

**BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION**

**NEW DELHI**

**PETITION NO.....**

**For True-up in Petition No- 430/GT/2020**

**IN THE MATTER OF** : Petition Under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter III of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 and Chapter-3, Regulation-13 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for revision of tariff of **Rihand Super Thermal Power Station St-III (1000 MW)** for the period from **01.04.2019 to 31.03.2024** after the truing up exercise

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**परिमल पीयूष/PARIMAL PIYUSH**  
अपर महाप्रबन्धक (व. विभाग)  
Addl. General Manager (Commercial)  
**एन टी पी सी लिमिटेड/NTPC LIMITED**  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

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**Petitioner:**

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

**Respondents**

1. Uttar Pradesh Power Corp. Ltd. (UPPCL)  
Shakti Bhawan  
14, Ashok Marg  
Lucknow – 226 001
2. Rajasthan Urja Vikas Nigam Limited (RUVNL)  
Vidyut Bhawan, Janpath,  
Jaipur – 302 005 (Rajasthan)  
(On Behalf of DISCOMs of Rajasthan)

**परिमल पीयूष/PARIMAL PIYUSH**  
अपर महाप्रबन्धक (व्यावसायिक)  
Addl. General Manager (Commercial)  
**एन टी पी सी लिमिटेड/NTPC LIMITED**  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

3. Tata Power Delhi Distribution Ltd.  
Grid Substation, Hudson Road  
Kingsway Camp, New Delhi- 110009
4. BSES Rajdhani Power Ltd. (BRPL)  
BSES Bhawan, Nehru Place  
New Delhi – 110019
5. BSES Yamuna Power Ltd. (BYPL)  
Shakti Kiran Building  
Karkardooma  
Delhi- 110092
6. Haryana Power Purchase Centre  
Shakti Bhawan, Sector-VI,  
Panchkula, Haryana – 134109
7. Punjab State Power Corporation Ltd. (PSPCL)  
The Mall, Patiala – 147 001
8. Himachal Pradesh State Electricity Board Ltd.  
(HPSEB Ltd.)  
Kumar Housing Complex Building-II  
Vidyut Bhawan, Shimla – 171 004
9. Power Development Department (PDD-J&K)  
Govt. of J&K, Civil Secretariat  
Srinagar
10. Electricity Department (Chandigarh)  
Union Territory of Chandigarh  
Addl. Office Building, Sector-9 D  
Chandigarh

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
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EOC, A-8A, Sector-24, Noida-201301 (U.P.)

11. Uttarakhand Power Corporation Ltd. (UPCL)  
Urja Bhavan, Kanwali Road  
Dehradun – 248 001

The Petitioner humbly states that:

- 1) The Petitioner herein NTPC Ltd. (hereinafter referred to as 'Petitioner' or 'NTPC'), is a Government of India Company within the meaning of the Companies Act, 1956. Further, it is a 'Generating Company' as defined under Section 2(28) of the Electricity Act, 2003.
- 2) The Petitioner is having power stations/ projects at different regions and places in the country. **Rihand Super Thermal Power Station Stage-III (2 X 500 MW)** (hereinafter referred to as Rihand-III) is one such station located in the State of Uttar Pradesh.
- 3) The power generated from Rihand-III is being supplied to the respondents herein mentioned above.
- 4) Section 62 of Electricity Act, 2003 provides for determination of tariff by the Appropriate Commission for supply of electricity by a generating company. The Hon'ble Commission, under Section 79(1)(a) of Electricity Act, 2003, is vested with the jurisdiction to regulate the tariff of the Generating Companies owned or controlled by the Central Government.
- 5) 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 1.4.2019 and specify the terms & conditions and methodology of tariff determination for the period from 01.04.2019 to 31.03.2024 under Section 62 & 79 of the Electricity Act, 2003.
- 6) Regulation 9(2) of CERC (Terms & Conditions of Tariff) Regulations 2019 provides as under:

**"9. Application for determination of tariff:**

.....

  
परिमल पीयूष/PARIMAL PIYUSH  
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EOC, A-8A, Sector-24, Noida-201301 (U.P.)  
3

*"(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."*

- 7) In accordance with the above, Petition No. 430/GT/2020 for determination of tariff for Rihand-III was filed before the Hon'ble Commission based on the admitted cost as on 31.03.2019 and projected estimated additional capital expenditure for the period 01.04.2019 to 31.03.2024.
- 8) The tariff for Rihand-III for the period from 01.04.2019 to 31.3.2024 was determined by the Hon'ble Commission vide order dated 27.12.2023 in Petition No. 430/GT/2020. The capital cost allowed for tariff determination included the projected additional capital expenditure admitted by the Hon'ble Commission after prudence check.
- 9) Further, Chapter-3, Regulation 13 of the Tariff Regulations 2019 provides as under:

***"(13) Truing up of tariff for the period 2019-24:***

- (1) The Commission shall carry out truing up exercise for the period 2019-24 along with the tariff petition filed for the next tariff period, for the following:*
- a) the capital expenditure including additional capital expenditure incurred up to 31.3.2024, as admitted by the Commission after prudence check at the time of truing up;*
  - b) the capital expenditure including additional capital expenditure incurred up to 31.3.2024, on account of Force Majeure and Change in Law.*
- (2) The generating company or the transmission licensee, as the case may be, shall make an application, as per Annexure-I to these regulations, for carrying*

out truing up exercise in respect of the generating station or a unit thereof or the transmission system or an element thereof by 30.11.2024.

- .....\*
- 10) In line with the provisions quoted above, the Petitioner is filing this petition for truing up the additional capital expenditure for the control period 2019-24, based on admitted capital cost as on 01.04.2019 and actual capital expenditure incurred during the tariff period from 01.04.2019 to 31.03.2024.
- 11) The year wise actual capital expenditure has been indicated and enclosed as part of **Appendix-I** herewith. In addition to the actual additional capital expenditure as above, discharge of liabilities during the period from 01.04.2019 to 31.03.2024 (year wise) out of the liabilities excluded from capital cost for the works already allowed/ claimed have also been indicated.
- 12) As per para 29 of CERC order dated 27.12.2023 in petition no. 430/GT/2020 the capital cost as on 31.3.2024 is Rs 5,63,837.35 Lakh, as shown in Form-5. Further, the Petitioner has claimed additional capitalization under the regulatory provisions of CERC Tariff Regulations-2019 for truing up of tariff. The difference in additional capitalization amounting to Rs 6,734.03 Lakh wrt earlier add-cap has been adjusted to arrive at the capital cost as on 31.3.2024, as shown in Form-9A. Hon'ble Commission may be pleased to take the same into consideration while approving the tariff of the instant station.
- 13) Emission Control System(De-NOx):
- a. Hon'ble Commission, vide order dated 17.11.2021 in Petition No. 66/MP/2020 has accorded in principle approval for installation of Emission Control System (ECS) comprising:
- (i) De-NOx system (Combustion Modification) and
- (ii) SO<sub>2</sub> removal system (i.e. Wet FGD).
- b. The petitioner has installed Emission Control (ECS) System for controlling Nox emissions during the Tariff Period 2019-24. Accordingly, the supplementary tariff for the same has been claimed as a separate



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stream under regulation 29 of Central Electricity Regulatory Commission (Terms and Condition of Tariff) Regulations, 2019. The tariff forms for the ECS (DeNox) System are attached as **Appendix-IA**.

- 14) Further, in accordance with the provisions of the Regulation-31 of Tariff Regulations 2019, for the purpose of computation of the Return on Equity, the base rate has been grossed up with the effective tax rate (MAT) applicable to NTPC at the end of respective financial years for the period 2019-24. The same is indicated in the Form-3 attached at **Appendix-I/ Appendix-IA**.
- 15) Further, in accordance with the provisions of the Regulation-34 of Tariff Regulations 2019, for the purpose of computation of the Interest on Working Capital, the landed fuel cost (taking into account normative transit and handling losses) and gross calorific value of the fuel as per actual weighted average for the third quarter of FY 2018-19, FY 2019-20, FY 2020-21, FY 2021-22 & FY 2022-23 is considered. Also, the rate of interest on working capital is considered at bank rate as on 1st April of each of the financial year during the tariff period of 2019-24. The same is indicated in the Form-O attached at Appendix-I.
- 16) It is submitted that some of the loans allocated to this station have been refinanced by taking new loans with lower rate of interest. As per Regulation 61 (1) of Tariff Regulations 2019, the benefits of refinancing of loans has to be shared with the beneficiaries in the ratio of 50:50 (Beneficiaries: Generator). The same has been applied by adjusting the rate of interest of new loans while computing weighted average rate of interest. The adjustment in rate of interest for new loans has been done as illustrated below:
- Rate of interest of existing loan: 8.000% (say)  
Rate of interest of new loan for refinancing of existing loan: 6.000% (say)  
Rate of interest of new loan considered for computing weighted average rate of interest: 7.000%.
- 17) It is relevant to submit that the Petitioner has filed Appeal before the Hon'ble Appellate Tribunal for Electricity in respect of certain disallowed claims by



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Hon'ble Commission. It is humbly submitted that the Petitioner reserves the right to approach this Hon'ble Commission and/or file amended Petition based on the outcome of such Appeal and/or any subsequent appeal(s).

18) Hon'ble Commission vide tariff order dated 27.12.2023 in tariff petition 430/GT/2020 of the stations at Para 48 has allowed the truing up of water charges, which has been allowed by the Hon'ble Commission in the instant order based on actual/projections. Accordingly, the details for water charges at actuals have been submitted in the instant petition. Hon'ble Commission may be pleased to allow the same.

19) It is submitted that Hon'ble Commission at para 49 in its order dated 27.12.2023 in petition no. 430/GT/2020 has allowed the consideration of the claim on merits towards capital spares consumption at the time of truing up. Accordingly, the same has been claimed in Form-3A of the attached Appendix-I. The details of the year wise capital spares consumed have been provided in Form-17 of the attached Appendix-I. It is prayed before Hon'ble Commission to consider the same and allow the expenditure on capital spares consumption as claimed under Regulation 35(1)(6) of the 2019 Tariff Regulations.

20) It is further submitted that at para 52 of order dtd. 27.12.2023 in petition no. 430/GT/2020 for the instant station, the claim against security expenses had been claimed by the petitioner on estimated basis, and the same has been considered by Hon'ble Commission subject to truing up. The details of actual security expenses has been provided in Form-3A of the attached Appendix-I for the period 2019-24. It is prayed before Hon'ble Commission to consider the same and allow the expenditure on security expenses as claimed under Regulation 35(1)(6) of the 2019 Tariff Regulations."

**21) Ash Transportation expenses**

(i) It is submitted that Hon'ble Commission vide its order dated 28.10.2022 in Petition No. 205/MP/2021 has allowed ash transportation on actual basis for the period 2019-22 and the monthly billing for ash transportation charges for 2022-24 period as below:



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39. Petitioner has furnished the details of the distance to which fly ash has been transported from the generating station, schedule rates applicable for transportation of fly ash, as notified by the State Governments along with details, including Auditor certified accounts. These documents have been examined and accordingly, the total fly ash transportation expenditure allowed to the Petitioner generating station wise for the period 2019-22 is as per the table in para 38 above totalling to Rs.309704.03 lakh and the same shall be recovered from the beneficiaries of the respective generating stations in 6 (six) equal monthly installments. However, the Petitioner is directed to submit details regarding award of transportation contracts, distance to which fly ash has been transported along with duly reconciled statements of expenditure incurred on ash transportation at the time of filing petitions for truing up of tariff for the 2019-24 tariff period of the generating stations.

#### **Monthly billing**

.....  
43. In the light of the above discussion and keeping in view that the Petitioner is entitled for recovery of fly ash transportation charges, under change in law, as additional O&M expenses, we permit the provisional billing at 90% of the fly ash transportation charges incurred by the Petitioner, in respect of its generating stations, for the balance period (i.e. 2022-24), on a monthly basis, based on self -certification, and the beneficiaries shall pay the same accordingly. This is, however, subject to prudence check of the claims, at the time of truing-up of tariff for the period 2019-24, in respect of the generating stations of the Petitioner, in terms of Regulation 13 of the 2019 Tariff Regulations.

44. We direct that the fly ash transportation cost incurred by the Petitioner, shall be recovered, in proportion to the coal consumed corresponding to the scheduled generation at normative parameters in accordance with the 2019 Tariff Regulations or at actuals, whichever is lower, for the supply of electricity to the respective Discoms. If the actual generation is less than the scheduled generation, the coal consumed for actual generation shall be considered for the



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purpose of computation of transportation of fly ash. The Petitioners are directed to furnish along with its monthly regular and/or supplementary bill(s), computations duly certified by the auditor, to the Respondent Discoms. The Petitioners and the Respondent Discoms are also directed to carry out reconciliation in respect of the claims, annually and the same is subject to truing-up, in terms of Regulation 13 of the 2019 Tariff Regulations."

### **Carrying Cost**

47. In line with the above decision and since the Petitioner has been permitted to recover the fly ash transportation cost as 'additional O&M expenses', for the period 2019-24, in exercise of the regulatory powers under Section 79(1)(a) of the Act, we permit the recovery of these charges, along with carrying cost, at the rate of interest as specified, in terms of Regulation 10 (7) of the 2019 Tariff Regulations."

It is pertinent to mentioned here that in compliance to the various directives of the Hon'ble commission in petition no 205/MP/2021, petitioner has already submitted entire set of documents i.e. transportation contracts, price discovery mechanism, end user certificate etc and duly audited statement of ash transportation and ash fund for the FY 2019-20, 20-21 and 21-22. Based on the above said submissions of petitioner, the Hon'ble Commission has already decided the Ash Transportation expenditure for NTPC Stations including Rihand-III for the said period which has achieved finality.

Further, in compliance to Hon'ble Commission directives vide order dated 28/10/2022 in petition no 205/MP/2021 (para 43), the petitioner continued monthly billing of ash transportation expenditure @90% of expenditure provisionally for the balance period 2022-24.

In view of the above directions passed by this Hon'ble Commission, the Petitioner is now submitting the actual transportation cost incurred for ash transportation for the period 2022-24 on actual basis in Form-3A along with the required documents. It is relevant to mention that Form-3A contains information

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of Ash Transportation for entire control period of 2019-24 for the sake of brevity/ simplicity. It is prayed that this Hon'ble Commission may be pleased to allow the same as prayed for.

22) The tariff calculation based on the above & other applicable provisions, in the formats provided in the **Appendix-I** of the Tariff Regulations 2019 and supplementary tariff calculations in the formats compiled under **Appendix-IA** are enclosed herewith.

23) The filing fee for the tariff determination has already been paid for the period from 2019-24 as per provisions of CERC (Payment of Fees), Regulation 2012. Accordingly, no fee is payable along with this petition for revision of tariff.

#### Prayer

In the light of above submissions and submissions made in respect of the directions of the Hon'ble Commission in its order dated 27.12.2023 the Petitioner, therefore, prays that the Hon'ble Commission may be pleased to:

- i) Approve revised tariff of Rihand-III for the tariff period 2019-24 as per provisions of Regulation 13 of Tariff Regulations 2019.
- ii) Approve supplementary tariff for Rihand Super Thermal Power Station Stage-III (2x500MW) on installation of Emission Control System for controlling Nox emissions.
- iii) Allow the Petitioner to recover the additional O&M cost for ash transportation.
- iv) Allow the reimbursement of water charges, capital spares and security expenses for the instant station, as claimed by the Petitioner.
- v) Pass any other order as it may deem fit in the circumstances mentioned above.

  
(Petitioner)

Noida (U.P.)

Date: 18.11.2024

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
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**Petitioner:** : NTPC Ltd.  
NTPC Bhawan  
Core-7, Scope Complex  
7, Institutional Area, Lodhi Road  
New Delhi-110 003



**Respondents:**

1. Uttar Pradesh Power Corp. Ltd. (UPPCL)  
Shakti Bhawan  
14, Ashok Marg  
Lucknow -226 001

And  
Others

**AFFIDAVIT**

I, Parimal Piyush, Son of Late Bharat Mishra, aged about 49 years, resident of IN1-2004, Inspire, Eldeco Amantran, Sector-119, Noida (UP), do hereby solemnly affirm and state as follows:

1. That the deponent is the Additional General Manager (Commercial) of the Petitioner NTPC Ltd., and is well conversant with the facts and the circumstances of the case and therefore competent to swear this affidavit.
2. That the accompanying Petition under Section 62 and 79 (1) (a) of the Electricity Act, 2003, has been filed by my authorized representative under my



A handwritten signature in blue ink, appearing to be 'S.P.A.' with a long horizontal line extending to the right.

instruction and the contents of the same are true and correct to the best of my knowledge and belief.

3. That the contents of Para No...1..... to...23.. as mentioned in the Petition are true and correct based on the my personal knowledge, belief and records maintained in the office.
4. That the annexures annexed to the Petition are correct and true copies of the respective originals.
5. That the Deponent has not filed any other Petition or Appeal before any other forum or court of law with respect to the subject matter of the dispute.

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अपर महाप्रबन्धक (वाणिज्यिक)  
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(Deponent)

**Verification:**

Verified at Noida on this 16<sup>th</sup> day of November 2024, that the contents of my above noted affidavit are true and correct to my knowledge and no part of it is false and nothing material has been concealed therefrom.

  
(Deponent)



**ATTESTED**

BALKRISHNA DIXIT  
Advocate (Notary)  
R. No. 7167  
GAUTAM BUDH NAGAR (U.P.)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
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EOG, A-8A, Sector-24, Noida-201301 (U.P.)

16 NOV 2024

**TARIFF FILING FORMS (THERMAL)**

**FOR TRUING-UP OF TARIFF**

**FOR**

**Rihand Super Thermal Power Station Stage-III**

**(From 01.04.2019 to 31.03.2024)**

**PART-I**

**APPENDIX-I**



**परिमल पीयूष/PARIMAL PIYUSH**  
अपर महाप्रबन्धक (वाणिज्यिक)  
Add. General Manager (Commercial)  
**एन टी पी सी लिमिटेड/NTPC LIMITED**  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**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	✓
FORM- 4	Details of Foreign loans	✓
FORM- 4A	Details of Foreign Equity	NA
FORM-5	Abstract of Admitted Capital Cost for the existing Projects	NA
FORM-5A**	Abstract of Claimed Capital Cost for the existing Projects	✓
FORM- 6	Financial Package upto COD	✓
FORM- 7	Details of Project Specific Loans	NA
FORM- 8	Details of Allocation of corporate loans to various projects	NA
FORM-9A**	Summary of Statement of Additional Capitalisation claimed during the period	✓
FORM-9##	Statement of Additional Capitalisation after COD	✓
FORM- 10	Financing of Additional Capitalisation	✓
FORM- 11	Calculation of Depreciation on original project cost	✓
FORM- 12	Statement of Depreciation	NA
FORM- 13	Calculation of Weighted Average Rate of Interest on Actual Loans	✓
FORM- 14	Draw Down Schedule for Calculation of IDC & Financing Charges	✓
FORM- 15	Details of Fuel for Computation of Energy Charges	NA
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	✓
FORM-17	Details of Capital Spares	NA
FORM- 18	Non-Tariff Income	✓
FORM-19	Details of Water Charges	✓
FORM-19A	Details of Water Charges Computation	✓
FORM-20	Details of Statutory Charges	✓

## Provided yearwise for the period 2019-24

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

PART-I

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	NA
FORM-I	Details of Assets De-capitalised during the period	NA
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	✓
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	NA
FORM-T	Summary of issues involved in the petition	✓

\*\* Additional Forms

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड /NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

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.	NA
	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		
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.	✓
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

परिमल पीयूश/PARIMAL PIYUSH  
 अपर मैनेजर (व्यापारिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

  
 (Petitioner)



**Summary of Tariff**

PART-I  
FORM- 1

Name of the Petitioner: NTPC Limited  
 Name of the Generating Station: Rihand Super Thermal Power Station Stage-III  
 Place (Region/District/State): Northern Region/Sonebhadra/ Uttar Pradesh

S. No.	Particulars	Unit	Amount in Rs. Lakhs					
			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	30,138.22	30,146.92	30,347.15	30,631.48	30,738.03	30,978.39
1.2	Interest on Loan	Rs Lakh	18,089.76	15,873.51	12,951.00	10,720.40	9,223.41	7,564.11
1.3	Return on Equity	Rs Lakh	32,658.63	31,092.53	31,317.22	31,619.12	31,739.59	31,949.68
1.4	Interest on Working Capital	Rs Lakh	6,833.90	5,227.46	4,926.06	4,553.18	4,742.82	5,783.43
1.5	O&M Expenses	Rs Lakh	20,864.30	25610.14	28170.85	29621.63	32728.14	40546.95
	<b>Total</b>	Rs Lakh	<b>1,08,584.80</b>	<b>1,07,950.57</b>	<b>1,07,712.29</b>	<b>1,07,145.81</b>	<b>1,09,171.99</b>	<b>1,16,822.56</b>
2.1	Landed Fuel Cost of coal as per FSA approved by beneficiaries	Rs/Ton	1,698.87	2,228.61	2,248.06	2,161.19	2,422.66	2,409.13
	(%) of Fuel Quantity	(%)	97.12%	100.00%	100.00%	100.00%	100.00%	100.00%
2.2	Landed Fuel Cost of Imported Coal as per FSA approved by beneficiaries	Rs/Ton						
	(%) of Fuel Quantity	(%)						
2.3	Landed Fuel Cost of coal other than FSA	Rs/Ton	5,890.58					
	(%) of Fuel Quantity	(%)	1.11%					
2.4	Landed Fuel Cost Imported Coal other than FSA,	Rs/Ton	6,663.22					
	(%) of Fuel Quantity	(%)	1.77%					
2.5	Secondary fuel oil cost	Rs/Unit	0.03	0.03	0.03	0.02	0.03	0.04
	Energy Charge Rate ex-bus 2A, 2B, 2C, 2D	Rs/Unit	1.30	1.40	1.41	1.40	1.47	1.54

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड, NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

  
(Petitioner)

Name of the Petitioner: **NTPC Limited**  
 Name of the Generating Station: **Rihand Super Thermal Power Station Stage-III**

**Statement showing claimed capital cost – (A+B)** Amount in Rs. Lakhs

S. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	8
1	Opening Capital Cost	5,51,385.35	5,52,243.39	5,59,360.69	5,62,959.20	5,63,636.68
2	Add: Addition during the year	546.88	6,539.39	2,936.01	691.34	7,260.37
3	Less: De-capitalisation during the year	-180.66	-1,138.01	-197.16	-734.98	-966.77
4	Less: Reversal during the year	-	-	-	-	-
5	Add: Discharges during the year	491.83	1,715.92	859.66	721.13	641.10
6	Closing Capital Cost	5,52,243.39	5,59,360.69	5,62,959.20	5,63,636.68	5,70,571.38
7	Average Capital Cost	5,51,814.37	5,55,802.04	5,61,159.94	5,63,297.94	5,67,104.03

**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		7
1	Opening Capital Cost	551385.35	552243.39	559360.69	562959.20	563636.68
2	Add: Addition during the year	546.88	6539.39	2936.01	691.34	6955.22
3	Less: De-capitalisation during the year	-180.66	-1138.01	-197.16	-734.98	-966.77
4	Less: Reversal during the year	0.00	0.00	0.00	0.00	0.00
5	Add: Discharges during the year	491.83	1715.92	859.66	721.13	641.10
6	Closing Capital Cost	552243.39	559360.69	562959.20	563636.68	570266.23
7	Average Capital Cost	551814.37	555802.04	561159.94	563297.94	566951.46

**परिमल पीयूष/PARIMAL PIYUSH**  
 ज्येष्ठ महाप्रबन्धक (व्यापारिक)  
 Addl. General Manager (Commercial)  
**एन टी पी सी लिमिटेड/NTPC LIMITED**  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)



Name of the Petitioner:

NTPC Limited

Name of the Generating Station:

Rihand Super Thermal Power Station Stage-III

Amount in Rs. Lakhs

**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	0.00	0.00	0.00	0.00	305.14
3	Less: De-capitalisation during the year	0.00	0.00	0.00	0.00	0.00
4	Less: Reversal during the year	0.00	0.00	0.00	0.00	0.00
5	Add: Discharges during the year	0.00	0.00	0.00	0.00	0.00
6	Closing Capital Cost	0.00	0.00	0.00	0.00	305.14
7	<b>Average Capital Cost</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>152.57</b>

  
 (Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Statement showing Return on Equity at Normal Rate**

**PART-I  
FORM- 1(IIA)**

Name of the Petitioner

NTPC Limited

Name of the Generating Station

Rihand Super Thermal Power Station Stage-III

S. No.	Particulars	Amount in Rs. Lakhs				
		2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
	<b>Return on Equity</b>					
1	Gross Opening Equity (Normal)					
2	Less: Adjustment in Opening Equity	1,65,415.61	1,65,673.02	1,67,808.21	1,68,887.76	1,69,091.01
3	Adjustment during the year	-	-	-	-	-
4	Net Opening Equity (Normal)	-	-	-	-	-
5	Add: Increase in equity due to addition during the year	1,65,415.61	1,65,673.02	1,67,808.21	1,68,887.76	1,69,091.01
7	Less: Decrease due to De-capitalisation during the year	164.06	1961.82	880.80	207.40	2086.57
8	Less: Decrease due to reversal during the year	-54.20	-341.40	-59.15	-220.49	-290.03
9	Add: Increase due to discharges during the year	0.00	0.00	0.00	0.00	0.00
10	Net closing Equity (Normal)	147.55	514.78	257.90	216.34	192.33
11	Average Equity (Normal)	1,65,673.02	1,67,808.21	1,68,887.76	1,69,091.01	1,71,079.87
12	Rate of ROE (%)	1,65,544.31	1,66,740.62	1,68,347.99	1,68,989.38	1,70,085.44
13	Total ROE	18.782%	18.782%	18.782%	18.782%	18.782%
		<b>31,092.53</b>	<b>31,317.22</b>	<b>31,619.12</b>	<b>31,739.59</b>	<b>31,945.45</b>

  
(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Statement showing Return on Equity at Weighted Average Rate of Interest**

**PART-I  
FORM- 1(IIA)**


Name of the Petitioner:

NTPC Limited


Name of the Generating Station:

Rihand Super Thermal Power Station Stage-III

S. No.	Particulars	Amount in Rs. Lakhs				
		2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
	<b>Return on Equity @ Weighted Average Rate of Interest</b>					
1	Gross Opening Equity (Normal)					
2	Less: Adjustment in Opening Equity	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
4	Net Opening Equity (Normal)	0.00	0.00	0.00	0.00	0.00
5	Add: Increase in equity due to addition during the year	0.00	0.00	0.00	0.00	0.00
7	Less: Decrease due to De-capitalisation during the year	0.00	0.00	0.00	0.00	91.54
8	Less: Decrease due to reversal during the year	0.00	0.00	0.00	0.00	0.00
9	Add: Increase due to discharges during the year	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
11	Average Equity (Normal)	0.00	0.00	0.00	0.00	91.54
12	Rate of ROE (%)	0.00	0.00	0.00	0.00	45.77
13	Total ROE	9.18%	8.61%	8.34%	8.81%	9.24%
		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.23</b>

  
 (Petitioner)

**परिमल पीयूष/PARIMAL PIYUSH**  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

		PART-I FORM-2	
Name of the Company:	NTPC Limited		
Name of the Power Station:	Rihand Super Thermal Power Station Stage-II		
<b>Plant Characteristics</b>			
Unit(s)/Block(s)/Parameters			
Installed Capacity ( MW)	Unit-I	Unit-II	
Schedule COD as per Investment Approval	500	500	
Actual COD /Date of Taken Over (as applicable)	NA	NA	
Pit Head or Non Pit Head	19.11.2012	27.03.2014	
Name of the Boiler Manufacture	Pit Head		
Name of Turbine Generator Manufacture			
Main Steams Pressure at Turbine inlet (kg/Cm <sup>2</sup> abs) <sup>1</sup>			
Main Steam Temperature at Turbine inlet (°C) <sup>1</sup>			
Reheat Steam Pressure at Turbine inlet (kg/Cm <sup>2</sup> ) <sup>1</sup>			
Reheat Steam Temperature at Turbine inlet (°C) <sup>1</sup>			
Main Steam flow at Turbine Inlet under MCR condition (tons /hr) <sup>2</sup>			
Main Steam flow at Turbine inlet under VWO condition (tons /hr) <sup>2</sup>			
Unit Gross electrical output under MCR /Rated condition (MW) <sup>2</sup>			
Unit Gross electrical output under VWO condition (MW) <sup>2</sup>			
Guaranteed Design Gross Turbine Cycle Heat Rate (kCal/kWh) <sup>3</sup>			
Conditions on which design turbine cycle heat rate guaranteed % MCR	N/A		
% Makeup Water Consumption			
Design Capacity of Make up Water System(DM)-m <sup>3</sup> /hr			
Design Capacity of Inlet Cooling System-m <sup>3</sup> /hr			
Design Cooling Water Temperature (°C)			
Back Pressure(mm Hg abs)			
Steam flow at super heater outlet under BMCR condition (tons/hr)			
Steam Pressure at super heater outlet under BMCR condition (kg/Cm <sup>2</sup> )			
Steam Temperature at super heater outlet under BMCR condition (°C)			
Steam Temperature at Reheater outlet at BMCR condition (°C)			
Design / Guaranteed Boiler Efficiency (%)			
Design Fuel with and without Blending of domestic/imported coal			
Type of Cooling Tower	Induced draught type Cooling tower (IDCT)		
Type of cooling system <sup>4</sup>	Closed Cycle		
Type of Boiler Feed Pump <sup>5</sup>	2X50% Steam Driven + 1X50% Electrical Driven for each unit		
Type of coal Mill			
Fuel Details <sup>7</sup>			
-Primary Fuel			
-Secondary Fuel	Coal		
-Alternate Fuels	LDO after Hon'ble Supreme Court order 24.10.2017 in W.		
Types of SOX control system	P (C) No (s) 13029/1985		
Types of NOX control system	LDO		
Details of SPM control system	FGD under implementation		
Special Features/Site Specific Features <sup>8</sup>	ESP		
Special Technological Features <sup>9</sup>			
Environmental Regulation related features <sup>10</sup>	1.ESP is provided 2. DeNOx (Combustion Modification) System provided. 3.FGD under implementation		
	 (Petitioner)		

**परिमल पीयूष/PARIMAL PIYUSH**  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड /NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)  
 21

Normative parameters considered for tariff computations							PART-I
Name of the Petitioner:							FORM-3
Name of the Generating Station:							
Rihand Super Thermal Power Station Stage-III							
							(Year Ending March)
Particulars	Unit	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 at normal rate	%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
Base Rate of Return on Equity on Add.							
Capitalization at Weighted Average Rate of Interest on Loan	%	7.83%	7.88%	7.10%	6.88%	7.27%	7.62%
Effective Tax Rate	%	21.55%	17.47%	17.47%	17.47%	17.47%	17.47%
Target Availability	%	85.00%	85.00%	85.00%	85.00%	85.00%	85.00%
In High Demand Season	%	85.00%	85.00%	85.00%	85.00%	85.00%	85.00%
Peak Hours	%	85.00%	85.00%	85.00%	85.00%	85.00%	85.00%
Off-Peak Hours	%	85.00%	85.00%	85.00%	85.00%	85.00%	85.00%
In Low Demand Season(Off-Peak)	%	85.00%	85.00%	85.00%	85.00%	85.00%	85.00%
Peak Hours	%	85.00%	85.00%	85.00%	85.00%	85.00%	85.00%
Off-Peak Hours	%	85.00%	85.00%	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	2402.07	2358.84	2358.84	2358.84	2358.84	2358.84
Specific Fuel Oil Consumption	mlkWh	0.50	0.50	0.50	0.50	0.50	0.50
Cost of Coal/Lignite for WC	in Days	45	40	40	40	40	40
Cost of Main Secondary Fuel Oil for WC	in Months	2	2	2	2	2	2
Fuel Cost for WC	in Months						
Liquid Fuel Stock for WC	in Months						
O&M Expenses	Rs lakh/MW	20.43	22.51	23.30	24.12	24.97	25.84
Maintenance Spares for WC	% of O&M	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
Receivables for WC	in Days	2months	45.00	45.00	45.00	45.00	45.00
Storage capacity of Primary fuel*	MT	8.9 lakh MT					
SBI 1 Year MCLR plus 350 basis point	%	13.50%	12.05%	11.25%	10.50%	10.50%	12.00%
Blending ratio of domestic coal/imported coal							

\*Combined storage capacity of Rihand St-I, Rihand St-II and Rihand St-III.

  
(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Calculation of O&M Expenses**

Name of the Company : NTPC Limited  
Name of the Power Station : Rihand Super Thermal Power Station Stage-III

S.No	Particulars	Amount in Rs. Lakhs				
		2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	O&M expenses under Reg.35(1)					
1a	Normative	22510.00	23300.00	24120.00	24970.00	25840.00
2	O&M expenses under Reg.35(6)					
2a	Water Charges	466.24	466.24	466.24	466.24	477.83
2b	Security expenses	1244.50	1535.62	1251.15	1503.19	1667.45
2c	Capital Spares*	1389.40	1791.07	1217.69	1847.84	5355.02
3	O&M expenses-Ash Transportation**	0.00	1077.92	2566.56	3940.88	7206.65
	<b>Total O&amp;M Expenses</b>	<b>25610.14</b>	<b>28170.85</b>	<b>29621.63</b>	<b>32728.14</b>	<b>40546.95</b>

\*Capital spares: The above amount for Rihand-III is by apportioning the capital spares for Rihand-I, II & III based on MW installed capacity.

\*\*Hon'ble commission vide its order dated 28.10.2022 in petition no 205/MP/2021 had allowed the Ash transportation expenses of Rs 0 Lakhs, Rs 3125.21Lakh, Rs 7229.05 Lakhs for the period from 2019-20, 2020-21 & 2021-22 after accounting for the revenue earned through sale of ash for the Rihand Station (Stage-I, II and III combined), as per the audited data submitted by the petitioner. Also, Hon'ble commission had allowed the provisional billing at 90 % of the ash transportation expenses incurred by the petitioner for the tariff period (i.e. 2022-24). The details of same apportioned for Rihand-I, II & III provided in Annexure-3B. Auditor certificate enclosed as Annexure-1.



(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (व. निगमितक)  
Addl. General Manager (Commercial)  
एन टी सी लिमिटेड/NTPC LIMITED  
EOC, A-5A, Sector-24, Noida-201301 (U.P.)



Statement of Ash Transportation Expenses

Name of the Petitioner: NTPC Limited  
Name of the Generating Station: Rihand Super Thermal Power Station Stage-III

S.No.	Particulars	UOM	Amount in Rs. in Lakh				
			2019-20	2020-21	2021-22	2022-23	2023-24
1	Total Ash Transportation Charges Incurred, Rihand Station	Rs Lakh	11.90	3,364.53	7,229.05	11,810.27	21,277.18
2	Income from sales of Ash, Rihand Station	Rs Lakh	11.90	239.32	-	5.49	44.09
3	Net Ash Transportation Charges, Rihand Station	Rs Lakh	-	3,125.21	7,229.05	11,804.78	21,233.09
4	Ash Trans. Charges- Rihand Super Thermal Power Station Stage-III	Rs Lakh	-	1,077.92	2,566.56	3,940.88	7,206.65
5	Ash Trans. Charges- Rihand Super Thermal Power Station Stage-I	Rs Lakh	-	928.63	2,508.71	3,577.34	7,269.50
6	Ash Trans. Charges- Rihand Super Thermal Power Station Stage-II	Rs Lakh	-	1,118.65	2,153.78	4,210.75	6,756.94
			-	3,125.20	7,229.05	11,728.97	21,233.09

Note: Ash Transportation charges from 2019-20 to 2021-22 were allowed by Hon'ble Commission vide its order dated 28.10.2022 in Petition No 205/MP/2021 which is pro-rated based on Scheduled Generation (SG) in different stages.

Petitioner

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Add. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Form-4

**DETAILS OF FOREIGN LOANS**  
 (Details only in respect of loans applicable to the project under petition)
Part-  
Form-4
 Name of the company  
 Name of the Power Station  
 Exchange Rate as on

**NTPC LIMITED**  
**Rihand III**

31-03-2019 USD = Rs. 69.77 EUR = Rs. 78.84 JPY 0.6343

Financial Year (Starting from COD)	16% (Amount in Lacs)				(Amount in Lacs)				(Amount in Lacs)			
	2019-20 (01.04.2019 to 31.03.2020)				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	1	2	3	4
Currency 1 USD	Date	Amount (FC)	Ex. Rate	Amount (INR)	Date	Amount (FC)	Ex. Rate	Amount (INR)	Date	Amount (FC)	Ex. Rate	Amount (INR)
At the date of draw	14-01-2019	-	-	-	-	-	-	-	-	-	-	-
Loan repayment upto previous period	01-04-2019	878.45	69.77	61,289.46	01-04-2020	878.45	69.77	61,289.46	01-04-2021	878.45	69.77	61,289.46
Net loan at the Beginning of the period		-	69.77	-		-	69.77	-		-	69.77	-
Schedule repayment date of principal	01-04-2019	878.45	69.77	61,289.46	01-04-2020	878.45	69.77	61,289.46	01-04-2021	878.45	69.77	61,289.46
Scheduled payment date of interest	14-07-2019	24.71	69.77	1,723.77	14-07-2020	24.71	69.77	1,723.77	14-07-2021	24.71	69.77	1,723.77
Withholding tax including surcharge on interest	14-07-2019	6.90	69.77	481.67	14-07-2020	6.90	69.77	481.67	14-07-2021	6.90	69.77	481.67
Schedule repayment date of principal	14-07-2019	6.90	69.77	481.67	14-07-2020	6.90	69.77	481.67	14-07-2021	6.90	69.77	481.67
Scheduled payment date of interest	14-01-2020	24.71	69.77	1,723.77	14-01-2021	24.71	69.77	1,723.77	14-01-2022	24.71	69.77	1,723.77
Withholding tax including surcharge on interest	14-01-2020	6.90	69.77	481.67	14-01-2021	6.90	69.77	481.67	14-01-2022	6.90	69.77	481.67
At the end of Financial year	31-03-2020	878.45	69.77	61,289.46	31-03-2021	878.45	69.77	61,289.46	31-03-2022	878.45	69.77	61,289.46

Financial Year (Starting from COD)	10% (Amount in Lacs)				(Amount in Lacs)				(Amount in Lacs)				(Amount in Lacs)			
	2019-20 (01.04.2019 to 31.03.2020)				2020-21 (01.04.2020 to 31.03.2021)				2021-22 (01.04.2021 to 31.03.2022)				2022-23 (01.04.2022 to 31.03.2023)			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Currency 1 USD	Date	Amount (FC)	Ex. Rate	Amount (INR)	Date	Amount (FC)	Ex. Rate	Amount (INR)	Date	Amount (FC)	Ex. Rate	Amount (INR)	Date	Amount (FC)	Ex. Rate	Amount (INR)
At the date of draw	02-10-2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loan repayment upto previous period	01-04-2019	479.65	69.77	33,464.83	01-04-2020	479.65	69.77	33,464.83	01-04-2021	479.65	69.77	33,464.83	01-04-2022	479.65	69.77	33,464.83
Net loan at the Beginning of the period		-	69.77	-		-	69.77	-		-	69.77	-		-	69.77	-
Schedule repayment date of principal	01-04-2019	479.65	69.77	33,464.83	01-04-2020	479.65	69.77	33,464.83	01-04-2021	479.65	69.77	33,464.83	01-04-2022	479.65	69.77	33,464.83
Scheduled payment date of interest	02-04-2019	11.39	69.77	794.79	02-04-2020	11.39	69.77	794.79	02-04-2021	11.39	69.77	794.79	02-04-2022	11.39	69.77	794.79
Withholding tax including surcharge on interest	02-04-2019	0.66	69.77	45.90	02-04-2020	0.66	69.77	45.90	02-04-2021	0.66	69.77	45.90	02-04-2022	0.66	69.77	45.90
Schedule repayment date of principal	02-04-2019	0.66	69.77	45.90	02-04-2020	0.66	69.77	45.90	02-04-2021	0.66	69.77	45.90	02-04-2022	0.66	69.77	45.90
Scheduled payment date of interest	02-10-2019	11.39	69.77	794.79	02-10-2020	11.39	69.77	794.79	02-10-2021	11.39	69.77	794.79	02-10-2022	11.39	69.77	794.79
Withholding tax including surcharge on interest	02-10-2019	0.66	69.77	45.90	02-10-2020	0.66	69.77	45.90	02-10-2021	0.66	69.77	45.90	02-10-2022	0.66	69.77	45.90
At the end of Financial year	31-03-2020	479.65	69.77	33,464.83	31-03-2021	479.65	69.77	33,464.83	31-03-2022	479.65	69.77	33,464.83	31-03-2023	479.65	69.77	33,464.83

Financial Year (Starting from COD)	3% (Amount in Lacs)			
	2019-20 (01.04.2019 to 31.03.2020)			
	1	2	3	4
Currency 1 USD	Date	Amount (FC)	Ex. Rate	Amount (INR)
At the date of draw	15-11-2018	-	-	-
Loan repayment upto previous period	01-04-2019	83.80	69.77	5,853.05
Net loan at the Beginning of the period		-	69.77	-
Schedule repayment date of principal	01-04-2019	83.80	69.77	5,853.05
Scheduled payment date of interest	15-05-2019	1.79	69.77	125.22
Withholding tax including surcharge on interest	15-05-2019	0.01	69.77	0.72
Scheduled payment date of interest	29-07-2019	0.74	69.77	51.85
Withholding tax including surcharge on interest	29-07-2019	0.0043	69.77	0.30
Schedule repayment date of principal	29-07-2019	0.74	69.77	51.85
Scheduled payment date of interest	29-01-2020	1.79	69.77	125.22
Withholding tax including surcharge on interest	29-01-2020	0.01	69.77	0.72
Schedule repayment date of principal	29-01-2020	0.0043	69.77	0.30
Scheduled payment date of interest	29-01-2020	1.79	69.77	125.22
At the end of Financial year	31-03-2020	83.80	69.77	5,853.05

परिमल पीयूष/PARIMAL PIYUSH  
 अवर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

(Petitioner)

**Abstract of Admitted Capital Cost for the existing Projects**

Name of the Company : NTPC Limited

Name of the Power Station : Rihand Super Thermal Power Station Stage-III

Last date of order of Commission for the project

Date (DD-MM-YYYY)

27-12-2023

Reference of petition no. in which the above order was passed

Petition no.

430/GT/2020

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:

Capital cost as on 31.03.2024	(Rs. in lakh)	5,63,837.35
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)		15,165.63
Gross Normative Debt as on 31.03.2024		3,94,686.15
Cumulative Repayment as on 31.03.2024		3,13,416.92
Net Normative Debt as on 31.03.2024		81,269.23
Normative Equity as on 31.03.2024		1,69,151.21
Cumulative Depreciation as on 31.03.2024		3,13,416.92
Freehold land		148.90

  
 (Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Abstract of Claimed Capital Cost for the existing Projects**

Name of the Company : NTPC Limited

Name of the Power Station: Rihand Super Thermal Power Station Stage-III

Reference of Final True-up Tariff Petition	Affidavit dated	
Capital Cost as on 31.03.2024 as per Hon'ble Commission's Order dated 28.12.2023 in Pet. No. 430/GT/2020.	Rs. Lakhs	5,63,837.35
Adjustment as per Para 12 i.e. capital cost as on 31.03.2024 as per present true-up petition.		6,734.03

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 31.03.2024	(Rs. in lakh)	5,70,571.38
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)		10,953.73
Gross Normative Debt as on 31.03.2024		3,99,399.96
Cumulative Repayment as on 31.03.2024		3,12,923.21
Net Normative Debt as on 31.03.2024		86,476.75
Normative Equity as on 31.03.2024		1,71,171.42
Cumulative Depreciation as on 31.03.2024		3,12,923.21
Freehold land		

  
(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (व्यावसायिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement Giving Details of Project Financed through a Combination of loan

Part-1  
Form-6

Form 6  
TRANCHE NO  
36901  
008001

Subsidiary Loan From MDC Bank Ltd. JV

Source of Loan	MDC Bank Ltd. JV
Currency	INR
Amount of Loan	29,00,00,000
Total Project amount	1,80,00,00,000
Date of Issue	17/04/2017
Interest Type	Floating
Fixed Interest Rate	
Rate of Interest as on 31/03/2017	8.4%
Margin of Floating Interest	
Are there any caps/floor	Yes
Frequency of Int. Payment	MONTHLY
If Above is yes, specify Cap/Floor	
Maximum Period	5 Years
Maturity effective from	17/04/2017
Repayment Period (in Months)	
Repayment Frequency	3 Yearly Installment
Repayment Type	AVR
First Repayment Date	17/04/2021
Base Exchange Rate	INR/USD
Cost of Base Exchange Rate	N/A

Project Code	Project Name	Amount		
	ATM&C-9	45,00,00,000	17/04/2017	000091
	SHALAKA COOL WATER	8,00,00,000	17/04/2017	000091
	VINDYADAHM JV	47,00,00,000	17/04/2017	000091
	M&C&C-1	30,00,00,000	17/04/2017	000091
	SAHAYATI BOLD&N JV	80,00,00,000	17/04/2017	000091
<b>Total Allocated Amount</b>		<b>1,80,00,00,000</b>		<b>7.90%</b>

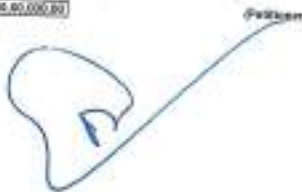
Form 6  
TRANCHE NO  
36901  
008002

Subsidiary Loan From Janta & Kashi Bank JV

Source of Loan	Janta & Kashi Bank JV
Currency	INR
Amount of Loan	7,00,00,00,000
Total Project amount	1,80,00,00,000
Date of Issue	17/04/2017
Interest Type	Floating
Fixed Interest Rate	
Rate of Interest as on 31/03/2017	8.50%
Margin of Floating Interest	
Are there any caps/floor	Yes
Frequency of Int. Payment	MONTHLY
If Above is yes, specify Cap/Floor	
Maximum Period	10
Maturity effective from	17/04/2017
Repayment Period (in Months)	
Repayment Frequency	3 Yearly Installment
Repayment Type	AVR
First Repayment Date	17/04/2021
Base Exchange Rate	INR/USD
Cost of Base Exchange Rate	N/A

Project Code	Project Name	Amount		
	SH&C-9	15,00,00,000	17/04/2017	
	SH&C-10	85,00,00,000	17/04/2017	
	SH&C-11	30,00,00,000	17/04/2017	
	VINDYADAHM JV	22,00,00,000	17/04/2017	
	SH&C-12	28,00,00,000	17/04/2017	
	SH&C-13	8,00,00,000	17/04/2017	
<b>Total Allocated Amount</b>		<b>7,00,00,00,000</b>		

Parimal



**परिमल पीयूष/PARIMAL PIYUSH**  
 अपर महाप्रबन्धक (सांख्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Form 8  
TRANCHE NO  
T0801

UP NO. 283609001

Unlevered Loan From Bank of Karnataka Bank

Name of Loan: Karnataka Bank  
Currency: INR  
Amount of Loan: 5,000,00,000  
Total Interest Amount: 5,26,00,00,000  
Date of Issue: 28.07.2011  
Interest Type: Floating  
Fixed Interest Rate: 7.50%  
Rate of Interest as on 31/03/2011: 7.50%  
Loan Secured Against: 0.0000%  
Margin, if Floating Interest: 0.0000%  
Are there any Cap/Floor: No  
Frequency of Int. Payment: Monthly  
If Above is not, specify Cap/Floor:  
Cap:  
Floor:  
Maturity Period: 10 Years  
Maturity effective Date: 28.07.2021  
Payment Period (in Months): 12 Years  
Compounding Frequency: 12 Half Yearly Installments  
Payment Type: Ann  
First Payment Date: 28.07.2011  
Date Exchange Rate: INR/USD  
Date of Rate Exchange Rate: N/A.

Project Code	Project Name	Amount	Start Date
10001	RAJ	80,78,00,000.00	28.07.2011
10002	RAJ	1,71,25,00,000.00	28.07.2011
10003	RAJ	11,95,71,407,000.00	28.07.2011
10004	RAJ	38,78,97,145,000.00	28.07.2011
10005	RAJ	15,75,00,000,000.00	28.07.2011
10006	RAJ	28,50,75,00,000.00	28.07.2011
10007	RAJ	44,57,50,000,000.00	28.07.2011
10008	RAJ	34,71,50,000,000.00	28.07.2011
10009	RAJ	30,00,00,147,000.00	28.07.2011
<b>TOTAL Allocated Amount</b>		<b>508,36,80,000.00</b>	

Form 8  
TRANCHE NO  
T0801

UP NO. 283609001

Unlevered Loan From Bank of Karnataka Bank

Name of Loan: Karnataka Bank  
Currency: INR  
Amount of Loan: 1,000,00,00,000  
Total Interest Amount: 1,26,00,00,000  
Date of Issue: 28.07.2011  
Interest Type: Floating  
Fixed Interest Rate: 7.50%  
Rate of Interest as on 31/03/2011: 7.50%  
Loan Secured Against: 0.0000%  
Margin, if Floating Interest: 0.0000%  
Are there any Cap/Floor: No  
Frequency of Int. Payment: Monthly  
If Above is not, specify Cap/Floor:  
Cap:  
Floor:  
Maturity Period: 10 Years  
Maturity effective Date: 28.07.2021  
Payment Period (in Months): 12 Years  
Compounding Frequency: 12 Half Yearly Installments  
Payment Type: Ann  
First Payment Date: 28.07.2011  
Date Exchange Rate: INR/USD  
Date of Rate Exchange Rate: N/A.

Project Code	Project Name	Amount	Start Date
10010	RAJ	1,26,00,00,000.00	28.07.2011
10011	RAJ	25,00,00,000.00	28.07.2011
10012	RAJ	44,08,00,000.00	28.07.2011
10013	RAJ	25,00,00,000.00	28.07.2011
10014	RAJ	25,00,00,000.00	28.07.2011
10015	RAJ	38,00,00,000.00	28.07.2011
<b>TOTAL Allocated Amount</b>		<b>1,80,08,00,000.00</b>	

(Partner)



परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (स. + लि. ॥)  
Addl. General Manager (G.M.)  
एन टी पी सी लिमिटेड / NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Form B		TRANCHE NO		00001		00002	
SF NO 000000001							
Unsecured Loan From SBI Ltd							
Source of Loan	SBI Ltd						
Category	001						
Amount of Loan	1,00,00,000.00						
Total Credit amount	1,00,00,000.00						
Date of issue	31.01.2012						
Interest Type	Floating						
Fixed Interest Rate							
Rate of Interest as on 01.04.2012	10.00% - 8.25%						
Block of Floating Interest							
Are there any Collateral	NO						
Frequency of Int. Payment	Monthly						
If Above is yes, specify Collateral							
Collateral Period	4 Years						
Maturity/Repayable from	31.01.2012						
Repayment Period (in Months)	12 Years						
Repayment Frequency	12 Half Yearly Installments						
Repayment Type	EMI						
First Repayment Date	30.06.2012						
Bank Reference Date	30.06.12						
Date of Base Exchange Rate	N/A						
Project Code	Project Name	Amount					
	0010001	71,00,000.00	31.01.2012	00001	00002		
	0010002	29,00,000.00	31.01.2012	00001	00002		
<b>Total Allocated Amount</b>		<b>1,00,00,000.00</b>					

Form B		TRANCHE NO		00001		00003	
SF NO 000000001							
Unsecured Loan From SBI Ltd							
Source of Loan	SBI Ltd						
Category	001						
Amount of Loan	1,00,00,000.00						
Total Credit amount	1,00,00,000.00						
Date of issue	21.04.2012						
Interest Type	Floating						
Fixed Interest Rate							
Rate of Interest as on 01.04.2012	10.00% - 8.25%						
Block of Floating Interest							
Are there any Collateral	NO						
Frequency of Int. Payment	Monthly						
If Above is yes, specify Collateral							
Collateral Period	4 Years						
Maturity/Repayable from	21.04.2012						
Repayment Period (in Months)	12 Years						
Repayment Frequency	12 Half Yearly Installments						
Repayment Type	EMI						
First Repayment Date	31.08.2012						
Bank Reference Date	31.08.12						
Date of Base Exchange Rate	N/A						
Project Code	Project Name	Amount					
	0010001	71,00,000.00	21.04.2012	00001	00003		
	0010002	29,00,000.00	21.04.2012	00001	00003		
	0010003	48,00,000.00	21.04.2012	00001	00003		
	0010004	18,00,000.00	21.04.2012	00001	00003		
	0010005	54,00,000.00	21.04.2012	00001	00003		
	0010006	5,00,000.00	21.04.2012	00001	00003		
	0010007	1,00,000.00	21.04.2012	00001	00003		
	0010008	10,00,000.00	21.04.2012	00001	00003		
	0010009	27,00,000.00	21.04.2012	00001	00003		
	0010010	8,00,000.00	21.04.2012	00001	00003		
<b>Total Allocated Amount</b>		<b>1,00,00,000.00</b>					

Follows

*SM*

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (व्यापारिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Form B  
TRAMCH NO  
TR001 00004

BP NO: 005000001  
Unallocated Loan From (2012)

Source of Loan	RE-IT			
Customer	NR			
Amount of Loan	1,70,00,00,000			
Total Disbursal	5,40,00,00,000			
Date of Grant	29.08.2012			
Interest Type	Floating			
Fixed Interest Rate				
Rate of Interest as on 01/04/2012	000000 3.25%			
Margin if Floating Interest				
Are there any Cap/Floor	Yes			
Frequency of Int. Payment	Monthly			
If Above is yes, specify Cap/Floor				
Maturity Period	4 Years			
Maturity effective from	01.04.2012			
Repayment Period (in Months)	12 Years			
Repayment Frequency	18 Half Yearly Installments			
Repayment Type	FCR			
First Disbursement Date	27.08.2012			
Break Percentage Rate	N/A			
Date of Next Recharge Date	N/A			
Project Code	Project Name	Amount		
	KORAPUT	32,00,00,00.00	29.08.2012	TR001 00004
	KANHA	35,00,00,00.00	29.08.2012	TR001 00004
	KALPA	33,00,00,00.00	29.08.2012	TR001 00004
	KORAPUT/AMAM JV	30,00,00,00.00	29.08.2012	TR001 00004
	KALPA	40,00,00,00.00	29.08.2012	TR001 00004
	KALPA/RE	35,00,00,00.00	29.08.2012	TR001 00004
	KALPA/RE	38,00,00,00.00	29.08.2012	TR001 00004
	KALPA/RE	1,50,00,00,00.00	29.08.2012	TR001 00004
<b>Total Allocated Amount</b>		<b>3,00,00,00,00.00</b>		

Form B  
TRAMCH NO  
TR001 00000

BP NO: 005000001  
Unallocated Loan From (2012)

Source of Loan	RE-IT			
Customer	NR			
Amount of Loan	1,90,00,00,00,000			
Total Disbursal	4,90,00,00,000			
Date of Grant	21.08.2012			
Interest Type	Floating			
Fixed Interest Rate				
Rate of Interest as on 01/04/2012	000000 3.25%			
Margin if Floating Interest				
Are there any Cap/Floor	Yes			
Frequency of Int. Payment	Monthly			
If Above is yes, specify Cap/Floor				
Maturity Period	4 Years			
Maturity effective from	21.08.2012			
Repayment Period (in Months)	12 Years			
Repayment Frequency	18 Half Yearly Installments			
Repayment Type	FCR			
First Disbursement Date	26.08.2012			
Break Percentage Rate	N/A			
Date of Next Recharge Date	N/A			
Project Code	Project Name	Amount		
	KALPA/RE	65,00,00,000.00	21.08.2012	TR001 00000
	KALPA	1,50,00,00,000.00	21.08.2012	TR001 00000
	KALPA/RE	80,00,00,000.00	21.08.2012	TR001 00000
	KALPA/RE	58,00,00,000.00	21.08.2012	TR001 00000
	KALPA/RE	36,00,00,000.00	21.08.2012	TR001 00000
	KALPA/RE	41,00,00,000.00	21.08.2012	TR001 00000
<b>Total Allocated Amount</b>		<b>4,90,00,00,000.00</b>		

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)



Form 6  
TRANCHE NO  
708061 08806

Unsecured Loan From 888 1/2%				
Source of Loan	888-1/2			
Currency	INR			
Amount of Loan	1,30,80,00,000			
Total Loan amount	1,30,80,00,000			
Date of Draw	28.08.2012			
Interest Type	Floating			
Fixed Interest Rate				
Rate of Interest as on 01.04.2012	00.000% @ 3 yrs			
Maturity / Floating Interest				
On From and Date From	7/8			
Frequency of Int. Payment	Monthly			
If Above is yes, specify Cap/Floor				
Cap				
Floor				
Maturity Period	4 Years			
Maturity effective from	28.08.2012			
Repayment Period (in)				
Repayment	12 Years			
Repayment Frequency	12 Half Yearly Installments			
Repayment Type	AMV			
First Repayment Date	30.08.2012			
Base Exchange Rate	INR/USD			
Date of Base Exchange Rate	N/A			
Project Code	Project Name	Amount		
	8881/1/1	44,00,00,000	28.08.2012	708061 08806
	8881/1/2	32,00,00,000	28.08.2012	708061 08806
	8881/1/3	30,00,00,000	28.08.2012	708061 08806
	8881/1/4	25,00,00,000	28.08.2012	708061 08806
	8881/1/5	18,00,00,000	28.08.2012	708061 08806
	8881/1/6	20,00,00,000	28.08.2012	708061 08806
	8881/1/7	25,00,00,000	28.08.2012	708061 08806
	8881/1/8	28,00,00,000	28.08.2012	708061 08806
	8881/1/9	28,00,00,000	28.08.2012	708061 08806
	8881/1/10	45,00,00,000	28.08.2012	708061 08806
	8881/1/11	30,00,00,000	28.08.2012	708061 08806
	8881/1/12	15,00,00,000	28.08.2012	708061 08806
	8881/1/13	30,00,00,000	28.08.2012	708061 08806
	8881/1/14	40,00,00,000	28.08.2012	708061 08806
	8881/1/15	1,00,00,00,000	28.08.2012	708061 08806
<b>Total Allocated Amount</b>		<b>1,30,80,00,000</b>		

Form 6  
TRANCHE NO  
708061 08807

Unsecured Loan From 888 1/2%				
Source of Loan	888-1/2			
Currency	INR			
Amount of Loan	1,09,00,00,000			
Total Loan amount	1,09,00,00,000			
Date of Draw	12.11.2012			
Interest Type	Floating			
Fixed Interest Rate				
Rate of Interest as on 01.04.2012	00.000% @ 3 yrs			
Maturity / Floating Interest				
On From and Date From	7/8			
Frequency of Int. Payment	Monthly			
If Above is yes, specify Cap/Floor				
Cap				
Floor				
Maturity Period	4 Years			
Maturity effective from	12.11.2012			
Repayment Period (in)				
Repayment	12 Years			
Repayment Frequency	12 Half Yearly Installments			
Repayment Type	AMV			
First Repayment Date	30.11.2012			
Base Exchange Rate	INR/USD			
Date of Base Exchange Rate	N/A			
Project Code	Project Name	Amount		
	8881/2/1	25,00,00,000	12.11.2012	708061 08807
	8881/2/2	20,00,00,000	12.11.2012	708061 08807
	8881/2/3	20,00,00,000	12.11.2012	708061 08807
	8881/2/4	25,00,00,000	12.11.2012	708061 08807
	8881/2/5	28,00,00,000	12.11.2012	708061 08807
	8881/2/6	18,00,00,000	12.11.2012	708061 08807
	8881/2/7	45,00,00,000	12.11.2012	708061 08807
	8881/2/8	25,00,00,000	12.11.2012	708061 08807
	8881/2/9	25,00,00,000	12.11.2012	708061 08807
	8881/2/10	25,00,00,000	12.11.2012	708061 08807
	8881/2/11	25,00,00,000	12.11.2012	708061 08807
	8881/2/12	25,00,00,000	12.11.2012	708061 08807
	8881/2/13	25,00,00,000	12.11.2012	708061 08807
	8881/2/14	25,00,00,000	12.11.2012	708061 08807
	8881/2/15	25,00,00,000	12.11.2012	708061 08807
	8881/2/16	25,00,00,000	12.11.2012	708061 08807
	8881/2/17	25,00,00,000	12.11.2012	708061 08807
	8881/2/18	25,00,00,000	12.11.2012	708061 08807
	8881/2/19	25,00,00,000	12.11.2012	708061 08807
	8881/2/20	25,00,00,000	12.11.2012	708061 08807
	8881/2/21	25,00,00,000	12.11.2012	708061 08807
	8881/2/22	25,00,00,000	12.11.2012	708061 08807
	8881/2/23	25,00,00,000	12.11.2012	708061 08807
	8881/2/24	25,00,00,000	12.11.2012	708061 08807
	8881/2/25	25,00,00,000	12.11.2012	708061 08807
	8881/2/26	25,00,00,000	12.11.2012	708061 08807
	8881/2/27	25,00,00,000	12.11.2012	708061 08807
	8881/2/28	25,00,00,000	12.11.2012	708061 08807
	8881/2/29	25,00,00,000	12.11.2012	708061 08807
	8881/2/30	25,00,00,000	12.11.2012	708061 08807
<b>Total Allocated Amount</b>		<b>1,09,00,00,000</b>		

परिमल वित्त/PARAMAL FINANCE  
 एन एच 30, गुरुग्राम  
 Add: Gurgaon  
 एन एच 30, गुरुग्राम



**Form B**  
**BRANCH NO**  
00001

BP NO 000000001

**Unallocated Loan From \$81.91**

Source of Loan	MSB LW
Currency	INR
Amount of Loan	1,80,00,00,000
Total Disb. amount	1,80,00,00,000
Date of Draw	01.02.2014
Interest Type	Floating
Fixed Interest Rate	
Rate of Interest as on 01.02.2014	12.25% & 25%
Margin of Floating Interest	
Are there any Coll. Fees	Yes
Frequency of Int. Payment	Monthly
If Above is yes, specify Capx	
Term	
Maturity Period	4 Years
Maturity effective from	01.02.2014
Prepayment Period (in Months)	
Prepayment	12 Years
Prepayment Frequency	18 Mth. (Half Yearly)
Prepayment Type	ANY
First Prepayment Date	30.06.2015
Swap Exchange Rate	N/A
Date of Swap Exchange Rate	N/A

Project Code	Project Name	Amount		
	MOUDA-I	30,00,00,000	01.02.2014	000018 10.25%
	WISHPYACHAL-IV	50,00,00,000	01.02.2014	000018 10.25%
	WISHPYACHAL-III	25,00,00,000	01.02.2014	000018 10.25%
	WISHPYACHAL-II	1,00,00,00,000	01.02.2014	000018 10.25%
	WISHPYACHAL-I	50,00,00,000	01.02.2014	000018 10.25%
	WISHPYACHAL-IV	20,00,00,000	01.02.2014	000018 10.25%
	WISHPYACHAL-III	15,00,00,000	01.02.2014	000018 10.25%
	WISHPYACHAL-II	25,00,00,000	01.02.2014	000018 10.25%
	WISHPYACHAL-I	25,00,00,000	01.02.2014	000018 10.25%
	WISHPYACHAL-IV	25,00,00,000	01.02.2014	000018 10.25%
	WISHPYACHAL-III	10,00,00,000	01.02.2014	000018 10.25%
	WISHPYACHAL-II	10,00,00,000	01.02.2014	000018 10.25%
	WISHPYACHAL-I	10,00,00,000	01.02.2014	000018 10.25%
<b>Total Allocated Amount</b>		<b>1,80,00,00,000</b>		

**Form B**  
**BRANCH NO**  
00001

BP NO 000000042

**Unallocated Loan From \$88.76**

Source of Loan	MSB LW
Currency	INR
Amount of Loan	1,10,00,00,00,000
Total Disb. amount	1,10,00,00,00,000
Date of Draw	
Interest Type	Floating
Fixed Interest Rate	
Rate of Interest as on 01.04.2014	10.00% & 25%
Margin of Floating Interest	0.00%
Are there any Coll. Fees	Yes
Frequency of Int. Payment	Monthly
If Above is yes, specify Capx	
Term	
Maturity Period	5 Years
Maturity effective from	01.04.2014
Prepayment Period (in Months)	
Prepayment	12 Years
Prepayment Frequency	6 Mths. (Half Yearly)
Prepayment Type	ANY
First Prepayment Date	31.01.2015
Swap Exchange Rate	N/A
Date of Swap Exchange Rate	N/A

Project Code	Project Name	Amount		
	WISHPYACHAL-IV	54,00,00,000	21.10.2013	000008
	WISHPYACHAL-III	13,00,00,000	21.10.2013	000008
	WISHPYACHAL-II	21,00,00,000	21.10.2013	000008
	WISHPYACHAL-I	22,00,00,000	21.10.2013	000008
	WISHPYACHAL-IV	21,00,00,000	21.10.2013	000008
	WISHPYACHAL-III	11,00,00,000	21.10.2013	000008
	WISHPYACHAL-II	18,00,00,000	21.10.2013	000008
	WISHPYACHAL-I	18,00,00,000	21.10.2013	000008
	WISHPYACHAL-IV	13,00,00,000	21.10.2013	000008
	WISHPYACHAL-III	45,00,00,000	21.10.2013	000008
	WISHPYACHAL-II	45,00,00,000	21.10.2013	000008
	WISHPYACHAL-I	10,00,00,000	21.10.2013	000008
	WISHPYACHAL-IV	1,00,00,000	21.10.2013	000008
	WISHPYACHAL-III	14,00,00,000	21.10.2013	000008
	WISHPYACHAL-II	20,00,00,000	21.10.2013	000008
	WISHPYACHAL-I	20,00,00,000	21.10.2013	000008
<b>Total Allocated Amount</b>		<b>1,10,00,00,000</b>		

(Signature)



परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Add. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Form B**  
**TRANCHE NO**  
**TR001**

NP NO 58500442      TR001      00021

**Unsecured Loan From SBA A/R**

Source of Loan	SBA
Category	NPI
Amount of Loan	1,08,00,00,000
Total Disb. amount	1,08,00,00,000
Date of Draw	21.02.2018
Interest Type	Fixed
Fixed Interest Rate	8.25%
Date of interest as on 01.04.2017	000001, 8.25%
Maturity of Floating Interest	8.25%
Amortization Type	Y/N
Frequency of Int. Payment	Monthly
If Above is yes, specify Cash/ Floor	
Contract Period	5 Years
Month/Year effective from	21.08.2018
Repayment Period (in Months)	36
Repayment Frequency	3 Yearly Installments
Repayment Due	400
First Repayment Date	31.01.2017
Base Exchange Rate	N/A
Date of Base Exchange Rate	N/A

Project Code	Project Name	Amount		
	BEHOJNAGAR	50,00,00,000	21.08.2018	8.15% 00021
	MULLAI	15,00,00,000	21.08.2018	8.12% 00021
	WALLI	84,00,00,000	21.08.2018	8.12% 00021
	WALLI	8,00,00,000	21.08.2018	8.12% 00021
	WALLI	18,00,00,000	21.08.2018	8.12% 00021
	WALLI	17,00,00,000	21.08.2018	8.12% 00021
	WALLI	23,00,00,000	21.08.2018	8.12% 00021
	WALLI	7,00,00,000	21.08.2018	8.12% 00021
<b>Total Allocated Amount</b>		<b>1,08,00,00,000</b>		

**Form B**  
**TRANCHE NO**  
**TR001**

NP NO 58500442      TR001      00021

**Unsecured Loan From SBA A/R**

Source of Loan	SBA
Category	NPI
Amount of Loan	1,10,00,00,00,000
Total Disb. amount	1,10,00,00,00,000
Date of Draw	14.02.2017
Interest Type	Fixed
Fixed Interest Rate	8.25%
Date of interest as on 01.04.2017	000001, 8.25%
Maturity of Floating Interest	8.25%
Amortization Type	Y/N
Frequency of Int. Payment	Monthly
If Above is yes, specify Cash/ Floor	
Contract Period	5 Years
Month/Year effective from	14.02.2017
Repayment Period (in Months)	36
Repayment Frequency	3 Yearly Installments
Repayment Due	400
First Repayment Date	31.01.2017
Base Exchange Rate	N/A
Date of Base Exchange Rate	N/A

Project Code	Project Name	Amount		
	WALLI	3,00,00,00,000	14.02.2017	8.05% 00021
	BEHOJNAGAR	74,20,57,142	14.02.2017	8.05% 00021
	WALLI	14,28,57,141	14.02.2017	8.05% 00021
	WALLI	2,28,08,00,000	14.02.2017	8.05% 00021
	WALLI	82,65,71,427	14.02.2017	8.05% 00021
	WALLI	2,45,71,428	14.02.2017	8.05% 00021
	WALLI	1,90,80,08,000	14.02.2017	8.05% 00021
	WALLI	90,71,42,860	14.02.2017	8.05% 00021
	WALLI	15,71,42,855	14.02.2017	8.05% 00021
	WALLI	1,05,00,00,000	14.02.2017	8.05% 00021
	WALLI	32,14,28,571	14.02.2017	8.05% 00021
	WALLI	32,14,28,571	14.02.2017	8.05% 00021
	WALLI	32,14,28,571	14.02.2017	8.05% 00021
	WALLI	5,71,42,855	14.02.2017	8.05% 00021
	WALLI	80,80,00,000	14.02.2017	8.05% 00021
	WALLI	32,82,85,714	14.02.2017	8.05% 00021
	WALLI	4,28,57,143	14.02.2017	8.05% 00021
<b>Total Allocated Amount</b>		<b>1,10,00,00,00,000</b>		

**Parimal**

*201*

**परिमल पीयूष / PARIMAL PIYUSH**  
 अपर महाप्रबन्धक (रिजिस्ट्रार)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड / NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Form B		
TRANCHE NO		
EP NO 000000001	70001	00000
Unsecured Loan From Cooperative Bank-B		
Source of Loan	Cooperative Bank-B	
Category	001	
Amount of Loan	500000000	
Total Loan amount	500000000	
Date of Disbursal	28/01/2014	
Interest Type	FLMINT	
Rate of Interest as on 01/04/2014 20%		
Margin if Floating Interest	0%	
Are there any Capex Floor	Y/N	
Frequency of Int. Payment	MONTHLY	
If Above is yes, specify Capex Floor		
Maturity Period	5 Years	
Repayment effective from	28/01/2012	
Repayment Period (in Months)	15 Years	
Repayment Frequency	20 Half Yearly Installment	
Repayment Type	AVD	
First Repayment Date	28 Mar 13	
Swap Exchange Rate	INR/USD	
Date of Swap Exchange Rate	N/A	
Project Code	Project Name	Amount
	000000001	500000000
Total Allocated Amount		500000000

Form B		
TRANCHE NO		
EP NO 000000001	70001	00000
Unsecured Loan From Cooperative Bank-B		
Source of Loan	Cooperative Bank-B	
Category	001	
Amount of Loan	500000000	
Total Loan amount	500000000	
Date of Disbursal	21/01/2014	
Interest Type	FLMINT	
Rate of Interest as on 01/04/2014 20%		
Margin if Floating Interest	0%	
Are there any Capex Floor	Y/N	
Frequency of Int. Payment	MONTHLY	
If Above is yes, specify Capex Floor		
Maturity Period	5 Years	
Repayment effective from	28/01/2012	
Repayment Period (in Months)	15 Years	
Repayment Frequency	20 Half Yearly Installment	
Repayment Type	AVD	
First Repayment Date	28 Mar 13	
Swap Exchange Rate	INR/USD	
Date of Swap Exchange Rate	N/A	
Project Code	Project Name	Amount
	000000001	500000000
Total Allocated Amount		500000000

(Yellow)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (व्यापारिक)  
 Add. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Form B  
BR NO 00000000 & 211  
BRANCH NO  
100001  
00000

Unsecured Loan From HDFC Bank Ltd. II

Source of Loan	HDFC Bank Ltd. II		
Currency	INR		
Amount of Loan	50,00,00,000		
Total Loan Amount	50,00,00,000		
Date of Issue	28.01.2013		
Interest Type	Floating		
Rate of Interest as on 01.04.2013	8.45%		
Margin / Floating Interest	NA		
Over Rate any Cash Flow	NA		
Frequency of Int. Payment	MONTHLY		
If Above is not specify Cash Flow			
Maturity Period	3 Years		
Maximum effective term	28.10.2010		
Repayment Period (No)			
Maturity	30 Years		
Repayment Frequency	14 Half Yearly Installment		
Repayment Type	AVS		
First Repayment Date	28.04.2014		
Rate Exchange Rate	NA		
Date of Rate Exchange Rate	NA		
Account Code	Project Name	Amount	
	PRMND01	30,00,00,000	28.01.2013
	CCO00M	18,00,00,000	28.01.2013
	CCO00M1	14,00,00,000	28.01.2013
Total Allocated Amount		50,00,00,000	

Form B  
BR NO 00000000 & 211  
BRANCH NO  
100001  
00000

Unsecured Loan From HDFC Bank Ltd. II

Source of Loan	HDFC Bank Ltd. II		
Currency	INR		
Amount of Loan	50,00,00,000		
Total Loan Amount	50,00,00,000		
Date of Issue	28.01.2013		
Interest Type	Floating		
Rate of Interest as on 01.04.2013	8.45%		
Margin / Floating Interest	NA		
Over Rate any Cash Flow	NA		
Frequency of Int. Payment	MONTHLY		
If Above is not specify Cash Flow			
Maturity Period	3 Years		
Maximum effective term	28.10.2010		
Repayment Period (No)			
Maturity	30 Years		
Repayment Frequency	14 Half Yearly Installment		
Repayment Type	AVS		
First Repayment Date	28.04.2014		
Rate Exchange Rate	NA		
Date of Rate Exchange Rate	NA		
Account Code	Project Name	Amount	
	PRMND01	30,00,00,000	28.01.2013
	CCO00M	18,00,00,000	28.01.2013
Total Allocated Amount		50,00,00,000	

(Printed)



परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement Giving Details of Project Financed through a Conversion of Loan  
Form 3

Form 3		TRANCHES NO		30001		30002	
SF NO 300000013		UNSECURED Loan From NTPCC LTD					
Source of Loan:	NTPCC LTD						
Currency:	INR						
Amount of Loan:	20,00,00,00,000						
Total Gross Amount:	1,50,00,00,000						
Date of Issue:	09.12.2018						
Interest Type:	Floating						
Date of Conversion as on 01.04.2019:	5.7%						
Margin of Floating Interest:	1%						
Are there any Collateral:	Yes						
Frequency of Int. Payment:	Monthly						
If Above is yes, Specify Collateral:							
Class:							
Maturity Period:	3 Years						
Maturity effective from:	02.12.2020						
Replacement Period (in Months):							
Repayment Period:	14 Years						
Repayment Frequency:	14 Half Yearly Installments						
Collateral Type:	None						
Final Redemption Date:	31.03.2019						
Bank Exchange Rate:	84.9302						
Cost of Issue Exchange Rate:	N/A						
Project Code:	Project Name	Amount					
	SHANQU-1	11,50,00,000	09.12.2018				
	SHANQU-2	50,00,00,000	09.12.2018				
	SHANQU-4	41,00,00,000	09.12.2018				
	SHANQU-7	43,50,00,000	09.12.2018				
<b>Total Allocated Amount</b>		<b>1,50,00,00,000</b>					

Form 4		TRANCHES NO		30001		30001	
SF NO 300000113		UNSECURED Loan From India Bank					
Source of Loan:	India Bank - II						
Currency:	INR						
Amount of Loan:	15,00,00,00,000						
Total Gross Amount:	15,00,00,00,000						
Date of Issue:	01.08.2009						
Interest Type:	Fixed						
Date of Conversion as on 01.04.2019:	5.7%						
Margin of Floating Interest:	1%						
Are there any Collateral:	Yes						
Frequency of Int. Payment:	Monthly						
If Above is yes, Specify Collateral:							
Class:							
Maturity Period:	2 Years						
Maturity effective from:	01.08.2011						
Replacement Period (in Months):							
Repayment Period:	14 Years						
Repayment Frequency:	14 Half Yearly Installment						
Collateral Type:	None						
Final Redemption Date:	31.12.2012						
Bank Exchange Rate:	84.9302						
Cost of Issue Exchange Rate:	N/A						
Project Code:	Project Name	Amount					
	SHANQU-1	15,00,00,00,000	01.08.2009		30001	00001	
<b>Total Allocated Amount</b>		<b>15,00,00,00,000</b>					

(Petitioner)

**परिमल पीयूष/PARIMAL PIYUSH**  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement Giving Details of Project Financed through a Combination of loan  
Form B

NP NO. (SECTORIAL)	TRANCHE NO	DOORS
0000000001	00001	00002
Unsecured Loan From Indian Bank - II		
Source of Loan	Indian Bank - II	
Category	138	
Amount of Loan	5,00,00,00,000	
Total Drawn amount	5,00,00,00,000	
Date of Issue	8	
Interest Type	Floating	
Rate of Interest as on 31.03.2018	7.75%	
Margin of Floating Interest	0%	
Are there any Capex Plans	Yes	
Frequency of Int. Payment	MONTHLY	
If Above is not, specify Case		
Term		
Maximum Period	10 Years	
Minimum start date from	01.04.2018	
Repayment Period (inc)		
Repayment	10 Years	
Repayment Frequency	14.00% Yearly Instalment	
Repayment Type	Step	
First Repayment Date	01.12.2018	
State Exchange Rate	INR/USD	
Date of State Exchange Rate	N/A	
Expend Code	Project Name	Amount
	0000000001	5,00,00,00,000
Total Allocated Amount		5,00,00,00,000

NP NO. (SECTORIAL)	TRANCHE NO	DOORS
0000000001	00001	00003
Unsecured Loan From Indian Bank - II		
Source of Loan	Indian Bank - II	
Category	138	
Amount of Loan	5,00,00,00,000	
Total Drawn amount	5,00,00,00,000	
Date of Issue	8	
Interest Type	Floating	
Rate of Interest as on 31.03.2018	7.75%	
Margin of Floating Interest	0%	
Are there any Capex Plans	Yes	
Frequency of Int. Payment	MONTHLY	
If Above is not, specify Case		
Term		
Maximum Period	10 Years	
Minimum start date from	01.04.2018	
Repayment Period (inc)		
Repayment	10 Years	
Repayment Frequency	14.00% Yearly Instalment	
Repayment Type	Step	
First Repayment Date	01.12.2018	
State Exchange Rate	INR/USD	
Date of State Exchange Rate	N/A	
Expend Code	Project Name	Amount
	M&I/0001	20,00,00,000.00
	0000000001	28,00,00,000.00
	0000000001	48,00,00,000.00
	0000000001	40,00,00,000.00
	0000000001	80,00,00,000.00
Total Allocated Amount		5,00,00,00,000.00



परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Add. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)



Form B  
TRANCHE NO  
T0801

BP NO 007000011      00000

Unsecured Loan From PFC/L		
Source of Loan	PFC/L	
Currency	INR	
Amount of Loan	1,00,00,00,000	
Total Disbursal amount	1,00,00,00,000	
Date of Issue	0	
Interest Type	Floating	
Date of Interest as on 31.03.2013	0.00%	
Margin if floating interest	0%	
Available and Used Floor	0%	
Compliance of IS. Payment	Monthly	
If Above is not specify Date/ Floor		
Maturity Period	4 Years	
Repayment effective from	08.12.2008	
Repayment Period per		
Maturity date	18 Years	
Repayment Frequency	48 Quarterly installments	
Repayment Type	F&D	
Term Repayment Date	30.07.2013	
Base Exchange Rate	INR/USD	
Date of Base Exchange Rate	N/A	
Project Code	Project Name	Amount
	SRMACH-1	1,00,00,00,000.00
	SRPAT-1	1,00,00,00,000.00
	SRSEKARACHAL	50,00,00,000.00
	SRMACH-2	50,00,00,000.00
Total Allocated Amount		3,00,00,00,000.00

Statement Giving Details of Project Financed through a Combination of loan  
Form B

TRANCHE NO  
T0801

BP NO 007000011      00000

Unsecured Loan From PFC/L		
Source of Loan	PFC/L	
Currency	INR	
Amount of Loan	1,00,00,00,000	
Total Disbursal amount	1,00,00,00,000	
Date of Issue	0	
Interest Type	Floating	
Date of Interest as on 31.03.2013	0.00%	
Margin if floating interest	0%	
Available and Used Floor	0%	
Compliance of IS. Payment	Monthly	
If Above is not specify Date/ Floor		
Maturity Period	4 Years	
Repayment effective from	08.12.2008	
Repayment Period per		
Maturity date	18 Years	
Repayment Frequency	48 Quarterly installments	
Repayment Type	F&D	
Term Repayment Date	30.07.2013	
Base Exchange Rate	INR/USD	
Date of Base Exchange Rate	N/A	
Project Code	Project Name	Amount
	SRMACH	50,00,00,000.00
	SRMACH-2	50,00,00,000.00
Total Allocated Amount		1,00,00,00,000.00



(Signature)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement Giving Details of Project Financed through a Combination of loan  
Form B

DP NO 307900011 TRANCHE NO 70001 DB012

Unallocated Loan From PFC-V

Source of Loan	PFC-V
Currency	INR
Amount of Loan	1,00,00,00,000
Total Disbursed	1,00,00,00,000
Date of Disb	00
Interest Type	Floating
Date of Interest as on 01/04/2019	8.30%
Margin of Floating Interest	0%
Amortisation Method	YTD
Frequency of Int. Payment	Monthly
If Above is not, specify Capex/Opex	
Capex	
Maximum Period	4 Years
Maximum effective from	28.12.2008
Maximum Period (in)	
Maximum	15 Years
Repayment Frequency	48 Quarterly Installments
Repayment Type	PRD
Last Disbursement Date	15.07.2013
Base Exchange Rate	65.25
Date of Base Exchange Rate	N/A

Project Code	Project Name	Amount
00000001	00000001	25,00,00,000.00
00000002	00000002	15,00,00,000.00
00000003	00000003	20,00,00,000.00
00000004	00000004	20,00,00,000.00
00000005	00000005	20,00,00,000.00
00000006	00000006	20,00,00,000.00
00000007	00000007	20,00,00,000.00
00000008	00000008	20,00,00,000.00
00000009	00000009	20,00,00,000.00
00000010	00000010	20,00,00,000.00
<b>Total Allocated Amount</b>		<b>1,00,00,00,000.00</b>

Statement Giving Details of Project Financed through a Combination of loan  
Form B

DP NO 307900011 TRANCHE NO 70001 DB012

Unallocated Loan From PFC-V

Source of Loan	PFC-V
Currency	INR
Amount of Loan	1,00,00,00,000
Total Disbursed	1,00,00,00,000
Date of Disb	00
Interest Type	Floating
Date of Interest as on 01/04/2019	8.30%
Margin of Floating Interest	0%
Amortisation Method	YTD
Frequency of Int. Payment	Monthly
If Above is not, specify Capex/Opex	
Capex	
Maximum Period	4 Years
Maximum effective from	28.12.2008
Maximum Period (in)	
Maximum	15 Years
Repayment Frequency	36 Quarterly Installments
Repayment Type	PRD
Last Disbursement Date	13.07.2013
Base Exchange Rate	65.25
Date of Base Exchange Rate	N/A

Project Code	Project Name	Amount
00000001	00000001	25,00,00,000.00
00000002	00000002	1,00,00,00,000.00
00000003	00000003	20,00,00,000.00
00000004	00000004	20,00,00,000.00
00000005	00000005	20,00,00,000.00
00000006	00000006	20,00,00,000.00
00000007	00000007	20,00,00,000.00
00000008	00000008	20,00,00,000.00
00000009	00000009	20,00,00,000.00
00000010	00000010	20,00,00,000.00
<b>Total Allocated Amount</b>		<b>1,00,00,00,000.00</b>

(Signature)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement Giving Details of Project Financed through a Combination of loan

Form B

TRANCHES NO

BP NO. 507686911	TRANCHES NO. 300001	000000
Unsecured Loan From PPC-V		
Source of Loan	REC-V	
Category	AAA	
Amount of Loan	1,00,00,00,000	
LOAN DRAWN AMOUNT	1,00,00,00,000	
Date of Draw	1	
Interest Type	Dividend	
Rate of Interest as on 01.04.2012	8.40%	
Margin of Floating Interest	NA	
Are there any Caps/ Floor	Yes	
Frequency of IFR Payment	Monthly	
If Above is yes, specify Caps/Floor		
Maturity Period	4 Years	
Maturity Effective Date	06.12.2016	
Repayment Period (yr)		
Maturity	18 Years	
Repayment Frequency	48 Quarterly Installments	
Repayment Type	PRP	
First Repayment Date	15.07.2013	
Basic Exchange Rate	NA/INR	
Date of Basic Exchange Rate	N/A	
Project Code	Project Name	Amount
	KANAKPURA	20,00,00,000.00
	KALYANDURG-II	20,00,00,000.00
	KADAPUR	20,00,00,000.00
	TALUR	20,00,00,000.00
	MALDA	1,00,00,00,000.00
	KAMRANGHAT	20,00,00,000.00
	BALASOBI	20,00,00,000.00
	BERHAMPUR	20,00,00,000.00
<b>Total Allocated Amount</b>		<b>1,00,00,00,000.00</b>

Statement Giving Details of Project Financed through a Combination of loan

Form B

TRANCHES NO

BP NO. 507686911	TRANCHES NO. 300001	000002
Unsecured Loan From PPC-V		
Source of Loan	REC-V	
Category	AAA	
Amount of Loan	1,00,00,00,000	
LOAN DRAWN AMOUNT	1,00,00,00,000	
Date of Draw	1	
Interest Type	Fixed with Floor 8.00 and 3 Years	
Rate of Interest as on 01.04.2012	8.00%	
Margin of Floating Interest	NA	
Are there any Caps/ Floor	Yes	
Frequency of IFR Payment	Monthly	
If Above is yes, specify Caps/Floor		
Maturity Period	4 Years	
Maturity Effective Date	06.12.2016	
Repayment Period (yr)		
Maturity	18 Years	
Repayment Frequency	48 Quarterly Installments	
Repayment Type	PRP	
First Repayment Date	15.07.2013	
Basic Exchange Rate	NA/INR	
Date of Basic Exchange Rate	N/A	
Project Code	Project Name	Amount
	BARHATPUR-I	20,00,00,000.00
	KOLKATA	20,00,00,000.00
	KANAKPURA	20,00,00,000.00
	DEWANGANPUR	18,00,00,000.00
	KAMRANGHAT	20,00,00,000.00
	BALASOBI	20,00,00,000.00
	MALDA	40,00,00,000.00
	KAMRANGHAT-N	20,00,00,000.00
	BALASOBI	20,00,00,000.00
	TALCHER-I	20,00,00,000.00
	BERHAMPUR	20,00,00,000.00
	DUMKA	20,00,00,000.00
	KAMRANGHAT	20,00,00,000.00
<b>Total Allocated Amount</b>		<b>4,00,00,00,000.00</b>

*(Signature)*

(Position)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महसुबबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement Giving Details of Project Financed through a Combination of loan  
Form B

TRANCHE NO 330801		080603	
Disbursed Loan From PFC/V			
Scheme of Loan	MFC-V		
Currency	INR		
Amount of Loan	1,80,00,00,000.00		
Loan Uptake amount	1,80,00,00,000.00		
Term of Loan	10		
Interest Type	Floating		
Rate of Interest as on 31.03.2011	7.25%		
Margin, if floating interest	0%		
Are there any Cash Flows	Yes		
Frequency of Int. Payment	Monthly		
Is Above in per, specify Cash Flow			
Maturity Period	4 Years		
Maturity on/after date	28.12.2008		
Repayment Period (in)	10 Years		
Repayment Frequency	60 Quarterly installments		
Repayment Type	PPM		
First Repayment Date	15.07.2011		
Date of Next Repay Date	15.07.2011		
Date of Base Exchange Rate	N.A.		
Project Code	Project Name	Amount	
	BPCH-I	28,00,00,000.00	
	MANCO-I	28,00,00,000.00	
	SMANCO-I	18,00,00,000.00	
	COCHIN/COCH-I	20,00,00,000.00	
	MANCO-II	50,00,00,000.00	
	BPCH-II	1,00,00,00,000.00	
	COCH	50,00,00,000.00	
	COCH-II	20,00,00,000.00	
	MANCO-II	15,00,00,000.00	
	UPV/UPV (MANCO-I)	18,00,00,000.00	
	UPV/UPV (MANCO-II)	15,00,00,000.00	
	UPV/UPV (MANCO-I)	40,00,00,000.00	
<b>Total Allocated Amount</b>		<b>1,80,00,00,000.00</b>	

Statement Giving Details of Project Financed through a Combination of loan  
Form B

TRANCHE NO 330801		080603	
Disbursed Loan From PFC/V			
Scheme of Loan	MFC-V		
Currency	INR		
Amount of Loan	1,80,00,00,00,000.00		
Loan Uptake amount	1,80,00,00,000.00		
Term of Loan	10		
Interest Type	Fixed with Reset after every 2 Years		
Rate of Interest as on 31.03.2011	7.25%		
Margin, if fixed or interest	0%		
Are there any Cash Flows	Yes		
Frequency of Int. Payment	Monthly		
Is Above in per, specify Cash Flow			
Maturity Period	4 Years		
Maturity on/after date	28.12.2008		
Repayment Period (in)	10 Years		
Repayment Frequency	60 Quarterly installments		
Repayment Type	PPM		
First Repayment Date	15.07.2011		
Date of Next Repay Date	15.07.2011		
Date of Base Exchange Rate	N.A.		
Project Code	Project Name	Amount	
	BPCH-I	80,00,00,000.00	
	BPCH-II	80,00,00,000.00	
	MANCO-I	28,00,00,000.00	
	COCH	47,00,00,000.00	
	UPV/UPV (MANCO-I)	25,00,00,000.00	
	UPV/UPV (MANCO-II)	48,00,00,000.00	
	COCH-II	1,21,00,00,000.00	
	BPCH-II	7,00,00,000.00	
	UPV/UPV	4,00,00,000.00	
	MANCO/COCH-I	8,00,00,000.00	
	UPV/UPV (MANCO-I)	8,00,00,000.00	
<b>Total Allocated Amount</b>		<b>1,80,00,00,000.00</b>	

(Full Name)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement Giving Details of Project Financed through a Combination of loan  
Form B

SF NO: 507300011		TRANCHE NO:	DB004
Unsecured Loan From PFC-V			
Source of Loan	PFC-V		
Currency	INR		
Amount of Loan	1,00,00,00,000		
Total drawn amount	1,00,00,00,000		
Date of Grant	0		
Interest Type	Floating		
Rate of Interest as on 01/04/2019	8.75%		
Margin, if Floating Interest	Nil		
Are there any Cap/Floor	Yes		
Frequency of Int. Payment	Monthly		
If Above is yes, specify Cap/Floor			
Maturity Period	4 Years		
Maturity effective Date	06/12/2024		
Repayment Period (in Months)	18 Years		
Repayment Frequency	48 Quarterly Installments		
Repayment Type	PPFD		
First Repayment Date	15/07/2019		
Base Exchange Rate	INR/USD		
Rate of Base Exchange Rate	N/A		
Project Code	Project Name	Amount	
	001/1144	20,00,00,000.00	
	PARMOVA-1	20,00,00,000.00	
	TAPASWA-1/SHR/SHAD	45,00,00,000.00	
	MUSDA-1	1,00,00,00,000.00	
	SHANU-1	5,00,00,000.00	
	<b>Total Allocated Amount</b>	<b>1,06,00,00,000.00</b>	

Statement Giving Details of Project Financed through a Combination of loan  
Form B

SF NO: 507300011		TRANCHE NO:	DB004
Unsecured Loan From PFC-V			
Source of Loan	PFC-V		
Currency	INR		
Amount of Loan	1,00,00,00,000		
Total drawn amount	1,00,00,00,000		
Date of Grant	0		
Interest Type	Floating		
Rate of Interest as on 01/04/2019	8.75%		
Margin, if Floating Interest	Nil		
Are there any Cap/Floor	Yes		
Frequency of Int. Payment	Monthly		
If Above is yes, specify Cap/Floor			
Maturity Period	4 Years		
Maturity effective Date	06/12/2024		
Repayment Period (in Months)	18 Years		
Repayment Frequency	48 Quarterly Installments		
Repayment Type	PPFD		
First Repayment Date	15/07/2019		
Base Exchange Rate	INR/USD		
Rate of Base Exchange Rate	N/A		
Project Code	Project Name	Amount	
	001/1144	2,15,00,00,000.00	
	MUSDA-1	20,00,00,000.00	
	SHANU-1/AGHML-V	45,00,00,000.00	
	SHANU-1	1,00,00,00,000.00	
	SHANU-1	28,00,00,000.00	
	<b>Total Allocated Amount</b>	<b>1,08,80,00,000.00</b>	

  
(Signature)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement Giving Details of Project Financed through a Combination of loans

Form B

TRANCHE NO

NP NO 267000011		TRANCHE NO 00803	
Unsecured Loan From PFC-V			
Source of Loan	PFC-V		
Category	381		
Amount of Loan	1,00,00,00,000		
Total Disb. amount	1,00,00,00,000		
Date of Disb.	0		
Interest Type	Flat Rate		
Rate of Interest as on 31.03.2014	8.75%		
Margin, if Floating Interest	0%		
Are there any Cash Flows	Yes		
Frequency of Int. Payment	Monthly		
If Above is not, specify Cash Flow			
Maturity Period	4 Years		
Maximum effects from	26.12.2014		
Repayment Period (in Months)	18 Years		
Repayment Frequency	48 Quarterly Installments		
Repayment Type	F-P-D		
First Repayment Date	15/02/2015		
Base Exchange Rate	80/USD		
Date of Base Exchange Rate	N/A		
Project Code	Project Name	Amount	
	21NTPC-01	1,00,00,00,000.00	
	21NTPC-02/03/04	25,00,00,000.00	
	20NTPC-1	25,00,00,000.00	
	20NTPC-2	1,10,00,00,000.00	
	20NTPC-3	45,00,00,000.00	
	20NTPC-4	20,00,00,000.00	
	20NTPC-5/6/7	55,00,00,000.00	
	<b>Total Allocated Amount</b>	<b>4,80,00,00,000.00</b>	

Statement Giving Details of Project Financed through a Combination of loans

Form B

TRANCHE NO

NP NO 2670000121		TRANCHE NO 00805	
Unsecured Loan From Union Bank of India-4			
Source of Loan	Union Bank of India - 4		
Category	381		
Amount of Loan	28,00,00,00,000		
Total Disb. amount	1,00,00,00,000		
Date of Disb.	30.03.2014		
Interest Type	Floating		
Rate of Interest as on 31.03.2014	8.50%		
Margin, if Floating Interest	0%		
Are there any Cash Flows	Yes		
Frequency of Int. Payment	MONTHLY		
If Above is not, specify Cash Flow			
Maturity Period	4 Years		
Maximum effects from	30.03.2012		
Repayment Period (in Months)	14 Years		
Repayment Frequency	20 Half yearly		
Repayment Type	F-P-D		
First Repayment Date	31.03.2017		
Base Exchange Rate	80/USD		
Date of Base Exchange Rate	N/A		
Project Code	Project Name	Amount	
	20NTPC-1	20,00,00,000	
	20-NTPC-2	25,00,00,000	
	20NTPC-3/4/5	28,00,00,000	
	20NTPC-6	28,00,00,000	
	<b>Total Allocated Amount</b>	<b>1,00,00,00,000.00</b>	

(Partner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Add. General Manager (Commercial)  
 एन टी पी सी लिमिटेड /NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement Giving Details of Project Financed through a Combination of loan

Form B

TRANCHE NO  
T20021 00001

RP NO: 660000021

Source of Loan	Cooperation Bank JV
Currency	INR
Amount of Loan	30,00,00,000
Total Loans Financed	30,00,00,000
Date of Issue	11.01.2009
Interest Type	Fixed
Fixed Interest Rate	11.00%
Base Rate, if Floating Interest	N/A
Margin, if Floating Interest	0.00%
Are there any Cap/Floor	No
Prepayment of the Amount	Monthly
If Above is yes, specify Cap/Floor	
Maturity Period	3 Years
Month in which term starts	11.01.2009
Repayment Period (in Months)	36
Repayment Frequency	12 Yearly installments
Repayment Type	AVR
First Repayment Date	11.01.2010
Base Floating Rate	0.00%
Cost of Base Floating Rate	N/A

Project Code	Project Name	Amount
00000001	SHYAMOLI BROWNS P260	8,75,00,000 (11.01.2010)
00000002	PAHARANJOLI SOLAR JV	8,13,00,000 (11.01.2010)
00000003	SHYAMOLI SOLAR	5,14,00,000 (11.01.2010)
00000004	PANAGOLA II	11,42,00,000 (11.01.2010)
00000005	SA GADAGURU II	18,72,00,000 (11.01.2010)
00000006	SA GADAGURU I	14,96,00,000 (11.01.2010)
00000007	CHACHAI DAM	18,80,00,000 (11.01.2010)
00000008	SHYAMOLI	25,21,50,000 (11.01.2010)
00000009	SAIT II	28,09,00,000 (11.01.2010)
00000010	MAKODI I	30,00,00,000 (11.01.2010)
00000011	VAISHYANCHOLU I	1,30,00,000 (11.01.2010)
00000012	SAIT I	1,31,00,000 (11.01.2010)
00000013	MOLUDA	1,30,40,000 (11.01.2010)
00000014	SHANDOLI	1,30,00,000 (11.01.2010)
00000015	SHYAMOLI JV	2,45,00,000 (11.01.2010)
00000016	SOULAM	2,71,00,000 (11.01.2010)
00000017	SHANDOLI	4,70,00,000 (11.01.2010)
00000018	SAIT I	1,00,00,000 (11.01.2010)
<b>Total Allocated Amount</b>		<b>30,00,00,000</b>

Statement Giving Details of Project Financed through a Combination of loan

Form C

TRANCHE NO  
T20021 00001

RP NO: 660000021

Source of Loan	MPFC Bank Ltd. JV
Currency	INR
Amount of Loan	16,30,00,000
Total Loans Financed	16,30,00,000
Date of Issue	24.08.2009
Interest Type	Fixed
Fixed Interest Rate	8.50%
Base Rate, if Floating Interest	N/A
Margin, if Floating Interest	N/A
Are there any Cap/Floor	No
Prepayment of the Amount	Monthly
If Above is yes, specify Cap/Floor	
Maturity Period	3 Years
Month in which term starts	24.08.2009
Repayment Period (in Months)	36
Repayment Frequency	12 Yearly installments
Repayment Type	AVR
First Repayment Date	24.08.2010
Base Floating Rate	0.00%
Cost of Base Floating Rate	N/A

Project Code	Project Name	Amount
00000001	SAIT I	2,54,21,50,000 (24.08.2009)
00000002	BOBOLGURU	2,09,81,00,000 (24.08.2009)
00000003	CHATTI BAGOTI DAM	11,40,00,000 (24.08.2009)
00000004	SHYAMOLI SOLAR	28,00,00,000 (24.08.2009)
00000005	SHYAMOLI	15,43,50,000 (24.08.2009)
00000006	KHARICOLI	1,80,00,000 (24.08.2009)
00000007	SOULAM	4,34,00,000 (24.08.2009)
00000008	SAIT II	4,34,00,000 (24.08.2009)
00000009	SAIT I	4,34,00,000 (24.08.2009)
00000010	MOLUDA	89,48,00,000 (24.08.2009)
00000011	MOLUDA	1,80,00,000 (24.08.2009)
00000012	NORTH KARNALI I & II	58,00,00,000 (24.08.2009)
00000013	PAOLI BHARWADI DAM	1,07,21,50,000 (24.08.2009)
00000014	SHANDOLI	88,00,00,000 (24.08.2009)
00000015	SHANDOLI	20,00,00,000 (24.08.2009)
00000016	SHANDOLI	21,00,00,000 (24.08.2009)
00000017	SAIT I	18,47,00,000 (24.08.2009)
00000018	SHANDOLI	83,75,00,000 (24.08.2009)
00000019	SHANDOLI	1,00,00,000 (24.08.2009)
00000020	SHYAMOLI (JV)	18,00,00,000 (24.08.2009)
00000021	SHYAMOLI JV	85,00,00,000 (24.08.2009)
00000022	SHYAMOLI JV	1,48,20,00,000 (24.08.2009)
<b>Total Allocated Amount</b>		<b>16,30,00,000</b>



परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (राजिनिष्ठा)  
Add. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

(Perforated)

Parameters	XXXXX A 17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Source of Loan	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
Category	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Amount of Loan sanctioned	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Interest Type	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
Fixed Interest Rate / Floating	11.75	11.75	11.75	11.75	11.75	11.75	11.75	11.75	11.75	11.75	11.75	11.75	11.75	11.75	11.75	11.75	11.75	11.75
Margin 15 Floating Interest	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
Are there any Capital cost	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
1. 2020 15 yrs specific repayment	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Maturity Period	5 yrs	10 yrs	15 yrs	18 yrs	20 yrs	10 yrs	15 yrs	20 yrs	25 yrs	30 yrs	10 yrs	15 yrs	20 yrs	25 yrs	30 yrs	10 yrs	15 yrs	20 yrs
Repayment effective from #	22.03.11	25.01.2012	24.05.11	24.10.12	24.08.2013	25.12.2013	16.12.2013	16.12.2013	16.12.2013	16.12.2013	16.12.2013	16.12.2013	16.12.2013	16.12.2013	16.12.2013	16.12.2013	16.12.2013	16.12.2013
Repayment Period	14 yrs	9 yrs	9 yrs	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment
Repayment effective from	22.03.2017	25.01.2018	24.05.18	24.10.19	24.08.2020	16.12.2020	16.12.2020	16.12.2020	16.12.2020	16.12.2020	16.12.2020	16.12.2020	16.12.2020	16.12.2020	16.12.2020	16.12.2020	16.12.2020	16.12.2020
Repayment Frequency	Yearly	Yearly	Yearly	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment	Subst. Repayment
Repayment Installment	500	1000	2000	3000	3000	20000000	24000000	112001900	208001000	115001900	180001000	1800	Installment 1st - 200130.01 2nd - 410,275.22 3rd - 412,275.22	18000	18000	18250	40000	40000
Cost Exchange Rate																		
Door to Door Maturity	28 yrs	18 yrs	15 yrs	10 yrs	10 yrs	10 yrs	10 yrs	20 yrs	10 yrs	15 yrs	22 yrs	10 yrs						

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 EOC, A-8A, Sector-24, Noida-201301 (U.P.)







Name of the Company	NTPC Limited					
Name of the Power Station	Various					
Particulars	5.625% Fixed Rate Notes due 2021*	4.75% Fixed Rate Notes due 2022#	SBI, NEW YORK**			
Source of Loan						
Drawal	-	-				
Currency	USD	USD	I	II	III	IV
Amount of loan sanctioned	50,00,00,000	50,00,00,000	USD			
Amount of Gross Loan draws upto 26.03.2014 / COD	50,00,00,000	50,00,00,000	5,00,00,000	5,00,00,000	5,00,00,000	10,00,00,000
Interest Type	Fixed	Fixed	Floating			
Fixed Interest Rate, if applicable	5.625% *	4.75% #				
Base Rate, if floating interest	-	-	6 Month LIBOR			
Margin, if floating interest rate	-	-	1.85			
Are there any Caps / Floor	NO	NO	NO			
If above is Yes, specify Caps / Floor	-	-				
Moratorium Period	10 Years	10 Years	6 Years			
Moratorium effective from	14-Jul-2011	03-Oct-2012	06-Mar-2013			
Repayment period	Bullet payment	Bullet payment	1 Year			
Repayment effective from	13-Jul-2021	03-Oct-2022	29-Jul-2019			
Repayment frequency	One time	One time	Semi Annual			
Repayment instalment	50,00,00,000	50,00,00,000	2 Half Yearly Instalments			
Base Exchange Rate (26.03.2014)	60.81	60.81	60.81			
Are foreign currency loan hedged	NO	NO	NO			
If above is Yes, specify details	-	-				
Name of the Projects	%	%	%	%	%	%
Barh-II	19.3670%	2.7617%				
Bongaigaon	15.5700%	4.8526%				12.52330%
Maula	20.6600%	8.4848%				
Rihand-II	17.5990%	9.5029%				6.81617%
VSTPP-IV	19.7400%	10.6301%				8.38906%
Simhadri-II	2.3370%	3.8948%				13.58716%
Koldam	2.0570%	6.4273%				
Tapovan	1.6940%	3.1659%				
Spat-1	1.0980%	1.0980%				
Barh-I	-	11.2889%			9.40359%	23.80581%
Kudgi-I	-	5.0420%		27.69642%		8.33242%
Lara-I	-	15.2868%		0.15026%		
Maula-II	-	3.8033%		28.94482%	23.26568%	7.53019%
Solapur	-	5.4994%		14.89637%	10.07040%	6.57238%
Kawas R&M	-	4.4580%			24.15102%	
Gandhar R&M	-	0.2499%			33.10833%	
Auraiya R&M	-	2.4361%				
Korba R&M	-	1.1375%				
VSTPP-V				19.72072%		13.64250%
Gadarwara			100.00000%	8.59141%		
<b>Notes:-</b>						
a) The interest rate is exclusive of withholding tax currently @ 21.84% w.e.f 01.04.2019 (inclusive of surcharge & education cess) to be grossed up *						
b) The interest rate is exclusive of withholding tax currently @ 9.46% w.e.f 01.04.2019 (inclusive of surcharge & education cess) to be grossed up #						
c) The interest rate is exclusive of withholding tax currently @ 5.46% w.e.f 01.04.2019 (inclusive of surcharge & education cess) on Mizuho portion (10% of Loan)**						
d) Base exchange rate are the SBI BIL selling rate as on 26.03.2014						
e) Distribution of loan package to various projects is based on utilisation of loan as on 26.03.2014						

(Petitioner)

परिमल पीयूष / PARIMAL PIYUSH  
 अध्यक्ष, नैरावरण (व्यवसायिक)  
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 एन टी सी सी लिमिटेड / NTPC LIMITED  
 EDC, A-9A, Sector-24, Noida-201301

S.NO	Bank Loan	Interest Rate	Applicable from	Applicable upto	Number of Days	Product	Weighted Average Rate of Interest	
1	HDFC Bank Limited-II	8.450%	01-Apr-19	01-07-2019	91.00	7.69	8.0594%	
		8.400%	01-Jul-19	29-07-2019	28.00	2.35		
		8.300%	29-Jul-19	29-08-2019	31.00	2.57		
		8.200%	29-Aug-19	29-09-2019	31.00	2.54		
		8.100%	29-Sep-19	29-10-2019	30.00	2.43		
		8.000%	29-Oct-19	01-12-2019	33.00	2.64		
		7.650%	01-Dec-19	01-03-2020	91.00	6.96		
		7.450%	01-Mar-20	31-Mar-20	31.00	2.31		
					366.00	29.50		
			2020-21	7.450%	01-Apr-20	31-May-20		61.00
		6.300%	01-Jun-20	23-Dec-20	206.00	12.98		
		5.950%	24-Dec-20	31-Mar-21	98.00	5.83		
					365.00	23.35		
2	HDFC Bank Limited-IV	8.450%	01-Apr-19	17-04-2019	16.00	1.35	8.0492%	
		8.400%	17-Apr-19	29-07-2019	103.00	8.65		
		8.300%	29-Jul-19	29-08-2019	31.00	2.57		
		8.200%	29-Aug-19	29-09-2019	31.00	2.54		
		8.100%	29-Sep-19	29-10-2019	30.00	2.43		
		8.000%	29-Oct-19	01-12-2019	33.00	2.64		
		7.650%	01-Dec-19	01-03-2020	91.00	6.96		
		7.450%	01-Mar-20	31-Mar-20	31.00	2.31		
					366.00	29.46		
			2020-21	7.450%	01-Apr-20	31-May-20		61.00
		6.300%	01-Jun-20	23-Dec-20	206.00	12.98		
		5.950%	24-Dec-20	31-Mar-21	98.00	5.83		
					365.00	23.35		
	2021-22	5.95%	01-04-2021	31-03-2022	365	21.72	5.95%	
	2022-23	5.95%	01-04-2022	23-05-2022	53.00	3.15	7.2335%	
		6.35%	24-05-2022	23-06-2022	31.00	1.97		
		6.85%	24-06-2022	23-08-2022	61.00	4.18		
		7.35%	24-08-2022	23-10-2022	61.00	4.48		
		7.85%	24-10-2022	23-12-2022	61.00	4.79		
		8.20%	24-12-2022	31-12-2022	8.00	0.66		
		7.95%	01-01-2023	28-02-2023	59.00	4.69		
		8.01%	01-03-2023	31-03-2023	31.00	2.48		
				365.00	26.40			
	2023-24	8.01%	01-Apr-23	31-May-23	61.00	4.89	7.96%	
		7.95%	01-Jun-23	31-Mar-24	305.00	24.25		
					366.00	29.13		
3	HDFC Bank Limited-IX	6.300%	24-Aug-20	23-Dec-20	122.00	7.69	6.1441%	
		5.950%	24-Dec-20	31-Mar-21	98.00	5.83		



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					220.00	13.52	
	2021-22	5.95%	01-04-2021	31-03-2022	365	21.72	5.95%
	2022-23	5.95%	01-04-2022	23-05-2022	53.00	3.15	
		6.35%	24-05-2022	23-06-2022	31.00	1.97	
		6.85%	24-06-2022	23-08-2022	61.00	4.18	
		7.35%	24-08-2022	23-10-2022	61.00	4.48	
		7.85%	24-10-2022	23-12-2022	61.00	4.79	
		8.20%	24-12-2022	31-12-2022	8.00	0.66	
		7.95%	01-01-2023	28-02-2023	59.00	4.69	
		8.01%	01-03-2023	31-03-2023	31.00	2.48	
					365.00	26.40	7.2335%
	2023-24	8.01%	01-Apr-23	31-May-23	61.00	4.89	
		7.95%	01-Jun-23	31-Mar-24	305.00	24.25	
					<b>366.00</b>	<b>29.13</b>	<b>7.96%</b>
<b>4</b>	<b>HUDCO-I</b>	8.300%	01-Apr-19	01-05-2019	30.00	2.49	8.0131%
		8.200%	01-May-19	01-08-2019	92.00	7.54	
		8.050%	01-Aug-19	01-11-2019	92.00	7.41	
		7.900%	01-Nov-19	01-02-2020	92.00	7.27	
		7.700%	01-Feb-20	31-Mar-20	60.00	4.62	
					366.00	29.33	8.0131%
	2020-21	7.700%	01-Apr-20	30-Apr-20	30.00	2.31	7.3986%
		7.400%	01-May-20	31-Jul-20	92.00	6.81	
		7.000%	01-Aug-20	23-Aug-20	23.00	1.61	
					145.00	10.73	
<b>5</b>	<b>Indian Bank-II</b>	8.2500%	01-Apr-19	28-Jun-19	88.00	7.26	8.2500%
					88.00	7.26	8.2500%
<b>6</b>	<b>Jammu &amp; Kashmir Bank-IV</b>	8.3000%	01-Apr-19	01-05-2019	30.00	2.49	7.9880%
		8.2500%	01-May-19	01-07-2019	61.00	5.03	
		8.2000%	01-Jul-19	01-09-2019	62.00	5.08	
		8.0000%	01-Sep-19	01-10-2019	30.00	2.40	
		7.9500%	01-Oct-19	01-11-2019	31.00	2.46	
		7.9000%	01-Nov-19	01-12-2019	30.00	2.37	
		7.8000%	01-Dec-19	01-01-2020	31.00	2.42	
		7.7000%	01-Jan-20	01-02-2020	31.00	2.39	
		7.6500%	01-Feb-20	31-Mar-20	60.00	4.59	
					366.00	29.24	7.9880%
	2020-21	7.600%	01-Apr-20	30-Apr-20	30.00	2.28	6.6804%
		7.250%	01-May-20	31-May-20	31.00	2.25	
		7.200%	01-Jun-20	30-Jun-20	30.00	2.16	
		7.150%	01-Jul-20	31-Jul-20	31.00	2.22	
		7.000%	01-Aug-20	31-Aug-20	31.00	2.17	
		6.850%	01-Sep-20	26-Nov-20	87.00	5.96	
		5.880%	27-Nov-20	31-Mar-21	125.00	7.35	
					365.00	24.38	

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	2021-22	5.88%	01-04-2021	31-03-2022	365	21.46	5.88%
	2022-23	5.88%	01-04-2022	26-05-2022	56.00	3.29	
		6.28%	27-05-2022	26-07-2022	61.00	3.83	
		6.78%	27-07-2022	26-09-2022	62.00	4.20	
		7.28%	27-09-2022	26-11-2022	61.00	4.44	
		7.78%	27-11-2022	30-12-2022	34.00	2.65	
		7.73%	31-12-2022	26-03-2023	86.00	6.65	
		7.98%	27-03-2023	31-03-2023	5.00	0.40	
					365.00	25.46	6.9753%
	2023-24	7.98%	01-Apr-23	31-Mar-24	366.00	29.21	
					<b>366.00</b>	<b>29.21</b>	<b>7.98%</b>
<b>7</b>	<b>Karnataka Bank Ltd II</b>	7.9600%	01-Apr-19	28-08-2019	88.00	7.00	7.4476%
		7.8500%	28-Jun-19	28-09-2019	92.00	7.22	
		7.1900%	28-Sep-19	28-12-2019	91.00	6.54	
		6.8300%	28-Dec-19	31-Mar-20	95.00	6.49	
					366.00	27.26	7.4476%
		6.100%	01-Apr-20	27-Jun-20	88.00	5.37	5.3767%
		5.000%	28-Jun-20	27-Sep-20	92.00	4.60	
		5.220%	28-Sep-20	31-Mar-21	185.00	9.66	
					365.00	19.63	
<b>8</b>	<b>State Bank of India - VII</b>	8.2500%	01-Apr-19	14-05-2019	43.00	3.55	7.9342%
		8.1500%	14-May-19	14-08-2019	92.00	7.50	
		7.9500%	14-Aug-19	14-11-2019	92.00	7.31	
		7.7000%	14-Nov-19	14-02-2020	92.00	7.08	
		7.6500%	14-Feb-20	31-Mar-20	47.00	3.60	
					366.00	29.04	7.9342%
	2020-21	7.650%	01-Apr-20	13-May-20	43.00	3.29	6.8560%
		7.000%	14-May-20	13-Aug-20	92.00	6.44	
		6.650%	14-Aug-20	31-Mar-21	230.00	15.30	
					365.00	25.02	
	2021-22	6.65%	01-04-2021	31-03-2022	365	24.27	6.65%
	2022-23	6.65%	01-04-2022	13-05-2022	43.00	2.86	
		6.75%	14-05-2022	13-08-2022	92.00	6.21	
		7.15%	14-08-2022	13-11-2022	92.00	6.58	
		7.60%	14-11-2022	13-02-2023	92.00	6.99	
		8.00%	14-02-2023	31-03-2023	46.00	3.68	
					365.00	26.32	7.2108%
	2023-24	8.00%	01-Apr-23	13-May-23	43.00	3.44	
		8.10%	14-May-23	29-Jun-23	47.00	3.81	
					<b>90.00</b>	<b>7.25</b>	<b>8.05%</b>
<b>9</b>	<b>State Bank of India - VIII</b>	8.2500%	01-Apr-19	14-05-2019	43.00	3.55	7.9342%

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 एन. टी. पी. सी. लिमिटेड, नोडा-201301 (U.P.)


		8.1500%	14-May-19	14-08-2019	92.00	7.50	
		7.9500%	14-Aug-19	14-11-2019	92.00	7.31	
		7.7000%	14-Nov-19	14-02-2020	92.00	7.08	
		7.6500%	14-Feb-20	31-Mar-20	47.00	3.60	
					366.00	29.04	7.9342%
	2020-21	7.650%	01-Apr-20	13-May-20	43.00	3.29	6.8560%
		7.000%	14-May-20	13-Aug-20	92.00	6.44	
		6.650%	14-Aug-20	31-Mar-21	230.00	15.30	
					365.00	25.02	
	2021-22	6.65%	01-04-2021	31-03-2022	365	24.27	6.65%
	2022-23	6.65%	01-04-2022	13-05-2022	43.00	2.86	
		6.75%	14-05-2022	13-08-2022	92.00	6.21	
		7.15%	14-08-2022	13-11-2022	92.00	6.58	
		7.60%	14-11-2022	13-02-2023	92.00	6.99	
		8.00%	14-02-2023	31-03-2023	46.00	3.68	
					365.00	26.32	7.2108%
	2023-24	8.00%	01-Apr-23	13-May-23	43.00	3.44	
		8.10%	14-May-23	13-Aug-23	92.00	7.45	
		8.15%	14-Aug-23	13-Feb-24	184.00	15.00	
		8.20%	14-Feb-24	31-Mar-24	47.00	3.85	
					366.00	29.74	8.13%
10	Union Bank-II	8.4000%	01-Apr-19	01-07-2019	91.00	7.64	8.0795%
		8.3500%	01-Jul-19	03-09-2019	64.00	5.34	
		8.0000%	03-Sep-19	03-11-2019	61.00	4.88	
		7.9000%	03-Nov-19	03-01-2020	61.00	4.82	
		7.8000%	03-Jan-20	03-02-2020	31.00	2.42	
		7.7000%	03-Feb-20	31-Mar-20	58.00	4.47	
					366.00	29.57	8.0795%
	2020-21	7.700%	01-Apr-20	02-Apr-20	2.00	0.15	6.7019%
		7.350%	03-Apr-20	02-Jun-20	61.00	4.48	
		7.250%	03-Jun-20	02-Jul-20	30.00	2.18	
		7.150%	03-Jul-20	02-Aug-20	31.00	2.22	
		6.950%	03-Aug-20	31-Aug-20	29.00	2.02	
		6.800%	01-Sep-20	30-Sep-20	30.00	2.04	
		6.750%	01-Oct-20	30-Nov-20	61.00	4.12	
		6.000%	01-Dec-20	31-Mar-21	121.00	7.26	
					365.00	24.46	
	202-122	6.00%	01-04-2021	31-03-2022	365	21.90	6.00%
	2022-23	6.00%	01-04-2022	10-05-2022	40.00	2.40	
		6.40%	11-05-2022	10-06-2022	31.00	1.98	
		6.90%	11-06-2022	10-08-2022	61.00	4.21	
		7.40%	11-08-2022	10-10-2022	61.00	4.51	
		7.90%	11-10-2022	10-12-2022	61.00	4.82	
		8.25%	11-12-2022	29-12-2022	19.00	1.57	
		7.50%	30-12-2022	10-01-2023	12.00	0.90	

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 एन.ए.ए. सेक्टर-24, नोडा-201301 (U.P.)

		7.65%	11-01-2023	10-02-2023	31.00	2.37	
		7.90%	11-02-2023	31-03-2023	49.00	3.87	
					365.00	26.64	7.2975%
	2023-24	7.90%	01-Apr-23	10-Jan-24	285.00	22.52	
		8.10%	11-Jan-24	31-Mar-24	81.00	6.56	
					<b>366.00</b>	<b>29.08</b>	<b>7.94%</b>
<b>11</b>	<b>Corporation Bank-III</b>	8.200%	01-04-2019	25-09-2019	177.00	14.51	8.0276%
		8.050%	25-09-2019	25-10-2019	30.00	2.42	
		8.000%	25-10-2019	25-12-2019	61.00	4.88	
		7.850%	25-12-2019	25-01-2020	31.00	2.43	
		7.750%	25-01-2020	25-02-2020	31.00	2.40	
		7.600%	25-02-2020	31-03-2020	36.00	2.74	
					366.00	29.38	8.0276%
	2020-21	7.600%	01-Apr-20	24-Apr-20	24.00	1.82	6.7032%
		7.350%	25-Apr-20	24-May-20	30.00	2.21	
		7.250%	25-May-20	24-Jun-20	31.00	2.25	
		7.150%	25-Jun-20	24-Jul-20	30.00	2.15	
		6.950%	25-Jul-20	24-Aug-20	31.00	2.15	
		6.800%	25-Aug-20	24-Sep-20	31.00	2.11	
		6.750%	25-Sep-20	30-Nov-20	67.00	4.52	
		6.000%	01-Dec-20	31-Mar-21	121.00	7.26	
					365.00	24.47	
	2021-22	6.00%	01-04-2021	31-03-2022	365	21.90	6.00%
	2022-23	6.00%	01-04-2022	10-05-2022	40.00	2.40	
		6.40%	11-05-2022	10-06-2022	31.00	1.98	
		6.90%	11-06-2022	10-08-2022	61.00	4.21	
		7.40%	11-08-2022	10-10-2022	61.00	4.51	
		7.90%	11-10-2022	10-12-2022	61.00	4.82	
		8.25%	11-12-2022	29-12-2022	19.00	1.57	
		7.50%	30-12-2022	10-01-2023	12.00	0.90	
		7.65%	11-01-2023	10-02-2023	31.00	2.37	
		7.90%	11-02-2023	31-03-2023	49.00	3.87	
					365.00	26.64	7.2975%
	2023-24	7.90%	01-Apr-23	10-Jan-24	285.00	22.52	
		8.10%	11-Jan-24	31-Mar-24	81.00	6.56	
					<b>366.00</b>	<b>29.08</b>	<b>7.94%</b>
<b>12</b>	<b>Corporation Bank-IV</b>	8.2500%	01-Apr-19	11-04-2019	10.00	0.83	8.0556%
		8.2000%	11-Apr-19	11-10-2019	183.00	15.01	
		8.0500%	11-Oct-19	11-11-2019	31.00	2.50	
		8.0000%	11-Nov-19	11-01-2020	61.00	4.88	
		7.8500%	11-Jan-20	11-02-2020	31.00	2.43	
		7.7500%	11-Feb-20	11-03-2020	29.00	2.25	
		7.6000%	11-Mar-20	31-Mar-20	21.00	1.60	
					366.00	29.48	8.0556%

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)



2020-21	7.600%	01-Apr-20	10-Apr-20	10.00	0.76	6.6705%
	7.350%	11-Apr-20	10-May-20	30.00	2.21	
	7.250%	11-May-20	10-Jun-20	31.00	2.25	
	7.150%	11-Jun-20	10-Jul-20	30.00	2.15	
	6.950%	11-Jul-20	10-Aug-20	31.00	2.15	
	6.800%	11-Aug-20	10-Sep-20	31.00	2.11	
	6.750%	11-Sep-20	30-Nov-20	81.00	5.47	
	6.000%	01-Dec-20	31-Mar-21	121.00	7.26	
				365.00	24.35	
2021-22	6.00%	01-04-2021	31-03-2022	365	21.90	6.00%
2022-23	6.00%	01-04-2022	10-05-2022	40.00	2.40	
	6.40%	11-05-2022	10-06-2022	31.00	1.98	
	6.90%	11-06-2022	10-08-2022	61.00	4.21	
	7.40%	11-08-2022	10-10-2022	61.00	4.51	
	7.90%	11-10-2022	10-12-2022	61.00	4.82	
	8.25%	11-12-2022	29-12-2022	19.00	1.57	
	7.50%	30-12-2022	10-01-2023	12.00	0.90	
	7.65%	11-01-2023	10-02-2023	31.00	2.37	
	7.90%	11-02-2023	31-03-2023	49.00	3.87	
				365.00	26.64	7.2975%
2023-24	7.90%	01-Apr-23	10-Jan-24	285.00	22.52	
	8.10%	11-Jan-24	31-Mar-24	81.00	6.56	
				<b>366.00</b>	<b>29.08</b>	<b>7.94%</b>
 (Petitioner)						

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)



Rihand-III

(Rs Lakhs)

## Year wise Prepayment of Loans

Sr. No.	Bank	ROI on prepayment date	Date of Prepayment	Replaced with Bank	ROI of replaced Loan	Prepayment Amount	Benefit(%)	Benefit(%) retained with NTPC
<b>Prepayment of Loans in 2016-17</b>								
1	Allahabad Bank-III	9.55%	20-Dec-16	ICICI V	8.80%	2285.71	0.75%	0.25%
2	Dena Bank-II	9.40%	20-Dec-16	ICICI V	8.80%	10000.00	0.60%	0.20%
3	Punjab & Sind Bank-I	9.60%	14-Feb-17	SBI VIII	8.00%	3214.29	1.60%	0.53%
4	Bank of Maharashtra - III	8.70%	28-Mar-17	Karnataka Bank -II	7.70%	1785.71	1.00%	0.33%
5	Bank of Maharashtra - V	8.70%	28-Mar-17	Karnataka Bank -II	7.70%	2812.50	1.00%	0.33%
						<b>20098.21</b>		
<b>Prepayment of Loans during 2017-18</b>								
1	LIC-V	11.00%	16-Sep-17	ICICI-VI	7.90%	4270.00	3.10%	1.03%
						<b>4270.00</b>		
<b>Prepayment of Loans during 2018-19</b>								
1	ICICI Bank- V	8.60%	11-Jan-19	Corporation Bank	8.20%	12285.71	0.40%	0.13%
2	ICICI Bank- VI	8.60%	15-Jan-19	Bonds Sr 67	8.33%	4270.00	0.27%	0.09%
						<b>16555.71</b>		

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Rihand-III

(Rs Lakhs)

Year wise Prepayment of Loans

Sr. No.	Bank	ROI on prepayment date	Date of Prepayment	Replaced with Bank	ROI of replaced Loan	Prepayment Amount	Benefit(%)	Benefit(%) retained with NTPC
Prepayment of Loans in 2020-2021								
1	HUDCO	7.25%	24-Aug-20	HDFC-IX	6.30%	2,043.00	0.95%	0.48%
2	PFC-V	7.83%	15-Oct-20	BOND-72	5.45%	1,662.50	2.38%	1.19%
3	PFC-V	8.17%	15-Oct-20	BOND-72	5.45%	4,200.00	2.72%	1.36%
4	PFC-V	8.30%	15-Oct-20	BOND-72	5.45%	1,750.00	2.85%	1.43%
6	PFC-V	8.23%	15-Oct-20	BOND-72	5.45%	6,125.00	2.78%	1.39%
						<b>15,780.50</b>		

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTPC Limited
Name of the Generating Station	Rihand Super Thermal Power Station Stage-III
COD	27-03-2014
For Financial Year	2019-24 (Summary)

Sl. No.	Head of Work /Equipment	ACE Claimed					Justification	Admitted Cost by the
		2019-20	2020-21	2021-22	2022-23	2023-24		
1	2	3	4	5	6	7	8	9
<b>A.</b>	<b>Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate</b>							
A.1.1	Works Under original scope in main plant packages							
A.1.1a	SG+TG							
A.1.1b	Coal Handling System	170.44	-	242.20	-			
A.1.1c	Switch gear Package	2.64	-	-91.68				
A.1.1d	SWITCHYARD Package	-						
A.1.1e	Road & Drainage		37.18	23.23	7.63	21.62		
A.1.1f	Fire Protection Package	40.68	1.70	3.69		9.14		
A.1.1g	Transformers Package: Power Transformers	-	32.83					
A.1.1h	Main plant/Chimney/CW System/Offsite Civil works	1.55	0.21	20.48				
A.1.1i	Tools & Plants	-	19.40					
A.1.1j	STATION C&I Package	14.81						
A.1.1k	Temp. construction & enabling works	0.02			13.23			
A.1.1l	Air Condition & Ventilation System	0.26	0.08	2.83	4.69	0.12		
				6.16				
A.1.1m	ELECTRICAL EQUIPMENTS (Cables, Cable facilities & Grounding)	-1.56	-		6.62			
A.1.1n	PT Plant Package		3.20					
A.1.1o	Central Repair Facility (CRF) Building - Civil Works	2.57	-		0.17			
	<b>Subtotal (A.1.1)</b>	<b>231.41</b>	<b>94.59</b>	<b>206.91</b>	<b>32.34</b>	<b>30.88</b>		
A.1.2	Township: Quarters and other facilities	53.54	98.08	112.46	38.93	13.15		
A.1.3	Ash Water Recirculation	10.16	162.49					
A.1.4	MGR		200.00					
A.1.5	Sewage Treatment Plant	135.84	4.90					
A.1.6	Ash Related Works							
A.1.6a	Wagons/ Bogie for transportation of Ash through Rail	-	5,724.96	2,482.94	6.97	6,625.93		
l.	Bogey Tank For Alumina Powder (BTAP) Wagon for Ash		4,623.54	2,420.84				

Pl. refer Form-9 of respective FYs.

  
 श्रीमती अश्विनी/ PARIMAL PIYUSH  
 Addl. General Manager (Commercial)  
 ई.टी.पी.सी. सिस्टम्स / NTPC LMT  
 EOC, A-8A, Sector-24, Noida-201305

ii.	Bogie Brake Van Type-BCVM					
A.1.6b	Ash Bricks Plant		78.95	41.58		
A.1.6c	Dry Ash Extraction System, Stage-III (Allowed Work)		3.31	0.02	6.97	
	3rd Raising of Central Ash Dyke Lagoon-II					6,625.48
			1,019.14	20.50		0.45
A.1.7	AGC Implementation					
				19.29		
A.1.8	Upgradation Of HMI System					
	Decap on Upgradation of HMI					359.81
						-204.63
A.1.10	Online-Analyser for CEMS for CO, CO2, Sox, Nox		79.20			
	<b>Subtotal (A.1)</b>	<b>430.95</b>	<b>6364.21</b>	<b>2,821.60</b>	<b>78.24</b>	<b>6,625.14</b>
A.2	Capitalization of MBOAs	115.92	175.18	114.40	613.09	130.09
A.3	Decap of Spares (Part of Capital Cost)	-56.79	-1124.69	-29.51	-85.07	-43.91
A.4	Decap of MBOA: Part of Capital Cost	-123.88	-13.33	-167.65	-649.91	-622.86
	<b>Total Claims</b>	<b>366.21</b>	<b>5401.38</b>	<b>2738.84</b>	<b>-43.64</b>	<b>5988.46</b>
A.5	Discharge of Liability	491.83	1715.92	859.66	721.13	641.10
	<b>Total (A)</b>	<b>858.04</b>	<b>7,117.30</b>	<b>3,598.51</b>	<b>677.48</b>	<b>6,629.55</b>
B.	<b>Works beyond Original scope excluding add-cap due to Change in Law eligible for RoE at Wtd. Average rate of Interest</b>					
B.1	Safety & Security of Plant	-	-	-	-	305.144
	<b>Total (B)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>305.144</b>
	<b>Total Add. Cap. Claimed (A+B)</b>	<b>858.044</b>	<b>7,117.296</b>	<b>3,598.508</b>	<b>677.484</b>	<b>6,934.696</b>

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Name of the Follower		Year wise Statement of Additional Capitalization after COD										FORM-3
Name of the Generating Station		NTPC Limited										FORM-3
COD		Brijnagar Thermal Power Station Stage-II										FORM-3
For Financial Year		21-01-2014										FORM-3
		2013-20										FORM-3
Sl. No.	Head of Work/Equipment	Party Name	ACR Claimed							Regulation & Order which claimed	Justification	Admitted Cost by the Commission, if any
			Account book as per Note 2	Net AS Adj.	Account book as per RGAAP	Un-discharged Liability included in col. 3	Cash Inlets	ESC include d as per 2	10			
1	2	3	4	5	6	7	8	9	10	11	12	
A	Works under Original scope, Change in Law etc. eligible for Cost at Normal Rate											
A.1	Capital Allowed Items											
A.1.1	Works under original scope & civil plant packages											
A.1.1a	200+10											
A.1.1a1	200 Inlet and COP											
A.1.1a2	10 Inlet											
A.1.1a3	Subtotal (A.1.1a)											
A.1.1b	Coal handling system											
A.1.1c	Switch gear Package											
A.1.1d	Plant & Overpass											
A.1.1e	Fire Protection Package											
A.1.1f	Transformers Package (Power Transformers)											
A.1.1g	Main Busbar/Collector/Switchgear/Switchgear/Coal works											
A.1.1h	Tanks & Ponds											
A.1.1i	RTATION CO. Package											
A.1.1j	Tank construction & ending work											
A.1.1k	ELECTRICAL EQUIPMENT (Cables, Cable facilities & Grounding)											
A.1.1l	Cable & Power Facility (CBF) Building - Civil Works											
	Subtotal (A.1.1)											
A.1.2	Township/Quarters and other facilities											
A.1.3	Ash Water Recirculation											

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Year wise Statement of Additional Capitalization after CDD											PART 4 FORM 9	
Name of the Petitioner Name of the Generating Station CCG							NTPC Limited Rajind Super Thermal Power Station Stage-II 27-03-2014 2019-20					
For Financial Year												
Sl. No.	Head of Work/ Equipment	Party Name	ACF Claimed					Amount in Rs Lakhs				
			Account basis as per Rule 2	Ind AG AGL	Account basis as per 1044P	Un- discharged Liability included in rule 2	Cash basis	ERC included in col. 5	Regulation s under which claimed	Justification	Admitted Cost by the Commission, if any	
1	2	3	4	5	6	7	8	9	10	11	12	
<b>A. Works under Original scope, Change in Law etc. eligible for RoC at Normal Rate</b>												
A.1.3	Sludge Treatment Plant	Hydrotech Parivahan (India) Pvt. Ltd/ Evers Case Engg Chowhan Brothers	148.85	-	142.06	5.11	130.84	-	20(100)		400	
The present work was allowed by Hon'ble Commission in order dttd. 27.12.2022 in petition no. 406/GT/2020 for 2019-24 period under Change in Law as per the directions of Uttar Pradesh Pollution Control Board (UPPCB) vide its letter dated 25.07.2018 under Change in Law. The present capitalization is release of payment for balance work.												
There is difference in expenditure allowed and actual capitalization as allowed capitalization was based on estimate for the respective year while actual expenditure is based on actual execution.												
The petitioner further tacitly submits that there is no debit against the present system as the old system for sludge treatment was an oxidation pond whereas no expensive machinery was involved.												
Hon'ble Commission may be pleased to allow the same.												
A.1.6	Package BIV		-75.68	-	-75.68	-75.68	-	-	20(190)			
Capitalization is reimbursement of facilities due to Foreign Exchange Rate variation corresponding to the works allowed by Hon'ble Commission. Hon'ble Commission may be pleased to allow the same as and when the liability is discharged.												
Subtotal (A.1)			-473.57	-	-473.57	-42.62	-420.89	-				
A.2	Capitalization of MBOAs		120.41	-	120.41	10.48	-115.83	-	20(20)			
These MBOAs were replaced due to replacement of assets which were deployed under original scope. The old assets served their useful life and were fully depreciated. Hon'ble Commission may be pleased to allow the capitalization of these MBOAs as per Regulation 25(2) (a) of Tariff Regulation, 2018 as replacement of these MBOAs were administered since the useful life of these assets were not commensurate with the useful life of the Station.												
A.3	Decap of Spares (Part of Capital Cost)		-86.78	-10.53	-86.78	-	-86.78	-	20(21)			
These spares were part of capital cost, have become unrecyclable. Accordingly the same are de-capitalized.												
A.4	Decap of MBOA (Part of Capital Cost)		-123.88	-	-123.88	-	-123.88	-	20(2)			
These assets were part of capital cost, have become unrecyclable. Accordingly the same are de-capitalized.												
Total Claim for year			-409.89	-18.53	-409.12	-51.11	-358.01	-				
4.5	Add: Discharge of liability corresponding to allowed/ claimed works						401.63		20(18)	Details given in Form-5, i.e., Liability Flow Sheet are		
Total additional capitalization claimed with RoC at Normal Rate (A)								888.04				
<b>B. Works beyond Original scope excluding add-cap due to Change in Law eligible for RoC at WRA, Average rate of interest</b>												
Total (B)												
Total A+B Capital Claimed								888.04				

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (दायित्विय-रत)  
Add. General Manager (Corporate cost)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-BA, Sector-24, Noida-201301 (U.P.)



Year-wise Statement of Additional Capitalization after IDC

PART-9  
FORM-9

Name of the Petitioner: NTPC Limited  
 Name of the Generating Station: Ghazal Super Thermal Power Station Stage II  
 CDD: 27.03.2014  
 For Financial Year: 2009-11

Sl. No.	Head of Work/Equipment	Party Name	A/Cr. Debited						Repatriation & under which claimed	Justification	Amount in Rs. Lakhs
			Accrued basis as per para 2	Est. A/c. Deb.	Actual basis as per IAS/MSAP	Un-discharged Liability included in cat. 3	Cash basis	IDC include d in cat. 3			
1	2	3	4	5	6	7	8	9	10	11	12
A	Works under Original scope. Change in Law etc. rights for A/Cr. at Normal Rate										
A.1.1	Works under original scope in B&H plant packages										
A.1	Classical/Approved Items										
A.1.1	Works under original scope in main plant										
A.1.1a	Plant & Package	Vencon Pvt Ltd	1.70	-	1.70	-	-	1.70	-		
A.1.1b	UPS/DC/MSD Package	Shakti Energy, Electronics Ltd	40.31	-	40.31	2.72	-	37.59	-		
A.1.1c	Fire Protection Package	Mansel Transfers India Ltd	32.83	-	32.83	-	-	32.83	-		
A.1.1d	Transformer Package	CO Power And Industrial Solutions	18.52	-	18.52	-	-	18.52	-		
A.1.1e	Main plant/Chimney/CW System/Other Civil works	Simple Infrastructure Ltd	112.54	-	112.54	83.14	-	29.40	-	29/10/08 29/10/08	
A.1.1f	Temp. installation & erection works	Vencon Pvt Ltd	5.08	-	5.08	-	-	5.08	-		
A.1.1g	ELECTRICAL CONTROL/STARTER/CONTROL	Patel Engineering	3.98	-	3.98	-	-	3.98	-		
A.1.1h	PT Plant Package	Merely Metal Engg Company	3.28	-	3.28	-	-	3.28	-		
A.1.1i	Control Room Facility (CRC) Building - Civil	Shakti Energy Ltd	34.14	-	34.14	-	-	34.14	-		
		<b>Subtotal (A.1.1)</b>	<b>248.81</b>	-	<b>248.81</b>	<b>146.26</b>	-	<b>102.55</b>	-		
A.1.2	Temporary Quarters and other facilities	Vencon Pvt Ltd	120.00	-	120.00	21.04	-	98.96	-	29/10/08 29/10/08	
A.1.3	Ash Water Recirculation System	Sludge & Roof Company India Ltd	92.48	-	92.48	-	-	92.48	-	29/10/08	
A.1.4	MSD		200.00	-	200.00	-	-	200.00	-	29/10/08	
A.1.5	Storage Treatment Plant	Hydrotech Polywater (India) Pvt. Ltd	19.84	-	19.84	14.14	-	5.70	-	29/10/08	
A.1.6	Ash Recirculation System										400
A.1.6a	Vegoria/ Sagar for transportation of Ash through rail										
A.1.6a-1	Soggy Tank for Ashes Powder (STAP) Vegoria for Ash	Termaco Rail & Engineering Ltd	5,061.78	3.00	5,061.71	435.85	-	4,623.64	-	29/10/08	
A.1.6a-2	Soggy Tank for Type-2 Ash	Termaco Rail & Engineering Ltd	78.95	-	78.95	-	-	78.95	-	29/10/08	

These works are part of the Original Scope of works and were completed & capitalized before cut-off date.  
 The current additional capitalization pertains to the release of balance payments on account of performance test and other contract closure activities.  
 Hon'ble Commission may be pleased to allow the same.

Justification as provided in A.1.3 of form 'B' 2010-2011  
 Hon'ble Commission may be pleased to allow the capitalization.

These works are part of the Original Scope of works and were completed & capitalized before cut-off date.  
 The current additional capitalization pertains to the release of balance payments on account of contract closure activities.  
 Hon'ble Commission may be pleased to allow the same.

These works are part of the Original Scope of works and were completed & capitalized before cut-off date.  
 The current additional capitalization pertains to the release of balance payments on account of contract closure activities.  
 Hon'ble Commission may be pleased to allow the same.

Justification as provided in A.1.5 of form 'B' 2010-2011  
 Hon'ble Commission may be pleased to allow the capitalization.

It is submitted that MCEFC vide notification dated 03.11.2008 had directed that all the Thermal Power Plants shall achieve 100% Ash utilization within 5 years. Subsequently, vide notification dated 25.01.2010, the target date for 100% Ash utilization was revised to 31.12.2010. It is further submitted that in the 2nd meeting of Joint Committee (JC) under the Chairmanship of Shri. Shri. Shri. Singh, Joint Secretary (MCEFC) held on 17th and 18th July 2010 to discuss action plan to achieve 100% Ash utilization by the Thermal Power Plants (TPPs), it was decided that NTPC should submit revised quarterly action plan for Category 'C' TPPs, which includes Revised STPS, to achieve 80% utilization of fly ash including bottom ash by FY 10-11 and 100% by ash utilization by FY 20-21. Copy of notification dated 11.2009, notification dated 25.01.2010 and minutes of meeting dated 18.07.2010 are attached as Annexure-2870.

It is respectfully submitted that in view of the remote location of Revised STPS, it is not possible to utilize the ash locally and hence been decided to transport the ash to plants at Ludhiana via the Rail in Waggon/Plaster through rail and store it there for disposal at the same to various agencies for utilization.

For transporting the Ash from Revised STPS to the site location, Soggy Tank Car for Ashes Powder (STAP) vegoria are required. STAP are being used along with a special air handling system for discharging powder from the bottom through pipes like a fluid. In view of the large amount of ash generated from the existing station and remoteness of the station, this is necessary requirement to comply with the directions of MCEFC.

It is further submitted that Hon'ble Commission vide order dated 28.10.2002 in 2002MP2001 has allowed recovery of ash transportation expenses after adjusting the revenue through sale of ash. The instant status is incurring expenditure on ash transportation in excess of revenue through ash sale.

The petitioner humbly submits that the present expenditure is towards developing infrastructure for meeting an obligation as mandated by MCEFC.

Hon'ble Commission may be pleased to allow capitalization under compliance of existing law.

  
**परिमल प्रियुष / PARIMAL PIYUSH**  
 अपर महाप्रबन्धक (व्यापारिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड / NTPC LIMIT  
 EOC, A-8A, Sector-24, Noida-201301


A.1.6b	Ash Sludge Plant	Peer Debar	3.31	-	3.31	-	3.31	-		The present capitalization is towards 100% absorption of ash as mandated by HCL SCC by available or ash stock pile. It is further submitted that HCL Commission vide order dt. 28.10.2022 in 2024/2021 has allowed recovery of ash transportation charges after adjusting the revenue through sale of ash. The present station is incurring expenditure on ash utilization in order of revenue through ash sale.  The petitioner hereby submits that the present expenditure is towards developing infrastructure for enabling ash utilization as mandated by HCL SCC.  HCL Commission may be pleased to allow the same.
A.1.6c	3rd Recharging of Central Ash Dye (Agreem.)	National Prestige Construction Co.	1,083.20	-1.41	1,051.50	92.78	1,019.14	-	261.88	Ash dye slaking is a continuous activity being carried out during the life of the plant. It remains in operation. In order to have optimum utilization of land for ash disposal, reservation of forest/conservation land and compliance with the directions of statutory bodies, capacity of Ash Dye was been enhanced by raising of the ash dyke for raising the level of disposal of ash.  The HCL Commission may be pleased to allow the same.
	Subtotal (A.1.6)		5,197.28	-1.41	5,195.88	479.84	5,774.95	-		
A.1.7	Package DTV		-32.42	-	-32.42	-32.42	-	-	28.000	The present capitalization is reinstatement of liabilities due to Foreign Exchange Rate variation corresponding to the norms allowed by HCL Commission. HCL Commission may be pleased to allow the same as and when the liabilities are discharged.
A.1.8	Online Analyser for CEMS for CO, CO2, SOx, NOx	Force Marshall Pvt. Ltd	79.28	-	79.28	-	79.28	-	26.704	As per Guidelines for Continuous Emission Monitoring Systems issued by MoEF, the CEMS must have the capability of online data monitoring. The present capitalization has been done to enable online measurement and monitoring of CEMS data as per MoEF guidelines. (MoEF guidelines attached as Annexure 28X2). HCL Commission may be pleased to allow the same.
	Subtotal (A.1.8)		5,986.88	-1.41	5,985.47	527.91	6,344.31	-		
A.2	Capitalization of MGOs		215.96	-	215.96	46.70	175.18	-	252294	These MGOs were capitalized due to replacement of assets which were deployed under original scope. These assets achieved their useful life and were fully depreciated. HCL Commission may be pleased to allow the capitalization of these MGOs as per Regulation 28 (2) (a) of Tariff Regulation, 2010 as replacement of these MGOs were necessitated since the useful life of these assets were not commensurate with the useful life of the Station.
A.3	Cost of Spares (Part of Capital Cost)		-305.33	-305.33	-1,124.88	-	-1,124.88	-	2523	These spares were part of capital cost, hence become unallowable. Accordingly the same are disallowed.
A.4	Cost of MGOs (Part of Capital Cost)		-13.11	-13.11	-13.11	-	-13.11	-	2523	These spares were part of capital cost, hence become unallowable. Accordingly the same are disallowed.
	Total Capital Cost		6,263.08	-329.95	5,933.13	463.70	5,469.38	-		
A.5	Add: Discharge of liability corresponding to allowed carried work						1715.00	-	28.000	Details given in Form D, i.e., Liability Flow Statement
	Total additional capitalization claimed with HCL at Normal Rate (A)						7,184.38	-		
B.	MGOs beyond Original scope excluding add-on due to change in Law/Regd. for HCL at 104. Average rate of interest									
	Cost B1									
	Total Add. Cap. Claimed (B+B1)						7,184.38	-		

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Year wise Statement of Additional Capitalisation after COG											PART-I FORM-9		
Name of the Petitioner		NTPC Limited											
Name of the Generating Station		Rihand Super Thermal Power Station Stage-II											
COG		27-03-2014											
For Financial Year		2021-22											
Sl. No.	Head of Work /Equipment	Party Name	ACB Claimed					Un-discharged Liability included in cat 3	Cash basis	IDC included in cat 3	Regulation under which classes	Justification	Admitted Cost by the Commission, if any
			Annual basis as per Note 2	Ind Ag Adj.	Accrual basis as per GAAP								
1	2	3	4	5	6	7	8	9	10	11	12		
A	Works under Original scope, Change in Law etc. eligible for NOC at Normal Rate												
A.1	Claimed Items												
A.1.1	Works under original scope in main plant packages												
A.1.1a	SG+TG												
A.1.1.1	SG Island and ESP	BHEL, New Delhi	14.35	-	14.05	4.13	0.91	-			These works are part of the Original Scope of works and were completed & capitalised before cut-off date.  The current additional capitalization pertains to cost adjustment and the release of balance payments on account of material reconciliation and other PG tests and other contract closure activities.  Hon'ble Commission may be pleased to allow the same.		
A.1.1.1a	TG Island	BHEL, New Delhi	236.39	-	236.04	3.50	252.29	-					
	Subtotal (A.1.1a)		250.74	-	250.14	7.64	242.20	-					
A.1.1b	Coal Handling Plant		-91.88	-	-91.68	-	-91.68	-					
A.1.1c	SWITCHYARD Package	BHEL, New Delhi	32.10	-	32.10	8.87	23.23	-					
A.1.1d	Road & Drainage		3.99	-	3.99	-	3.99	-					
A.1.1e	Transformers Package	CG Power And Industrial Solutions	20.48	-	20.48	-	20.48	-					
A.1.1f	Temp. construction & enabling works		2.83	-	2.83	-	2.83	-					
A.1.1g	Air Condition & Ventilation System		6.16	-	6.16	-	6.16	-					
	Subtotal (A.1.1)		223.72	-	223.72	16.81	226.81	-					
A.1.2	Township: Quarters and other facilities	Various Parties	127.07	-	127.07	14.61	112.40	-	24(1)(b) & 25(1)(a)	Justification as provided in A.1.2 of form "9 2019-20". Hon'ble Commission may be pleased to allow the capitalization.			
A.1.3	Ash Related works												
A.1.3a	Transportation of Ash through Rail												
A.1.3a.1	Ropes Tare For Alumina Powder (STAP) Wagon for Ash	Tremaco Rail & Engineering Ltd	2,029.99	-	2,029.99	209.18	2,430.84	-		Justification as provided in A.1.3a of form "9 20-21". Hon'ble Commission may be pleased to allow the capitalization.			
A.1.3a.2	BOGIE BRAKE VAN TYPE BVCM		41.58	-	41.58	-	41.58	-	26(1)(a)	Justification as provided in A.1.3a of form "9 20-21". Hon'ble Commission may be pleased to allow the capitalization.			
A.1.3b	Ash Bricks Plant		0.02	-	0.02	-	0.02	-		Justification as provided in A.1.3b of form "9 20-21". Hon'ble Commission may be pleased to allow the capitalization.			
A.1.3c	3rd Raising of Central Ash Dyeke Lagasse-II	National Prestige Construction Co	29.50	-	29.50	-	29.50	-	25(1)(a)	Justification as provided in A.1.3c of form "9 20-21". Hon'ble Commission may be pleased to allow the capitalization.			
	Subtotal (A.1.3)		2,692.18	-	2,692.10	209.18	2,492.94	-					
A.1.4	Package BRV		10.54	-	10.54	10.54	-	-	25(1)(a)	The present capitalization is reversalment of liabilities due to Foreign Exchange Rate variation corresponding to the works allowed by Hon'ble Commission. Hon'ble Commission may be pleased to allow the same as and when the liabilities are discharged.			

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)  
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A.1.5	AGC Implementation	ABB India Limited	62.37	-0.38	62.00	42.71	19.29	25(1)(b)	<p>Hon'ble Commission vide its order dated 28.06.2019 in petition no.318/PC/2018 directed all IGGTs stations to implement the AGC as per observation given below: "24. In the interest of reliable and safe grid operation, the Commission directs that all the IGGT stations whose tariff is determined or adopted by CERC shall be AGC-enabled and the ancillary services including secondary control through AGC be implemented as per the following direction:</p> <p>1. All thermal/PPCC stations with installed capacity of 200 MW and above and all Hydro stations having capacity exceeding 20 MW excluding the Run-of-River Hydro Projects irrespective of size of the generating station and whose tariff is determined or adopted by CERC are directed to install equipment at the unit control rooms for implementing the required data for AGC as per the requirement to be notified by NLDG. NLDG shall notify the said requirements within one month of this order.</p> <p>.....</p> <p>Copy of order dated 28.06.2019 is attached as Annexure-3C/1.</p> <p>Accordingly, in compliance of direction of Hon'ble Commission, implementation of AGC was carried out at the instant station.</p> <p>Further, Hon'ble Commission has allowed additional capital expenditure incurred on implementation of AGC in Petition No-306/OT/2020 vide its order dated 27.05.2022. Therefore, it is humbly requested that Hon'ble Commission may be pleased to allow for same at the instant station under Regulation 26 (1)(b) of Tariff Regulations, 2019.</p>	
Subtotal (A.1)			3,116.80	-0.38	3,116.42	293.82	2,821.60			
A.2	Capitalization of MROAs	Various Parties	165.89	0.45	166.32	94.92	114.40	25(2)(a)	<p>These MROAs were capitalised due to replacement of assets which were deployed under original scope. The old assets outlived their useful life and were fully depreciated. Hon'ble Commission may be pleased to allow the capitalization of these MROAs as per Regulation 25 (2) (a) of Tariff Regulation, 2019 as replacement of these MROAs were necessitated since the useful life of these assets were not commensurate with the useful life of the station.</p>	
A.3	Decap of MROAs: Part of Capital Cost		-25.18	-4.33	-29.51	-	-29.51	25(2)	<p>These assets were part of capital cost, have become unserviceable. Accordingly the same are de-capitalised.</p>	
A.4	Decap of Spares: Part of Capital		-125.01	-42.05	-167.05	-	-167.86	25(2)	<p>These spares were part of capital cost, have become unserviceable. Accordingly the same are de-capitalised.</p>	
Total claim (A)			3,126.91	-46.92	3,087.59	348.74	2,738.84			
A.5	Add: Discharge of liability corresponding to allowed claimed works						659.55	25(1)(c)	<p>Details given in Para-6, i.e., Liability Flow Statement</p>	
Total additional capitalization claimed with RoE at Normal Rate (A)							2,998.39			
B. Works beyond Original scope relating add-cap due to Change in Law eligible for RoE at Wtd. Average rate of Interest										
Total (B)										
Total Add. Cap. Claimed (A+B)							2,998.39			

  
 परिमल पीयूष/PARIMAL PIYUSH  
 अवर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Year wise Statement of Additional Capitalisation after CDD											PART-I FORM-8	
Name of the Petitioner							NTPC Limited					
Name of the Generating Station							Rihand Super Thermal Power Station Stage-III					
COD							27-03-2014					
For Financial Year							2022-23					
Sl. No.	Head of Work Equipment	Party Name	ACE Claimed					Amount in Rs Lakh			Justification	Admitted Cost by the Commission, if any
			Accrual basis as per Note 2	Ind AS Adj.	Accrual basis as per GAAP	Un-discharged Liability included in col. 3	Cash basis	IOC included in col. 3	Regulations under which claimed			
1	2	3	4	5	6	7	8	9	10	11	12	
A.	Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate											
A.1	Claimed Items											
A.1.1	Works under original scope in main plant packages											
A.1.1a	Station C&I Package	Schneider Electric Systems	13.13	-	13.13	-0.09	13.23	-		These works are part of the Original Scope of works and were completed & capitalised before cut-off date.  The current additional capitalization pertains to the release of balance payments on account of contract closure activities.  Hon'ble Commission may be pleased to allow the same.		
A.1.1b	Central Repair Facility (CRF) Building		36.06	-	36.06	35.09	0.17	-				
A.1.1c	Temp. construction & erasing works		4.89	-	4.89	-	4.89	-	24(1)(b) & 25(1)(d)			
A.1.1d	Switchyard Package	Shree Heavy Electricals Ltd	7.63	-	7.63	-	7.63	-				
A.1.1e	Electrical Equipments (Cables, Cable facilities & Grounding)	KE Industries Ltd	6.62	-	6.62	-	6.62	-				
	Subtotal (A.1.1)		68.34	-	68.34	35.76	32.34	-				
A.1.2	Township: Quarters and other facilities		91.01	-	91.01	52.06	38.95	-	24(1)(b) & 25(1)(d)	Justification as provided in A.1.2 of form '9-19-20'		
A.1.4	Ash Related works		6.97	-	6.97	-	6.97	-	25(1)(b)	Justification as provided in A.1.5b of form '9-20-21'		
A.1.5	Package EHV		61.73	-	61.73	61.73	-	-	25(1)(b)	The present capitalization is reinstatement of liabilities due to Foreign Exchange Rate variation corresponding to the works allowed by Hon'ble Commission. Hon'ble Commission may be pleased to allow the same as and when the liabilities are discharged.		
	Subtotal (A.1.2)		227.64	-	227.64	149.60	78.26	-				
A.2	Capitalization of MBOAs	Various Parties	640.95	2.33	650.30	37.28	613.09	-	25(2)(b)	These MBOAs were capitalised due to replacement of assets which were deployed under original scope. The old assets crossed their useful life and were fully depreciated. Hon'ble Commission may be pleased to allow the capitalization of these MBOAs as per Regulation 25 (2) (b) of Tariff Regulation, 2015 as replacement of these MBOAs were necessitated since the useful life of these assets were not commensurate with the useful life of the Station.		
A.3	Decap of MBOAs: Part of Capital Cost		-83.71	-1.36	-85.07	-	-85.07	-	25(2)	These assets were part of capital cost, have become unserviceable. Accordingly the same are decapitalized.		
A.4	Decap of Spares: Part of Capital Cost		-365.49	-294.42	-649.91	-	-649.91	-	25(2)	These spares were part of capital cost, have become unserviceable. Accordingly the same are decapitalized.		
	Total claim (A)		429.79	-383.45	143.24	166.89	-63.64	-				
A.17	Adj. Discharge of liability corresponding to allowed claimed works						121.33	-	25(1)(b)	Details given in Form-9, i.e., Liability Flow Statement		

  
**परिमल पीयूष / PARIMAL PIYUSH**  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड / NTPC Limited  
 EOC, A-8A, Sector-24, Noida-201301

Total additional capitalization claimed with RoI at Normal Rate (A)						677.48			
B. Works beyond Original scope excluding addi-cap due to Change in Law eligible for RoI at 10% Average rate of Interest									
Total (B)									
Total Add. Cap. Claimed (A+B)						677.48			

 (Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Year wise Statement of Additional Capitalization after COD**

PART  
FORM - 3

Name of the Petitioner: NTPC Limited  
 Name of the Generating Station: Noida Super Thermal Power Station Stage-II  
 COD: 27-03-2014  
 For Financial Year: 2023-24

Sl. No.	Head of Work / Equipment	Party Name	ACS Claimed						Regulations under which claimed	Justification	Admitted Cost by the Commission, if any
			Accrual basis as per Note 2	Incl AS A-4	Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IOC include d in col. 9			
1	2	3	4	5	6	7	8	9	10	11	12
A	Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate										
A.1	<b>Classed Items</b>										
A.1.1	Works under original scope in main plant packages										
A.1.1a	Switchyard Package		20.87	-	25.87	4.25	21.62	-		These works are part of the Original Scope of work and were completed & capitalized before out-of-date. The current additional capitalization pertains to the release of balance payments on account of contract release activities. Hon'ble Commission may be pleased to allow the same.	
A.1.1b	Road & Drainage		0.14	-	0.14	-	0.14	-	24(1)(b) & 25(1)(a)		
A.1.1c	Temp. construction & enabling works		0.12	-	0.12	-	0.12	-			
	<b>Subtotal (A.1.1)</b>		<b>21.13</b>	<b>-</b>	<b>26.13</b>	<b>4.25</b>	<b>21.88</b>	<b>-</b>			
A.1.2	Traveling & Cobey		13.15	-	13.15	-	13.15	-	24(1)(b) & 25(1)(a)	As/In/after as provided in A.1.2 of Mem 'B' 2019-20. The present capitalization is towards balance payments. Hon'ble Commission may be pleased to allow the capitalization.	
A.1.3	<b>Ash Related Works</b>										
A.1.3a	Dry Ash Extraction System, Stage-II		6,709.21	-	6,709.21	83.72	6,625.49	-	26(1)(a)	Florida Commission vide para 13 of order dttd. 28.12.2023 in ADRG T0820 has allowed the work of Dry Ash Extraction System. There is variation in actual capitalization vis-a-vis allowed as the expenditure allowed was based on estimation while expenditure capitalized is based on actual awarded value. Hon'ble Commission may be pleased to allow the present capitalization.	3261
A.1.3b	3rd Raising of Central Ash Dyke Lagoon/1		0.45	-	0.45	-	0.45	-	28(1)(a)	Justification as provided in A.1.3a of Mem 'B' 2023-24. Hon'ble Commission may be pleased to allow the capitalization.	
	<b>Subtotal (A.1.3)</b>		<b>6,709.66</b>	<b>-</b>	<b>6,709.66</b>	<b>83.72</b>	<b>6,625.94</b>	<b>-</b>			
A.1.5	Upgrade of HMI Package										
A.1.5	Upgrade of HMI System		355.94	3.07	358.81	-	355.81	-		The HMI system installed at the instant stations were based on Windows 7 for which no support from OEM is available. Accordingly, in compliance of CEA (Cyber Security in Power Sector) Guidelines, 2021 and direction from Govt order dated 28.04.2022 the HMI system was upgraded for ensuring safe and reliable operation of the Station as no spare and service support was available for the obsolete HMI system (Technosono later by OEM attached as Annexure-2671). CEA under the provision of Regulation (15) of the Central Electricity Authority (Technical Standards for Connectivity to the Grid (Amendment) Regulations, 2019) issued CEA (Cyber Security in Power Sector) Guidelines, 2021 (Amended as Annexure-2672). The CEA guidelines, 2021 require for compliance of following salient points w.r.t Cyber Security in Power Sector.	

*Signature*

**परिमल पीयूष / PARIMAL PIYUSH**  
 अपर महाप्रबन्धक (व्यावसायिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड / NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

A.1.5a	Decap on Upgradation of IIS	-52.14	-122.48	-204.83	-	-204.65	-	<p>(i) Phasing out of legacy systems  (ii) Ensuring security hardening with additional controls in consultation with the OEM  (iii) Maintaining system logs at least for 6 months duration.</p> <p>Further, Ministry of Electronics and Information Technology (MeitY), Govt of India vide its order No-2000/2022-CERT-In Govt dated 25.04.2022 issued Directions under sub-section (5) of section 70B of the Information Technology Act, 2008 (Attached as Annexure-2B/C) which inter alia provides:-</p> <p>"All service providers, intermediaries, data centers, body corporate and Government organisations shall mandatorily enable logs of all their ICT systems and maintain them securely for a rolling period of 180 days and the same shall be maintained within the Indian jurisdiction. These should be provided to CERT-In along with reporting of any incident or when ordered / directed by CERT-In."</p> <p>In view of above IIS system has been upgraded. It is humbly submitted that Hon'ble Commission may be pleased to allow same under Regulation 25(2) (c) of Tariff Regulations, 2019</p>		
	Subtotal (A.1.5)	275.80	-118.62	188.18	-	155.18	-			
A.1.7	Package COV	-238.65	-	-235.00	-238.65	-	-	25(1)(d)	The present capitalization is reinstatement of liabilities due to Foreign Exchange Rate variation corresponding to the works allowed by Hon'ble Commission. Hon'ble Commission may be pleased to allow the same as and when the liabilities are discharged.	
	Subtotal (A.1)	5,793.51	-118.62	6,674.81	-180.83	6,825.14	-			
A.2	Capitalization of MBOAs	130.91	0.85	130.96	0.88	130.89	-	25(2)(a)	These MBOAs were capitalized due to replacement of assets which were delayed under original scope. The old assets reached their useful life and were fully depreciated. Hon'ble Commission may be pleased to allow the capitalization of these MBOAs as per Regulation 25 (2) (a) of Tariff Regulation, 2019 as replacement of these MBOAs were necessitated since the useful life of these assets were not commensurate with the useful life of the Station.	
A.3	Delay of MBOAs: Part of Capital Cost	-32.88	-11.82	-45.01	-	-42.81	-	25(2)	These assets were part of capital cost, have become unworkable. Accordingly the same are de-capitalized.	
A.4	Delay of Spares: Part of Capital Cost	-899.91	-362.86	-122.86	-	-122.86	-	25(2)	These spares were part of capital cost, have become unworkable. Accordingly the same are de-capitalized.	
	Total claim (A)	5,332.68	-493.34	5,835.71	-149.78	5,988.48	-			
A.14	ADD: Discharge of liability corresponding to allowed/ claimed work					641.19	-	25(1)(b)	Details given in Form-5, i.e., Liability Flow Statement	
	Total additional capitalization claimed with RoE at Normal Rate (A)					6,629.68	-			
B.	Works beyond Original scope including add-on due to Change in Law eligible for RoE at Wtd. Average rate of interest									
A.1.6	Safety & Security of Plant	421.44	-	421.44	114.29	305.14	-	20(1)(a)	Hon'ble Commission vide para 26 of order dtd. 28/12/2025 in 4000T/0025 has allowed the expenditure towards safety related works.  There is variation in actual capitalization vis-a-vis allowed as the expenditure allowed was based on estimation while expenditure capitalized is based on actual expenditure for items procured under for safety and security of the plant.  Hon'ble Commission may be pleased to allow the present capitalization.	071
	Total (B)					385.14	-			
	Total Add. Cap. Claimed (A+B)					6,934.70	-			

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबंधक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-6A, Sector-24, Noida-201301 (U.P.)



## Calculation of Depreciation

Name of the Petitioner		NTPC Limited												
Name of the Generating Station		Rihand Super Thermal Power Station Stage-II												
Sl.No.	Name of the Asset	Depreciation Rates as per CERC's Depreciation Rate Schedule	Gross Block as on 31.03.2019		Gross Block as on 31.03.2020		Gross Block as on 31.03.2021		Gross Block as on 31.03.2022		Gross Block as on 31.03.2023		Amount in Rs Lakh	
				Depreciation		Depreciation		Depreciation		Depreciation		Depreciation		Depreciation
1	Land/Lease Hold*	3.34%	149	4.97	149	4.97	149	4.97	149	4.97	115.60	3.85		
2	Plant & Machinery	5.28%	475311	25096.43	483015	25545.45	485292	25623.41	481212	25935.98	493401	26051.00		
3	Cooling Towers & CW System	5.28%	22880	1208.09	22880	1208.09	22880	1208.09	22880	1208.09	22880	1208.09		
4	Air conditioning	5.28%	819	43.23	819	43.23	819	43.23	819	43.23	819	43.23		
5	Chimney	5.28%	5874	310.13	5874	310.13	5874	310.13	5874	310.13	5874	310.13		
6	Main Plant Building	3.34%	8996	300.47	8996	300.47	8996	300.47	8996	300.47	8996	300.47		
7	Ash Dyke/Disposal Area	5.28%	410	21.67	410	21.67	410	21.67	410	21.67	410	21.67		
8	S-Yard	5.28%	5685	300.18	5685	300.18	5685	300.18	5685	300.18	5685	300.18		
9	Raw Water Reservoir	5.28%	1540	81.32	1540	81.32	1540	81.32	1540	81.32	1540	81.32		
10	MGR & Wagons	5.28%	7969	420.78	7969	420.78	7969	420.78	7969	420.78	7969	420.78		
11	Locomotive	9.50%	9478	900.45	9478	900.45	9478	900.45	9478	900.45	9478	900.45		
12	Residential Building	3.34%	18145	605.05	18217	608.44	18367	613.45	18483	617.88	18625	622.08		
13	Water Treatment Plant	5.28%	8052	319.54	8203	327.51	8220	328.68	8220	328.75	8228	329.75		
14	Sparos	5.28%	13187	696.28	13859	731.74	16649	879.09	15357	810.84	16963	874.54		
15	Furniture & Fixtures, OFFICE EQUIPMENT	6.33%	1220	77.25	1328	84.05	1420	89.89	1454	92.05	1476	93.42		
16	Other MBOAs / T&Ps	6.33%	621	39.29	621	39.29	621	39.29	621	39.30	629	39.84		
17	EDP/WP & SATCOM	15.00%	799	119.50	792	118.87	811	121.70	809	121.32	825	122.82		
18	Construction equipment	5.28%	48	2.54	48	2.54	48	2.54	48	2.54	48	2.54		
19	Temp. Constructions	100.00%	1313	1313.18	1313	1313.18	1313	1313.18	1313	1313.18	1313	1313.18		
20	Central Repair/Workshop	5.28%	1330	70.21	1328	70.12	1326	70.02	1303	71.96	1379	72.79		
21	Road/Bridge	3.34%	6883	229.88	6913	230.90	6916	230.95	6912	230.86	6912	230.86		
22	Software	15.00%	11	1.69	11	1.69	11	1.69	11	1.69	12	1.83		
23	Water Supply drainage	5.28%	133	7.05	133	7.05	133	7.05	133	7.05	133	7.05		
24	5 Km Scheme	5.28%	0	0.01	0	0.01	0	0.01	0	0.01	0	0.01		
25	Hospital Equipment	5.28%	0	0.01	0	0.01	0	0.01	0	0.01	0	0.01		
26	Vehicle	9.50%	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00		
Total			508655.76	32170.58	508384.59	32672.18	603212.40	32926.95	608068.65	33181.08	612584.03	33436.45		
Weighted Average Rate of Depreciation (%)				5.4632%		5.4601%		5.4586%		5.4568%		5.4626%		

\* The leasehold land asset amounting to Rs. 1,489 Cr. was capitalized in 2015-16 on accrual basis (Nil on cash basis). Subsequently in 2022-23, liability of Rs. 1,560 Cr. was discharged. The petitioner in Form-11 for 2014-19 true-up inadvertently considered this leasehold land as free hold land and Hon'ble Commission also considered the same in Form-12 while calculating depreciation in 2014-19 true-up order. The petitioner humbly submits that since the land is lease-hold land, hence the same may not be considered for depreciation calculation.

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Statement of Depreciation

PART-I  
FORM- 12

Name of the Company :

NTPC Limited

Name of the Power Station :

Rihand Super Thermal Power Station Stage-III

S. No.	Particulars	(Amount in Rs Lakh)					
		2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
1	Opening Capital Cost	550580.55	551385.35	552243.39	559360.69	562959.20	563636.68
2	Closing Capital Cost	551385.36	552243.39	559360.69	562959.20	563636.68	570571.38
3	Average Capital Cost	550982.96	551814.37	555802.04	561159.94	563297.94	567104.03
1a	Cost of IT Equipments & Software included in (1) above	-	810.58	800.80	819.72	816.76	1,243.89
2a	Cost of IT Equipments & Software included in (2) above	-	800.80	819.72	816.76	1,243.89	761.27
3a	Average Cost of IT Equipments & Software	-	805.69	810.26	818.24	1,030.33	1,002.58
4	Freehold land*	148.90	0.00	0.00	0.00	0.00	0.00
5	Rate of depreciation	5.470%	5.46%	5.46%	5.46%	5.46%	5.46%
6	Depreciable value	4,95,750.65	4,96,713.50	5,00,302.86	5,05,125.77	5,07,071.18	5,10,493.88
7	Balance useful life at the beginning of the period	20.31	19.31	18.31	17.31	16.31	15.31
8	Remaining depreciable value	3,63,820.94	3,35,005.81	3,08,486.95	2,83,407.29	2,54,822.26	2,27,876.25
9	Depreciation (for the period)	30,138.31	30,146.92	30,347.15	30,631.48	30,738.03	30,978.39
10	Depreciation (annualised)	30,138.31	30,146.92	30,347.15	30,631.48	30,738.03	30,978.39
11	Cumulative depreciation at the end of the period	1,62,068.02	1,91,854.62	2,22,163.07	2,52,349.96	2,82,986.95	3,13,596.02
12	Less: Cumulative depreciation adjustment on account of un-discharged liabilities deducted as on 01.04.2009	0.00	0.00	0.00	0.00	0.00	0.00
13	Add: Cumulative depreciation adjustment on account of liability Discharge	0.00	0.00	0.00	0.00	0.00	0.00
14	Less: Cumulative depreciation adjustment on account of de-capitalisation	360.32	38.70	444.58	101.05	369.31	672.81
15	Net Cumulative depreciation at the end of the period after adjustments	1,61,707.70	1,91,815.92	2,21,718.48	2,52,248.92	2,82,617.63	3,12,923.21

\* The leasehold land asset amounting to Rs. 1,489 Cr. was capitalized in 2015-16 on accrual basis (Nil on cash basis). Subsequently in 2022-23, liability of Rs. 1,156Cr. was discharged. The petitioner in Form-11 for 2014-19 true-up inadvertently considered this leasehold land as free hold land and Hon'ble Commission also considered the same in Form-12 while calculating depreciation in 2014-19 true-up order. The petitioner humbly submits that since the land is lease-hold land, hence the same may not be considered for depreciation calculation.

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Name of the Company :  
Name of the Power Station:NTPC Ltd  
Rihand-III

(Amount in Rs. Lakhs)

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>1</b>	<b>4.75% Fixed Rate Notes due 2022</b>					
	Gross Drawl opening	29,167	29,167	29,167	29,167	29,167
	Cummulative repayment of drawl till prev yr	-	-	-	-	29,167
	Net Loan opening	29,167	29,167	29,167	29,167	-
	Increase decrease due to FERV	-	-	-	-	-
	Increase decrease due to ACE	-	-	-	-	-
	Total	29,167	29,167	29,167	29,167	-
	Repayment of loan during the year	-	-	-	29,167	-
	Net loan closing	29,167	29,167	29,167	-	-
	Average net loan	29,167	29,167	29,167	14,583	-
	Rate of interest on loan	5.0243%	5.0243%	5.0243%	5.0243%	0.0000%
	Interest on loan	1,485	1,465	1,465	733	-
<b>2</b>	<b>5.625% Fixed Rate Notes due 2021</b>					
	Gross Drawl opening	53,419	53,419	53,419	53,419	53,419
	Cummulative repayment of drawl till prev yr	-	-	-	53,419	53,419
	Net Loan opening	53,419	53,419	53,419	-	-
	Increase decrease due to FERV	-	-	-	-	-
	Increase decrease due to ACE	-	-	-	-	-
	Total	53,419	53,419	53,419	-	-
	Repayment of loan during the year	-	-	53,419	-	-
	Net loan closing	53,419	53,419	-	-	-
	Average net loan	53,419	53,419	26,709	-	-
	Rate of interest on loan	7.1968%	7.1968%	7.1968%	0.0000%	0.0000%
	Interest on loan	3,844	3,844	1,922	-	-
<b>3</b>	<b>SBI New York</b>					
	Gross Drawl opening	5,101	5,101	5,101	5,101	5,101
	Cummulative repayment of drawl till prev yr	-	5,101	5,101	5,101	5,101
	Net Loan opening	5,101	-	-	-	-
	Increase decrease due to FERV	-	-	-	-	-
	Increase decrease due to ACE	-	-	-	-	-
	Total	5,101	-	-	-	-
	Repayment of loan during the year	5,101	-	-	-	-
	Net loan closing	-	-	-	-	-
	Average net loan	2,551	-	-	-	-
	Rate of interest on loan	3.8619%	0.0000%	0.0000%	0.0000%	0.0000%
	Interest on loan	99	-	-	-	-
<b>4</b>	<b>Bonds XLII Series</b>					
	Gross Drawl opening	800	800	800	800	800
	Cummulative repayment of drawl till prev yr	-	-	-	-	160
	Net Loan opening	800	800	800	800	640
	Increase decrease due to FERV	-	-	-	-	-
	Increase decrease due to ACE	-	-	-	-	-
	Total	800	800	800	800	640
	Repayment of loan during the year	-	-	-	160	160
	Net loan closing	800	800	800	640	480
	Average net loan	800	800	800	720	560
	Rate of interest on loan	9.0300%	9.0300%	9.0300%	9.0300%	9.0300%
	Interest on loan	72	72	72	65	51

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 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड / NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

<b>5 Bonds XLIV Series</b>					
Gross Drawl opening	2,500	2,500	2,500	2,500	2,500
Cummulative repayment of drawl till prev yr	-	-	-	-	-
Net Loan opening	2,500	2,500	2,500	2,500	2,500
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	2,500	2,500	2,500	2,500	2,500
Repayment of loan during the year	-	-	-	-	500
Net loan closing	2,500	2,500	2,500	2,500	2,000
Average net loan	2,500	2,500	2,500	2,500	2,250
Rate of interest on loan	9.2800%	9.2800%	9.2800%	9.2800%	9.2800%
Interest on loan	232	232	232	232	209
<b>6 Bonds XLVII Series</b>					
Gross Drawl opening	3,500	3,500	3,500	3,500	3,500
Cummulative repayment of drawl till prev yr	-	-	-	-	3,500
Net Loan opening	3,500	3,500	3,500	3,500	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	3,500	3,500	3,500	3,500	-
Repayment of loan during the year	-	-	-	3,500	-
Net loan closing	3,500	3,500	3,500	-	-
Average net loan	3,500	3,500	3,500	1,750	-
Rate of interest on loan	8.8700%	8.8700%	8.8700%	8.8700%	0.0000%
Interest on loan	310	310	310	155	0
<b>7 Bonds XXXVIII Series</b>					
Gross Drawl opening	600	600	600	600	600
Cummulative repayment of drawl till prev yr	129	171	214	257	300
Net Loan opening	471	429	386	343	300
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	471	429	386	343	300
Repayment of loan during the year	43	43	43	43	43
Net loan closing	429	386	343	300	257
Average net loan	450	407	364	321	279
Rate of interest on loan	9.2000%	9.2000%	9.2000%	9.2000%	9.2000%
Interest on loan	41	37	34	30	28
<b>8 Bonds XLIX Series</b>					
Gross Drawl opening	5,000	5,000	5,000	5,000	5,000
Cummulative repayment of drawl till prev yr	-	-	-	-	-
Net Loan opening	5,000	5,000	5,000	5,000	5,000
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	5,000	5,000	5,000	5,000	5,000
Repayment of loan during the year	-	-	-	-	5,000
Net loan closing	5,000	5,000	5,000	5,000	-
Average net loan	5,000	5,000	5,000	5,000	2,500
Rate of interest on loan	8.8300%	8.8300%	8.8300%	8.8300%	8.8300%
Interest on loan	442	442	442	442	221

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परिमल पीयूष/PARIMAL PIYUSH  
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 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.F.)

<b>9 Bonds L1A Series</b>					
Gross Drawl opening	1,645	1,645	1,645	1,645	1,645
Cummulative repayment of drawl till prev yr	-	-	-	-	-
Net Loan opening	1,645	1,645	1,645	1,645	1,645
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	1,645	1,645	1,645	1,645	1,645
Repayment of loan during the year	-	-	-	-	1,645
Net loan closing	1,645	1,645	1,645	1,645	-
Average net loan	1,645	1,645	1,645	1,645	823
Rate of interest on loan	8.4400%	8.4400%	8.4400%	8.4400%	8.4400%
Interest on loan	139	139	139	139	69
<b>10 Bonds L2A Series</b>					
Gross Drawl opening	843	843	843	843	843
Cummulative repayment of drawl till prev yr	-	-	-	-	-
Net Loan opening	843	843	843	843	843
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	843	843	843	843	843
Repayment of loan during the year	-	-	-	-	-
Net loan closing	843	843	843	843	843
Average net loan	843	843	843	843	843
Rate of interest on loan	8.5100%	8.5100%	8.5100%	8.5100%	8.5100%
Interest on loan	72	72	72	72	72
<b>11 Bonds L3A Series</b>					
Gross Drawl opening	1,052	1,052	1,052	1,052	1,052
Cummulative repayment of drawl till prev yr	-	-	-	-	-
Net Loan opening	1,052	1,052	1,052	1,052	1,052
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	1,052	1,052	1,052	1,052	1,052
Repayment of loan during the year	-	-	-	-	-
Net loan closing	1,052	1,052	1,052	1,052	1,052
Average net loan	1,052	1,052	1,052	1,052	1,052
Rate of interest on loan	8.6900%	8.6900%	8.6900%	8.6900%	8.6900%
Interest on loan	91	91	91	91	91
<b>12 Bonds L1B Series</b>					
Gross Drawl opening	703	703	703	703	703
Cummulative repayment of drawl till prev yr	-	-	-	-	-
Net Loan opening	703	703	703	703	703
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	703	703	703	703	703
Repayment of loan during the year	-	-	-	-	703
Net loan closing	703	703	703	703	-
Average net loan	703	703	703	703	352
Rate of interest on loan	8.6900%	8.6900%	8.6900%	8.6900%	8.6900%
Interest on loan	61	61	61	61	31

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परिमल पीयूष/PARIMAL PIYUSH  
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 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

<b>13 Bonds L2B Series</b>					
Gross Drawl opening	308	308	308	308	308
Cummulative repayment of drawl till prev yr	-	-	-	-	-
Net Loan opening	308	308	308	308	308
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	308	308	308	308	308
Repayment of loan during the year	-	-	-	-	-
Net loan closing	308	308	308	308	308
Average net loan	308	308	308	308	308
Rate of interest on loan	8.7600%	8.7600%	8.7600%	8.7600%	8.7600%
Interest on loan	27	27	27	27	27
<b>14 Bonds L3B Series</b>					
Gross Drawl opening	1,348	1,348	1,348	1,348	1,348
Cummulative repayment of drawl till prev yr	-	-	-	-	-
Net Loan opening	1,348	1,348	1,348	1,348	1,348
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	1,348	1,348	1,348	1,348	1,348
Repayment of loan during the year	-	-	-	-	-
Net loan closing	1,348	1,348	1,348	1,348	1,348
Average net loan	1,348	1,348	1,348	1,348	1,348
Rate of interest on loan	8.9400%	8.9400%	8.9400%	8.9400%	8.9400%
Interest on loan	121	121	121	121	121
<b>15 Bonds LIA Series</b>					
Gross Drawl opening	400	400	400	400	400
Cummulative repayment of drawl till prev yr	-	-	-	-	-
Net Loan opening	400	400	400	400	400
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	400	400	400	400	400
Repayment of loan during the year	-	-	-	-	400
Net loan closing	400	400	400	400	-
Average net loan	400	400	400	400	200
Rate of interest on loan	8.2200%	8.2200%	8.2200%	8.2200%	8.2200%
Interest on loan	33	33	33	33	18
<b>16 Bonds 54 Series</b>					
Gross Drawl opening	28,300	28,300	28,300	28,300	28,300
Cummulative repayment of drawl till prev yr	-	-	-	-	5,880
Net Loan opening	28,300	28,300	28,300	28,300	22,640
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	28,300	28,300	28,300	28,300	22,640
Repayment of loan during the year	-	-	-	5,880	11,320
Net loan closing	28,300	28,300	28,300	22,640	11,320
Average net loan	28,300	28,300	28,300	25,470	16,980
Rate of interest on loan	8.5200%	8.5200%	8.5200%	8.5200%	8.5200%
Interest on loan	2411	2411	2411	2170	1447
<b>17 Bonds 57 Series</b>					
Gross Drawl opening	800	800	800	800	800
Cummulative repayment of drawl till prev yr	-	-	-	-	-
Net Loan opening	800	800	800	800	800
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	800	800	800	800	800
Repayment of loan during the year	-	-	-	-	-
Net loan closing	800	800	800	800	800
Average net loan	800	800	800	800	800
Rate of interest on loan	8.2200%	8.2200%	8.2200%	8.2200%	8.2200%
Interest on loan	66	66	66	66	66

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अपर महाप्रबन्धक (वाणिज्यिक)  
Add. General Manager (Commercial) 77  
एन टी पी सी लिमिटेड / NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

<b>18 Bonds 59 Series</b>					
Gross Drawl opening	1,700	1,700	1,700	1,700	1,700
Cummulative repayment of drawl till prev yr	-	-	1,700	1,700	1,700
Net Loan opening	1,700	1,700	-	-	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	1,700	1,700	-	-	-
Repayment of loan during the year	-	1,700	-	-	-
Net loan closing	1,700	-	-	-	-
Average net loan	1,700	850	-	-	-
Rate of interest on loan	8.3800%	8.3600%	0.0000%	0.0000%	0.0000%
Interest on loan	142	71	0	0	0
<b>19 Bonds 66 Series</b>					
Gross Drawl opening	3,200	3,200	3,200	3,200	3,200
Cummulative repayment of drawl till prev yr	-	-	-	-	-
Net Loan opening	3,200	3,200	3,200	3,200	3,200
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	3,200	3,200	3,200	3,200	3,200
Repayment of loan during the year	-	-	-	-	-
Net loan closing	3,200	3,200	3,200	3,200	3,200
Average net loan	3,200	3,200	3,200	3,200	3,200
Rate of interest on loan	7.4000%	7.4000%	7.4000%	7.4000%	7.4000%
Interest on loan	237	237	237	237	237
<b>20 Bonds 67 Series</b>					
Gross Drawl opening	4,270	4,270	4,270	4,270	4,270
Cummulative repayment of drawl till prev yr	-	-	-	-	-
Net Loan opening	4,270	4,270	4,270	4,270	4,270
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	4,270	4,270	4,270	4,270	4,270
Repayment of loan during the year	-	-	-	-	-
Net loan closing	4,270	4,270	4,270	4,270	4,270
Average net loan	4,270	4,270	4,270	4,270	4,270
Rate of interest on loan	8.4200%	8.4200%	8.4200%	8.4200%	8.4200%
Interest on loan	360	360	360	360	360
<b>21 Bonds 72 Series (pfc-v D33 refinanced)</b>					
Gross Drawl opening	-	-	1,663	1,663	1,663
Cummulative repayment of drawl till prev yr	-	-	-	-	-
Net Loan opening	-	-	1,663	1,663	1,663
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	1,663	-	-	-
Total	-	1,663	1,663	1,663	1,663
Repayment of loan during the year	-	-	-	-	-
Net loan closing	-	1,663	1,663	1,663	1,663
Average net loan	-	831	1,663	1,663	1,663
Rate of interest on loan	0.0000%	6.67%	6.6700%	6.6700%	6.6700%
Interest on loan	0	55	111	111	111

परिमल पीयूष/PARIMAL PIYUSH  
 अवर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-3A, Sector-24, Noida-201301 (U.P.)

<b>22 Bonds 72 Series (pfc-v D34 refinanced)</b>					
Gross Drawl opening	-	-	4,200	4,200	4,200
Cummulative repayment of drawl till prev yr	-	-	-	-	-
Net Loan opening	-	-	4,200	4,200	4,200
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	4,200	-	-	-
Total	-	4,200	4,200	4,200	4,200
Repayment of loan during the year	-	-	-	-	-
Net loan closing	-	4,200	4,200	4,200	4,200
Average net loan	-	2,100	4,200	4,200	4,200
Rate of interest on loan	0.0000%	6.8400%	6.8400%	6.8400%	6.8400%
Interest on loan	0	144	287	287	287
<b>23 Bonds 72 Series (pfc-v D36 refinanced)</b>					
Gross Drawl opening	-	-	1,750	1,750	1,750
Cummulative repayment of drawl till prev yr	-	-	-	-	-
Net Loan opening	-	-	1,750	1,750	1,750
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	1,750	-	-	-
Total	-	1,750	1,750	1,750	1,750
Repayment of loan during the year	-	-	-	-	-
Net loan closing	-	1,750	1,750	1,750	1,750
Average net loan	-	875	1,750	1,750	1,750
Rate of interest on loan	0.0000%	6.9050%	6.9050%	6.9050%	6.9050%
Interest on loan	0	60	121	121	121
<b>24 Bonds 72 Series (pfc-v D38 refinanced)</b>					
Gross Drawl opening	-	-	6,125	6,125	6,125
Cummulative repayment of drawl till prev yr	-	-	-	-	-
Net Loan opening	-	-	6,125	6,125	6,125
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	6,125	-	-	-
Total	-	6,125	6,125	6,125	6,125
Repayment of loan during the year	-	-	-	-	-
Net loan closing	-	6,125	6,125	6,125	6,125
Average net loan	-	3,063	6,125	6,125	6,125
Rate of interest on loan	0.0000%	6.8700%	6.8700%	6.8700%	6.8700%
Interest on loan	0	210	421	421	421
<b>25 Bonds 72 Series (OTHERS)</b>					
Gross Drawl opening	-	-	17,663	17,663	17,663
Cummulative repayment of drawl till prev yr	-	-	-	-	-
Net Loan opening	-	-	17,663	17,663	17,663
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	17,663	-	-	-
Total	-	17,663	17,663	17,663	17,663
Repayment of loan during the year	-	-	-	-	-
Net loan closing	-	17,663	17,663	17,663	17,663
Average net loan	-	8,831	17,663	17,663	17,663
Rate of interest on loan	0.0000%	5.4800%	5.4800%	5.4800%	5.4800%
Interest on loan	0	484	968	968	968

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परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)



<b>26 Corporation Bank-III- D4</b>					
Gross Drawl opening	5,000	5,000	5,000	5,000	5,000
Cummulative repayment of drawl till prev yr	750	1,000	1,500	2,000	2,500
Net Loan opening	4,250	4,000	3,500	3,000	2,500
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	4,250	4,000	3,500	3,000	2,500
Repayment of loan during the year	250	500	500	500	500
Net loan closing	4,000	3,500	3,000	2,500	2,000
Average net loan	4,125	3,750	3,250	2,750	2,250
Rate of interest on loan	8.0276%	6.7032%	6.0000%	7.2975%	7.9443%
Interest on loan	331	251	195	201	179
<b>27 Corporation Bank-III-D6</b>					
Gross Drawl opening	5,000	5,000	5,000	5,000	5,000
Cummulative repayment of drawl till prev yr	750	1,000	1,500	2,000	2,500
Net Loan opening	4,250	4,000	3,500	3,000	2,500
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	4,250	4,000	3,500	3,000	2,500
Repayment of loan during the year	250	500	500	500	500
Net loan closing	4,000	3,500	3,000	2,500	2,000
Average net loan	4,125	3,750	3,250	2,750	2,250
Rate of interest on loan	8.0276%	6.7032%	6.0000%	7.2975%	7.9443%
Interest on loan	331	251	195	201	179
<b>28 HDFC Bank Limited- II- D3</b>					
Gross Drawl opening	2,000	2,000	2,000	2,000	2,000
Cummulative repayment of drawl till prev yr	1,429	1,714	2,000	2,000	2,000
Net Loan opening	571	286	-	-	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	571	286	-	-	-
Repayment of loan during the year	286	286	-	-	-
Net loan closing	286	-	-	-	-
Average net loan	429	143	-	-	-
Rate of interest on loan	8.0594%	6.3982%	0.0000%	0.0000%	0.0000%
Interest on loan	35	9	-	-	-
<b>29 HDFC Bank Limited- II- D6</b>					
Gross Drawl opening	3,000	3,000	3,000	3,000	3,000
Cummulative repayment of drawl till prev yr	2,143	2,571	3,000	3,000	3,000
Net Loan opening	857	429	-	-	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	857	429	-	-	-
Repayment of loan during the year	429	429	-	-	-
Net loan closing	429	-	-	-	-
Average net loan	643	214	-	-	-
Rate of interest on loan	8.0594%	6.3982%	0.0000%	0.0000%	0.0000%
Interest on loan	52	14	-	-	-

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (व्यापारिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

<b>30 HUDCO LTD-I (Prepage with HDFC IX)</b>					
Gross Drawl opening	4,500	4,500	4,500	4,500	4,500
Cummulative repayment of drawl till prev yr	2,045	2,455	4,500	4,500	4,500
Net Loan opening	2,455	2,045	-	-	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	2,455	2,045	-	-	-
Repayment of loan during the year	409	2,045	-	-	-
Net loan closing	2,045	-	-	-	-
Average net loan	2,250	1,023	-	-	-
Rate of interest on loan	8.0131%	7.3986%	0.0000%	0.0000%	0.0000%
Interest on loan	180	76	-	-	-
<b>31 Indian Bank-II- D1</b>					
Gross Drawl opening	1,000	1,000	1,000	1,000	1,000
Cummulative repayment of drawl till prev yr	929	1,000	1,000	1,000	1,000
Net Loan opening	71	0	0	0	0
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	71	0	0	0	0
Repayment of loan during the year	71	-	-	-	-
Net loan closing	0	0	0	0	0
Average net loan	36	0	0	0	0
Rate of interest on loan	8.2500%	0.0000%	0.0000%	0.0000%	0.0000%
Interest on loan	3	-	-	-	-
<b>32 Indian Bank-II- D2</b>					
Gross Drawl opening	500	500	500	500	500
Cummulative repayment of drawl till prev yr	464	500	500	500	500
Net Loan opening	36	-	-	-	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	36	-	-	-	-
Repayment of loan during the year	36	-	-	-	-
Net loan closing	-	-	-	-	-
Average net loan	18	-	-	-	-
Rate of interest on loan	8.2500%	0.0000%	0.0000%	0.0000%	0.0000%
Interest on loan	1	-	-	-	-
<b>33 Indian Bank-II- D3</b>					
Gross Drawl opening	2,000	2,000	2,000	2,000	2,000
Cummulative repayment of drawl till prev yr	1,857	2,000	2,000	2,000	2,000
Net Loan opening	143	-	-	-	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	143	-	-	-	-
Repayment of loan during the year	143	-	-	-	-
Net loan closing	-	-	-	-	-
Average net loan	71	-	-	-	-
Rate of interest on loan	8.2500%	0.0000%	0.0000%	0.0000%	0.0000%
Interest on loan	6	-	-	-	-

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (व. वि. विभाग)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

<b>34 Power Finance Corporation Ltd-V- D8</b>					
Gross Drawl opening	5,000	5,000	5,000	5,000	5,000
Cummulative repayment of drawl till prev yr	2,396	5,000	5,000	5,000	5,000
Net Loan opening	2,604	-	-	-	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	2,604	-	-	-	-
Repayment of loan during the year	2,604	-	-	-	-
Net loan closing	-	-	-	-	-
Average net loan	1,302	-	-	-	-
Rate of interest on loan	9.3900%	9.3900%	9.3900%	9.3900%	9.3900%
Interest on loan	122	-	-	-	-
<b>35 Power Finance Corporation Ltd-V- D10</b>					
Gross Drawl opening	2,000	2,000	2,000	2,000	2,000
Cummulative repayment of drawl till prev yr	958	2,000	2,000	2,000	2,000
Net Loan opening	1,042	-	-	-	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	1,042	-	-	-	-
Repayment of loan during the year	1,042	-	-	-	-
Net loan closing	-	-	-	-	-
Average net loan	521	-	-	-	-
Rate of interest on loan	9.3300%	9.3300%	9.3300%	9.3300%	9.3300%
Interest on loan	49	-	-	-	-
<b>36 Power Finance Corporation Ltd-V- D12</b>					
Gross Drawl opening	3,500	3,500	3,500	3,500	3,500
Cummulative repayment of drawl till prev yr	1,677	3,500	3,500	3,500	3,500
Net Loan opening	1,823	-	-	-	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	1,823	-	-	-	-
Repayment of loan during the year	1,823	-	-	-	-
Net loan closing	-	-	-	-	-
Average net loan	911	-	-	-	-
Rate of interest on loan	8.6700%	8.6700%	8.6700%	8.6700%	8.6700%
Interest on loan	79	-	-	-	-
<b>37 Power Finance Corporation Ltd-V- D19</b>					
Gross Drawl opening	5,000	5,000	5,000	5,000	5,000
Cummulative repayment of drawl till prev yr	2,396	5,000	5,000	5,000	5,000
Net Loan opening	2,604	-	-	-	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	2,604	-	-	-	-
Repayment of loan during the year	2,604	-	-	-	-
Net loan closing	-	-	-	-	-
Average net loan	1,302	-	-	-	-
Rate of interest on loan	8.3500%	8.3500%	8.3500%	8.3500%	8.3500%
Interest on loan	109	-	-	-	-

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परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (एन.पी.सी. लिमिटेड)  
 Addl. General Manager (Commercial)  
 एन.पी.सी. लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

<b>38 Power Finance Corporation Ltd-V- D20</b>					
Gross Drawl opening	1,000	1,000	1,000	1,000	1,000
Cummulative repayment of drawl till prev yr	479	1,000	1,000	1,000	1,000
Net Loan opening	521	-	-	-	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	521	-	-	-	-
Repayment of loan during the year	521	-	-	-	-
Net loan closing	-	-	-	-	-
Average net loan	260	-	-	-	-
Rate of interest on loan	8.4000%	8.4000%	8.4000%	8.4000%	8.4000%
Interest on loan	22	-	-	-	-
<b>39 Power Finance Corporation Ltd-V- D22</b>					
Gross Drawl opening	3,500	3,500	3,500	3,500	3,500
Cummulative repayment of drawl till prev yr	1,677	3,500	3,500	3,500	3,500
Net Loan opening	1,823	-	-	-	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	1,823	-	-	-	-
Repayment of loan during the year	1,823	-	-	-	-
Net loan closing	-	-	-	-	-
Average net loan	911	-	-	-	-
Rate of interest on loan	7.6200%	7.6200%	7.6200%	7.6200%	7.6200%
Interest on loan	69	-	-	-	-
<b>40 Power Finance Corporation Ltd-V- D23</b>					
Gross Drawl opening	5,000	5,000	5,000	5,000	5,000
Cummulative repayment of drawl till prev yr	2,396	5,000	5,000	5,000	5,000
Net Loan opening	2,604	-	-	-	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	2,604	-	-	-	-
Repayment of loan during the year	2,604	-	-	-	-
Net loan closing	-	-	-	-	-
Average net loan	1,302	-	-	-	-
Rate of interest on loan	7.4300%	7.4300%	7.4300%	7.4300%	7.4300%
Interest on loan	97	-	-	-	-
<b>41 Power Finance Corporation Ltd-V- D33</b>					
Gross Drawl opening	3,800	3,800	3,800	3,800	3,800
Cummulative repayment of drawl till prev yr	1,821	2,138	3,800	3,800	3,800
Net Loan opening	1,979	1,663	-	-	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	1,979	1,663	-	-	-
Repayment of loan during the year	317	1,663	-	-	-
Net loan closing	1,663	-	-	-	-
Average net loan	1,821	831	-	-	-
Rate of interest on loan	7.8300%	7.8300%	7.8300%	7.8300%	7.8300%
Interest on loan	143	65	-	-	-

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (ए. गि. विभाग)  
Addl. General Manager (Co. In-charge)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

<b>42 Power Finance Corporation Ltd-V- D34</b>					
Gross Drawl opening	9,600	9,600	9,600	9,600	9,600
Cummulative repayment of drawl till prev yr	4,600	5,400	9,600	9,600	9,600
Net Loan opening	5,000	4,200	-	-	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	5,000	4,200	-	-	-
Repayment of loan during the year	800	4,200	-	-	-
Net loan closing	4,200	-	-	-	-
Average net loan	4,800	2,100	-	-	-
Rate of interest on loan	8.1700%	8.1700%	8.1700%	8.1700%	8.1700%
Interest on loan	376	172	-	-	-
<b>43 Power Finance Corporation Ltd-V- D36</b>					
Gross Drawl opening	4,000	4,000	4,000	4,000	4,000
Cummulative repayment of drawl till prev yr	1,917	2,250	4,000	4,000	4,000
Net Loan opening	2,083	1,750	-	-	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	2,083	1,750	-	-	-
Repayment of loan during the year	333	1,750	-	-	-
Net loan closing	1,750	-	-	-	-
Average net loan	1,917	875	-	-	-
Rate of interest on loan	8.3000%	8.3000%	8.3000%	8.3000%	8.3000%
Interest on loan	159	73	-	-	-
<b>44 Power Finance Corporation Ltd-V- D38</b>					
Gross Drawl opening	14,000	14,000	14,000	14,000	14,000
Cummulative repayment of drawl till prev yr	6,708	7,875	14,000	14,000	14,000
Net Loan opening	7,292	6,125	-	-	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	7,292	6,125	-	-	-
Repayment of loan during the year	1,167	6,125	-	-	-
Net loan closing	6,125	-	-	-	-
Average net loan	6,708	3,083	-	-	-
Rate of interest on loan	8.2300%	8.2300%	8.2300%	8.2300%	8.2300%
Interest on loan	552	252	-	-	-
<b>45 State Bank of India- VII- D1</b>					
Gross Drawl opening	9,500	9,500	9,500	9,500	9,500
Cummulative repayment of drawl till prev yr	4,750	5,344	6,531	7,719	8,908
Net Loan opening	4,750	4,156	2,969	1,781	594
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	4,750	4,156	2,969	1,781	594
Repayment of loan during the year	594	1,188	1,188	1,188	594
Net loan closing	4,156	2,969	1,781	594	-
Average net loan	4,453	3,563	2,375	1,188	297
Rate of interest on loan	7.9342%	6.8560%	6.6500%	7.2108%	8.0522%
Interest on loan	353	244	158	86	24

*Signature*

परिमल पीयूष/PARIMAL PIYUSH  
 अंपर मरुतपदन्तक (ए.जी.एम.)  
 Addl. General Manager (C&M)  
 एन टी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida 201301 (U.P.)

<b>46 State Bank of India- VII- D2</b>					
Gross Drawl opening	6,000	6,000	6,000	6,000	6,000
Cummulative repayment of drawl till prev yr	3,000	3,375	4,125	4,875	5,625
Net Loan opening	3,000	2,625	1,875	1,125	375
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	3,000	2,625	1,875	1,125	375
Repayment of loan during the year	375	750	750	750	375
Net loan closing	2,625	1,875	1,125	375	-
Average net loan	2,813	2,250	1,500	750	188
Rate of interest on loan	7.9342%	6.8560%	6.6500%	7.2108%	8.0522%
Interest on loan	223	154	100	54	15
<b>47 State Bank of India- VII- D3</b>					
Gross Drawl opening	500	500	500	500	500
Cummulative repayment of drawl till prev yr	250	281	344	408	469
Net Loan opening	250	219	156	94	31
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	250	219	156	94	31
Repayment of loan during the year	31	63	63	63	31
Net loan closing	219	156	94	31	-
Average net loan	234	188	125	63	18
Rate of interest on loan	7.9342%	6.8560%	6.6500%	7.2108%	8.0522%
Interest on loan	19	13	8	5	1
<b>48 State Bank of India- VII- D4</b>					
Gross Drawl opening	4,000	4,000	4,000	4,000	4,000
Cummulative repayment of drawl till prev yr	2,000	2,250	2,750	3,250	3,750
Net Loan opening	2,000	1,750	1,250	750	250
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	2,000	1,750	1,250	750	250
Repayment of loan during the year	250	500	500	500	250
Net loan closing	1,750	1,250	750	250	-
Average net loan	1,875	1,500	1,000	500	125
Rate of interest on loan	7.9342%	6.8560%	6.6500%	7.2108%	8.0522%
Interest on loan	149	103	87	36	10
<b>49 State Bank of India- VII- D5</b>					
Gross Drawl opening	8,500	8,500	8,500	8,500	8,500
Cummulative repayment of drawl till prev yr	4,250	4,781	5,844	6,906	7,989
Net Loan opening	4,250	3,719	2,656	1,594	531
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	4,250	3,719	2,656	1,594	531
Repayment of loan during the year	531	1,083	1,083	1,083	531
Net loan closing	3,719	2,656	1,594	531	-
Average net loan	3,984	3,188	2,125	1,083	286
Rate of interest on loan	7.9342%	6.8560%	6.6500%	7.2108%	8.0522%
Interest on loan	316	219	141	77	21
<b>50 State Bank of India- VII- D6</b>					
Gross Drawl opening	2,000	2,000	2,000	2,000	2,000
Cummulative repayment of drawl till prev yr	1,000	1,125	1,375	1,625	1,875
Net Loan opening	1,000	875	625	375	125
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	1,000	875	625	375	125
Repayment of loan during the year	125	250	250	250	125
Net loan closing	875	625	375	125	-
Average net loan	938	750	500	250	63
Rate of interest on loan	7.9342%	6.8560%	6.6500%	7.2108%	8.0522%
Interest on loan	74	53	33	18	5

Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड / NTPC LIMITED  
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<b>51 State Bank of India- VII- D7</b>					
Gross Drawl opening	4,500	4,500	4,500	4,500	4,500
Cummulative repayment of drawl till prev yr	2,250	2,531	3,094	3,656	4,219
Net Loan opening	2,250	1,969	1,406	844	281
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	2,250	1,969	1,406	844	281
Repayment of loan during the year	281	563	563	563	281
Net loan closing	1,969	1,406	844	281	-
Average net loan	2,109	1,688	1,125	563	141
Rate of interest on loan	7.9342%	6.8560%	6.6500%	7.2108%	8.0522%
Interest on loan	167	116	75	41	11
<b>52 State Bank of India- VII- D8</b>					
Gross Drawl opening	3,200	3,200	3,200	3,200	3,200
Cummulative repayment of drawl till prev yr	1,600	1,800	2,200	2,600	3,000
Net Loan opening	1,600	1,400	1,000	600	200
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	1,600	1,400	1,000	600	200
Repayment of loan during the year	200	400	400	400	200
Net loan closing	1,400	1,000	600	200	-
Average net loan	1,500	1,200	800	400	100
Rate of interest on loan	7.9342%	6.8560%	6.6500%	7.2108%	8.0522%
Interest on loan	119	82	53	29	8
<b>53 State Bank of India- VII- D11</b>					
Gross Drawl opening	10,000	10,000	10,000	10,000	10,000
Cummulative repayment of drawl till prev yr	5,000	5,625	6,875	8,125	9,375
Net Loan opening	5,000	4,375	3,125	1,875	625
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	5,000	4,375	3,125	1,875	625
Repayment of loan during the year	625	1,250	1,250	1,250	625
Net loan closing	4,375	3,125	1,875	625	-
Average net loan	4,688	3,750	2,500	1,250	313
Rate of interest on loan	7.9342%	6.8560%	6.6500%	7.2108%	8.0522%
Interest on loan	372	257	188	90	25
<b>54 State Bank of India- VII- D16</b>					
Gross Drawl opening	6,500	6,500	6,500	6,500	6,500
Cummulative repayment of drawl till prev yr	3,250	3,656	4,489	5,281	6,094
Net Loan opening	3,250	2,844	2,031	1,219	406
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	3,250	2,844	2,031	1,219	406
Repayment of loan during the year	406	813	813	813	406
Net loan closing	2,844	2,031	1,219	406	-
Average net loan	3,047	2,438	1,625	813	203
Rate of interest on loan	7.9342%	6.8560%	6.6500%	7.2108%	8.0522%
Interest on loan	242	167	108	59	16

*(Handwritten signature)*

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड /NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

<b>55 Union Bank of India-II- D8</b>					
Gross Drawl opening	2,500	2,500	2,500	2,500	2,500
Cummulative repayment of drawl till prev yr	825	875	1,125	1,375	1,625
Net Loan opening	1,675	1,625	1,375	1,125	875
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	1,675	1,625	1,375	1,125	875
Repayment of loan during the year	250	250	250	250	250
Net loan closing	1,625	1,375	1,125	875	625
Average net loan	1,750	1,500	1,250	1,000	750
Rate of interest on loan	8.0795%	6.7019%	6.0000%	7.2975%	7.9443%
Interest on loan	141	101	75	73	60
<b>56 Corporation Bank-IV D1</b>					
Gross Drawl opening	12,286	12,286	12,286	12,286	12,286
Cummulative repayment of drawl till prev yr	-	-	-	-	1,365
Net Loan opening	12,286	12,286	12,286	12,286	10,921
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	12,286	12,286	12,286	12,286	10,921
Repayment of loan during the year	-	-	-	1,365	1,365
Net loan closing	12,286	12,286	12,286	10,921	9,556
Average net loan	12,286	12,286	12,286	11,603	10,238
Rate of interest on loan	8.1889%	6.8038%	6.1333%	7.4309%	8.0776%
Interest on loan	1006	836	754	862	827
<b>57 HDFC Bank Ltd.-IV D1</b>					
Gross Drawl opening	4,000	4,000	4,000	4,000	4,000
Cummulative repayment of drawl till prev yr	-	-	-	444	889
Net Loan opening	4,000	4,000	4,000	3,556	3,111
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	4,000	4,000	4,000	3,556	3,111
Repayment of loan during the year	-	-	444	444	444
Net loan closing	4,000	4,000	3,556	3,111	2,667
Average net loan	4,000	4,000	3,778	3,333	2,889
Rate of interest on loan	8.0492%	6.3982%	5.9500%	7.2335%	7.9600%
Interest on loan	322	256	225	241	230
<b>58 Jammu &amp; Kashmir Bank-IV D2</b>					
Gross Drawl opening	500	500	500	500	500
Cummulative repayment of drawl till prev yr	-	-	56	111	167
Net Loan opening	500	500	444	389	333
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	500	500	444	389	333
Repayment of loan during the year	-	56	56	56	-
Net loan closing	500	444	389	333	333
Average net loan	500	472	417	361	333
Rate of interest on loan	7.9880%	6.6804%	5.8800%	6.9753%	7.9800%
Interest on loan	40	32	25	25	27
<b>59 Karnataka Bank-II</b>					
Gross Drawl opening	4,598	4,598	4,598	4,598	4,598
Cummulative repayment of drawl till prev yr	-	-	4,598	4,598	4,598
Net Loan opening	4,598	4,598	-	-	-
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	4,598	4,598	-	-	-
Repayment of loan during the year	-	4,598	-	-	-
Net loan closing	4,598	-	-	-	-
Average net loan	4,598	2,299	-	-	-
Rate of interest on loan	7.7809%	5.7100%	0.0000%	0.0000%	0.0000%
Interest on loan	358	131	0	0	0

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 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)



<b>60 SBI-VIII D8</b>					
Gross Drawl opening	1,000	1,000	1,000	1,000	1,000
Cummulative repayment of drawl till prev yr	-	-	-	111	222
Net Loan opening	1,000	1,000	1,000	889	778
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	1,000	1,000	1,000	889	778
Repayment of loan during the year	-	-	111	111	111
Net loan closing	1,000	1,000	889	778	667
Average net loan	1,000	1,000	944	833	722
Rate of interest on loan	8.4675%	7.3893%	7.1833%	7.7442%	8.6596%
Interest on loan	85	74	68	65	63
<b>61 SBI-VIII D21</b>					
Gross Drawl opening	5,700	5,700	5,700	5,700	5,700
Cummulative repayment of drawl till prev yr	-	-	-	633	1,267
Net Loan opening	5,700	5,700	5,700	5,067	4,433
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	5,700	5,700	5,700	5,067	4,433
Repayment of loan during the year	-	-	633	633	633
Net loan closing	5,700	5,700	5,067	4,433	3,800
Average net loan	5,700	5,700	5,383	4,750	4,117
Rate of interest on loan	8.4675%	7.3893%	7.1833%	7.7442%	8.6596%
Interest on loan	483	421	387	368	356
<b>62 SBI-VIII D24</b>					
Gross Drawl opening	3,214	3,214	3,214	3,214	3,214
Cummulative repayment of drawl till prev yr	-	-	-	357	714
Net Loan opening	3,214	3,214	3,214	2,857	2,500
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	-	-	-	-
Total	3,214	3,214	3,214	2,857	2,500
Repayment of loan during the year	-	-	357	357	357
Net loan closing	3,214	3,214	2,857	2,500	2,143
Average net loan	3,214	3,214	3,036	2,679	2,321
Rate of interest on loan	8.4675%	7.3893%	7.1833%	7.7442%	8.6596%
Interest on loan	272	238	218	207	201
<b>63 HDFC Bank Ltd. IX (Hudco-I refinanced)</b>					
Gross Drawl opening	-	-	2,043	2,043	2,043
Cummulative repayment of drawl till prev yr	-	-	-	-	-
Net Loan opening	-	-	2,043	2,043	2,043
Increase decrease due to FERV	-	-	-	-	-
Increase decrease due to ACE	-	2,043	-	-	-
Total	-	2,043	2,043	2,043	2,043
Repayment of loan during the year	-	-	-	-	-
Net loan closing	-	2,043	2,043	2,043	2,043
Average net loan	-	1,022	2,043	2,043	2,043
Rate of interest on loan	0.0000%	6.6191%	6.4250%	7.7085%	8.4350%
Interest on loan	0	68	131	157	172
<b>TOTAL LOAN</b>					
Gross Drawl opening	312555	312555	345998	345998	345998
Cummulative repayment of drawl till prev yr	65495	91819	122800	185951	235535
Net Loan opening	247059	220736	223198	160047	110463
Increase decrease due to FERV	0	0	0	0	0
Increase decrease due to ACE	0	33443	0	0	0
Total	247059	254179	223198	160047	110463
Repayment of loan during the year	26323	30981	63150	49584	27351
Net loan closing	220736	223198	160047	110463	83112
Average net loan	233898	221967	191622	135255	96788
Rate of interest on loan	7.5786%	7.1045%	6.8796%	7.2697%	7.8249%
Interest on loan	17721	15770	13183	9833	7380

परिमल एन टी पी सी लिमिटेड / NTPC LIMITED

अप (वाणिज्यिक)  
Add: General Manager (Commercial)  
एन टी पी सी लिमिटेड / NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Details of Source wise Fuel for Computation of Energy Charges**

**PART-I  
FORM-15**

Name of the Company :		NTPC Limited						
Name of the Power Station :		Rihand Super Thermal Power Station Stage-III						
S. No.	Month	Unit	Oct-18		Nov-18		Dec-18	
			Domestic	Imported	Domestic	Imported	Domestic	Imported
1	Opening Quantity of Coal/ Lignite	(MT)						
2	Value of Stock	(Rs.)	7,98,900.00		8,63,300.00		8,58,000.00	
3	Quantity of Coal supplied by Coal Company	(MT)	1731507464		1,82,70,94,965.00		2,01,33,08,246.00	
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	11,03,800.00	-	10,26,100.00	-	11,65,700.00	
5	Coal supplied by Coal Company (1+2)	(MT)						
6	Normative Transit & Handling Losses	(MT)	11,03,800.00		10,26,100.00		11,65,700.00	
7	Net coal / Lignite Supplied (3-4)	(MT)	3,200.00	-	2,700.00	-	3,390.63	
8	Amount charged by the Coal Company*	(Rs.)	11,00,800.00		10,23,400.00		11,82,309.370	
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	2,20,62,88,010.00		2,63,12,17,257.00		2,36,46,12,979.00	
10	Handling, Sampling and such other similar charges	(Rs.)						
11	Total amount Charged (8+7)	(Rs.)	2,41,46,258.00		2,81,11,557.00		5,84,28,824.00	
12	Transportation charges by rail ship, road transport	(Rs.)	2,23,04,34,268.00		2,55,93,26,814.00		2,42,30,41,803.00	
13	Adjustment (+/-) in amount charged made by Railways/ Transport Company	(Rs.)	3,65,20,499.00		2,22,83,997.00		3,83,10,986.00	
14	Demurrage Charges, if any	(Rs.)						
15	Cost of diesel in transporting coal through MGR system, if applicable	(Rs.)						
16	Total Transportation Charges (9+10+11+12)	(Rs.)	2,09,94,373.00		1,84,34,410.00		1,85,27,883.00	
17	Total amount Charged for coal supplied including Transportation (8+13+13A)	(Rs.)	5,75,14,872.00		4,07,18,407.00		5,66,38,869.00	
18	Landed cost of coal (14)(5)	Rs./MT	2,28,79,49,140.00		2,60,00,47,221.00		2,47,98,60,672.00	
19	Blending Ratio	%	100.00%	-	100.00%	-	100.00%	-
20	Weighted average cost of coal	Rs./MT			2228.62			
21	GCV of Domestic Coal of the opening stock as per bill of Coal Company	(kCal/Kg)						
22	GCV of Domestic Coal supplied as per bill Coal Company	(kCal/Kg)	4660.00		5009.00		4667.00	
23	GCV of Imported Coal of the opening stock as per bill of Coal Company	(kCal/Kg)						
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)						
25	Weighted average GCV of coal/ Lignite as Billed	(kCal/Kg)	4660.00		5009.00		4667.00	
26	GCV of Domestic Coal of opening stock as received at Station	(kCal/Kg)	4000.00		4402.00		4137.00	
27	GCV of Domestic Coal supplied as received at Station	(kCal/Kg)						
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)						
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)						
30	Weighted average GCV of coal/ Lignite as Received	(kCal/Kg)	4000.00		4402.00		4137.00	

Note- Break-up of coal receipt through different modes for computation of Normative Transit loss attached as Annexure-3

*(Petitioner)*

**परिमल प्रियुष / PARIMAL PIYUSH**  
 Addl. General Manager (Commercial)  
 एन टी सी पी पावर लिमिटेड / NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Details of Secondary Fuel for Computation of Energy Charges**

**PART-I  
FORM- 15A**

Name of the Company : **NTPC Limited**  
Name of the Power Station : **Rihand Super Thermal Power Station Stage-III**

Sl.No.	Month	Unit	Oct-18		Nov-18		Dec-18	
			LDO	HFO	LDO	HFO	LDO	HFO
1	Opening Quantity of Oil	KL	581.95	4383.4	736.45	4263.2	3839.84	4114.2
2	Value of Opening	(Rs)	2,90,44,489.00	13,41,81,533.00	4,10,05,239.00	13,05,02,056.00	21,55,94,390.00	12,59,40,974.00
3	Quantity of Oil supplied by Oil Company	KL	233.00		3,433.980			
4	Adjustment (+/-) in quantity supplied made by Oil Company	KL						
5	Oil supplied by oil company (1+2)	KL	233.00		3,433.98			
6	Normative Transit & Handling Losses	KL						
7	Net Oil Supplied (3-4)	KL	233.00		3,433.98			
8	Amount charged by the Oil Company	(Rs)	1,52,17,996.00		20,60,16,697.00			
9	Adjustment(+/-) in amount charged made by Oil Company	(Rs)						
10	Total amount charged (8+7)	(Rs)	1,52,17,996.00		20,60,16,697.00			
11	Transportation charges by rail / ship / road transport	(Rs)						
12	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs)						
13	Demurrage Charges, if any	(Rs)						
14	Cost of diesel in transporting Oil through MGR system, if applicable	(Rs)						
15	Total Transportation Charges (9+/-10-11+12)	(Rs)						
16	Others -Entry Tax on Oil	(Rs.)						
17	Total amount Charged for fuel supplied including Transportation (8+13+14)	(Rs)	1,52,17,996.00		20,60,16,697.00			
18	Weighted average GCV of Oil as fired	kCal/kL	9790		9790		9790	
19	Weighted average rate of Secondary Fuel	Rs/KL	55,879.60	30,611.29	59,231.77	30,611.29	59,231.83	30,611.29

Note: In terms of the order of Hon'ble Supreme Court regarding ban on use of furnace oil, main secondary fuel at Rihand-III is LDO w.e.f. 01.01.2019 and the same has been considered for calculation of Working Capital.

  
(Petitioner)


**परिमल पीयूष / PARIMAL PIYUSH**  
अपर महाप्रबन्धक (सांख्यिक) /  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड / NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Details of Source wise Fuel for Computation of Energy Charges**

**PART-I  
FORM-15**

Name of the Company :		NTPC Limited							
Name of the Power Station :		Rihand Super Thermal Power Station Stage-III							
S. No.	Month	Unit	Oct-19		Nov-19		Dec-19		
			Domestic	Imported	Domestic	Imported	Domestic	Imported	
1	Opening Quantity of Coal/ Lignite	(MT)	44500.0000		1,66,600.00		4,68,400.00		
2	Value of Stock	Rs	952472.14		35,57,23,828.00		1,16,56,43,867.00		
3	Quantity of Coal supplied by Coal Company*	(MT)	13,61,300.00		13,11,600.00		10,73,900.00		
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	-	-	-	-	-	-	
5	Coal supplied by Coal Company (1+2)	(MT)	13,61,300.00	-	13,11,600.00	-	10,73,900.00	-	
6	Normative Transit & Handling Losses	(MT)	3,800.0000		3,000.0000		2,100.00		
7	Net coal / Lignite Supplied (3-4)	(MT)	13,77,500.0000	-	13,08,600.0000	-	10,71,800.0000	-	
8	Amount charged by the Coal Company*	(Rs.)	2,85,01,51,843.00		3,23,30,89,518.00		2,02,14,10,220.00		
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)							
10	Handling, Sampling and such other similar charges	(Rs.)	2,98,57,197.00		4,60,07,174.00		6,45,95,642.00		
11	Total amount charged (8+7)	(Rs.)	2,88,00,08,840.0	-	3,27,90,96,692.0	-	2,08,60,05,862.0	-	
12	Transportation charges by rail, ship, road transport	(Rs.)	3,72,12,719.00	-	1,44,18,692.00	-		-	
13	Adjustment (+/-) in amount charged made by Railways/ Transport Company	(Rs.)							
14	Demurrage Charges, if any	(Rs.)							
15	Cost of diesel in transporting coal through MGR system, if applicable	(Rs.)	2,40,48,159.00		2,14,96,274.00		1,66,60,007.00		
16	Total Transportation Charges (9+10+11+12)	(Rs.)	6,12,60,878.00	-	3,59,14,956.00	-	1,68,56,607.00	-	
17	Total amount charged for coal supplied including Transportation (8+13+13A)	(Rs.)	2,94,12,89,718.0	-	3,31,50,11,658	-	2,10,28,61,869	-	
18	Landed cost of coal (14)/(5)	Rs./MT	2,135.38		2,488.35		2,122.04		
19	Blending Ratio	%	100.00%		100.00%		100.00%		
20	<b>Weighted average cost of coal</b>	<b>Rs./MT</b>			<b>2248.09</b>				
21	GCV of Domestic Coal of the opening stock as per bill of Coal Company	(kCal/Kg)	4558		4578		4898		
22	GCV of Domestic Coal supplied as per bill Coal Company	(kCal/Kg)	4579		4939		4229		
23	GCV of Imported Coal of the opening stock as per bill of Coal Company	(kCal/Kg)							
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)							
25	Weighted average GCV of coal/ Lignite as Billed	(kCal/Kg)	<b>4578</b>		<b>4898</b>		<b>4432</b>		
26	GCV of Domestic Coal of opening stock as received at Station	(kCal/Kg)	4126		4072		4355		
27	GCV of Domestic Coal supplied as received at Station	(kCal/Kg)	4070		4391		4020		
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)							
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)							
30	<b>Weighted average GCV of coal as Received</b>	<b>(kCal/Kg)</b>	<b>4072</b>		<b>4355</b>		<b>4122</b>		

Note- Break-up of coal receipt through different modes for computation of Normative Transit loss attached as Annexure-3

  
(Petitioner)

**परिमल पीयूष/PARIMAL PIYUSH**  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Details of Secondary Fuel for Computation of Energy Charges**

PART-I  
FORM- 15A

Name of the Company : **NTPC Limited**  
Name of the Power Station : **Rihand Super Thermal Power Station Stage-III**

Sl.No.	Month	Unit	Oct-19		Nov-19		Dec-19	
			LDO	HFO	LDO	HFO	LDO	HFO
1	Opening Stock of Oil	KL	5,772.386		5,507.386		5,383.390	
2	Value of Opening Stock	Rs.	30,57,75,957		29,17,38,325		28,51,69,772	
3	Quantity of Oil supplied by Oil Company	KL						
4	Adjustment (+/-) in quantity supplied made by Oil Company	KL						
5	Oil supplied by oil company (3+4)	KL	-	-	-	-	-	-
6	Normative Transit & Handling Losses	KL						
7	Net Oil Supplied (3-4)	KL	-	-	-	-	-	-
8	Amount charged by the Oil Company*	(Rs)						
9	Adjustment(+/-) in amount charged made by Oil Company	(Rs)	-	-	-	-	24,084.00	-
10	Handling, Sampling & Such other charges	(Rs)					24,084.00	-
11	Total amount charged (6+7)	(Rs)	-	-	-	-	24,084.00	-
12	Transportation charges by rail / ship / road transport	(Rs)						
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs)						
14	Demurrage Charges, if any	(Rs)						
15	Cost of Diesel in transporting Secondary Fuel through MGR system, if applicable	(Rs)						
16	Total transportation charges	(Rs)	-	-	-	-	-	-
17	Total amount charged for the Oil supplied including transportation	(Rs.)	-	-	-	-	24,084.00	-
18	Landed Cost of Oil	Rs/KL	52,972.20		52,972.19		52,976.70	
29	Weighted average GCV of Oil as fired	kCal/kL	9608		9605		9609	

Note: In terms of the order of Hon'ble Supreme Court regarding ban on use of furnace oil, main secondary fuel at Rihand-III is LDO w.e.f. 01.01.2019 and the same has been considered for calculation of Working Capital.

  
(Petitioner)

**परिमल पीयूष/PARIMAL PIYUSH**  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड / NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Details of Source wise Fuel for Computation of Energy Charges**

**PART-I  
FORM-15**

Name of the Company :		NTPC Limited						
Name of the Power Station :		Rihand Super Thermal Power Station Stage-III						
S. No.	Month	Unit	Oct-20		Nov-20		Dec-20	
			Domestic	Imported	Domestic	Imported	Domestic	Imported
1	Opening Quantity of Coal/ Lignite	(MT)	-	-	-	-	-	-
2	Value of Stock	Rs.	-	-	2,24,800.00	-	5,83,400.00	-
3	Quantity of Coal supplied by Coal Company*	(MT)	-	-	45,24,10,097.00	-	1,26,27,22,780.00	-
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	14,24,200.00	-	12,62,500.00	-	11,52,000.00	-
5	Coal supplied by Coal Company (1+2)	(MT)	-	-	-	-	-	-
6	Normative Transit & Handling Losses	(MT)	14,24,200.00	-	12,62,500.00	-	11,52,000.00	-
7	Net coal / Lignite Supplied (3-4)	(MT)	4,300.000	-	2,900.000	-	2,400.000	-
8	Amount charged by the Coal Company*	(Rs.)	14,19,900.000	-	12,59,600.000	-	11,49,600.000	-
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	2,66,58,32,773.00	-	2,34,31,78,863.00	-	2,19,65,93,389.00	-
10	Handling, Sampling and such other similar charges	(Rs.)	6,51,79,008.00	-	37,90,86,848.00	-	31,01,08,449.00	-
11	Total amount Charged (8+7)	(Rs.)	4,07,65,312.00	-	5,12,79,360.00	-	5,87,21,528.00	-
12	Transportation charges by rail, ship, road transport	(Rs.)	2,77,17,97,093.0	-	2,77,35,45,071.0	-	2,56,54,23,376.0	-
13	Adjustment (+/-) in amount charged made by Railways/ Transport Company	(Rs.)	5,82,32,386.00	-	1,48,09,169.00	-	3,15,08,721.00	-
14	Demurrage Charges, if any	(Rs.)	-	-	-	-	-	-
15	Cost of diesel in transporting coal through MGR system, if applicable	(Rs.)	-	-	-	-	-	-
16	Total Transportation Charges (9+10+11+12)	(Rs.)	2,72,82,513.00	-	2,27,73,599.00	-	2,16,24,463.00	-
17	Total amount Charged for coal supplied including Transportation (8+13+13A)	(Rs.)	8,54,94,899.00	-	3,75,82,768.00	-	5,31,31,194.00	-
18	Landed cost of coal (14)(15)	Rs./MT	2,85,72,91,992.0	-	2,81,11,27,839	-	2,61,85,54,560	-
19	Blending Ratio	%	2,012.41	-	2,198.59	-	2,251.14	-
20	Weighted average cost of coal	Rs./MT	100.00%	-	100.00%	-	100.00%	-
21	GCV of Domestic Coal of the opening stock as per bill of Coal Company	(kCal/Kg)	2161.22	-	2161.22	-	2161.22	-
22	GCV of Domestic Coal supplied as per bill Coal Company	(kCal/Kg)	4365	-	4435	-	4667	-
23	GCV of Imported Coal of the opening stock as per bill of Coal Company	(kCal/Kg)	4435	-	4708	-	4878	-
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)	-	-	-	-	-	-
25	Weighted average GCV of coal/ Lignite as Billed	(kCal/Kg)	4435	-	4667	-	4676	-
26	GCV of Domestic Coal of opening stock as received at Station	(kCal/Kg)	3630	-	3817	-	4148	-
27	GCV of Domestic Coal supplied as received at Station	(kCal/Kg)	3817	-	4207	-	4151	-
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)	-	-	-	-	-	-
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)	-	-	-	-	-	-
30	Weighted average GCV of coal as Received	(kCal/Kg)	3817	-	4148	-	4150	-

Note- Break-up of coal receipt through different modes for computation of Normative Transit loss attached as Annexure-3.

*(Petitioner)*

**परिमल पीयूष/PARIMAL PIYUSH**  
अपर महाप्रबन्धक (परिमल)  
Addl. General Manager (Commercial)  
एन टी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Details of Secondary Fuel for Computation of Energy Charges**

PART-I  
FORM- 15A

Name of the Company : **NTPC Limited**  
Name of the Power Station : **Rihand Super Thermal Power Station Stage-III**

Sl.No.	Month	Unit	Oct-20		Nov-20		Dec-20	
			LDO	HFO	LDO	HFO	LDO	HFO
1	Opening Stock of Oil	KL	5,060.395		5,004.395		4,089.400	
2	Value of Opening Stock	Rs.	22,94,37,752		22,68,98,718		18,54,12,719	
3	Quantity of Oil supplied by Oil Company	KL					3,156.270	
4	Adjustment (+/-) in quantity supplied made by Oil Company	KL						
5	Oil supplied by oil company (3+4)	KL	-	-	-	-	3,156.270	-
6	Normative Transit & Handling Losses	KL						
7	Net Oil Supplied (3-4)	KL	-	-	-	-	3,156.270	-
8	Amount charged by the Oil Company*	(Rs)					14,29,15,264.00	
9	Adjustment(+/-) in amount charged made by Oil Company	(Rs)	-	-	-	-		
10	Handling, Sampling & Such other charges	(Rs)						
11	Total amount charged (6+7)	(Rs)	-	-	-	-	14,29,15,264.00	
12	Transportation charges by rail / ship / road transport	(Rs)						
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs)						
14	Demurrage Charges, if any	(Rs)						
15	Cost of Diesel in transporting Secondary Fuel through MGR system, if applicable	(Rs)						
16	Total transportation charges	(Rs)	-	-	-	-		
17	Total amount charged for the Oil supplied including transportation	(Rs.)					14,29,15,264.00	
18	Landed Cost of Oil	Rs/KL	45,339.89	-	45,339.89	-	45,313.71	-
29	Weighted average GCV of Oil as fired	kCal/kL	9540		9540		9371	

Note: In terms of the order of Hon'ble Supreme Court regarding ban on use of furnace oil, main secondary fuel at Rihand-III is LDO w.e.f. 01.01.2019 and the same has been considered for calculation of Working Capital.

  
(Petitioner)

**परिमल पीयूष/PARIMAL PIYUSH**  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Details of Source wise Fuel for Computation of Energy Charges

PART-I  
FORM - 15

Name of the Company :		NTPC Limited									
Name of the Power Station :		Rihand Super Thermal Power Station Stage-II									
S. No.	Month	Unit	Oct-21			Nov-21			Dec-21		
			Domestic	Imported	Biomass	Domestic	Imported	Biomass	Domestic	Imported	Biomass
1	Opening Quantity of Coal/Lignite	(MT)	29193.3693	-	-	1,91,633.48	-	-	1,91,633.25	-	-
2	Value of Stock	(Rs)	41,29,93,937	-	-	47,29,21,223	-	-	44,17,08,525	-	-
3	Quantity of Coal supplied by Coal Company	(MT)	16,97,711.640	-	-	11,53,204.190	-	-	12,78,343.06	-	-
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	-	-	-	-	-	-	-	-	-
5	Coal supplied by Coal Company (3+4)	(MT)	16,97,711.640	-	-	11,53,204.190	-	-	12,78,343.06	-	-
6	Normative Transit & Handling Losses	(MT)	2,195.420	-	-	2,329.410	-	-	2,784.00	-	-
7	Net coal/Lignite Supplied (5-6)	(MT)	16,95,516.220	-	-	11,50,874.770	-	-	12,75,559.06	-	-
8	Amount charged by the Coal Company	(Rs.)	2,10,83,02,583	-	-	2,33,97,37,972	-	-	12,75,559.06	-	-
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	38,44,01,668	-	-	2,44,04,66,576.00	-	-	2,44,04,66,576.00	-	-
10	Handling, Storage and such other similar charges	(Rs.)	4,75,76,267.00	-	-	33,05,67,655	-	-	68,54,58,332.00	-	-
11	Total amount charged (8+9+10)	(Rs.)	2,74,32,81,568	-	-	2,58,99,00,645	-	-	3,17,75,42,397	-	-
12	Transportation charges by rail, ship, road transport	(Rs.)	-	-	-	-	-	-	78,33,317.00	-	-
13	Adjustment (+/-) in amount charged made by Railway/Transport Company	(Rs.)	-	-	-	-	-	-	-	-	-
14	Demurrage Charges, if any	(Rs.)	-	-	-	-	-	-	-	-	-
15	Cost of Diesel in transporting coal through MGR systems, if applicable	(Rs.)	2,34,56,100.00	-	-	2,57,87,011.00	-	-	2,64,58,958.00	-	-
16	Total Transportation Charges (12+13+14+15)	(Rs.)	2,34,56,100.00	-	-	2,57,87,011.00	-	-	2,64,58,958.00	-	-
17	Total amount charged for coal supplied including Transportation (11+16)	(Rs.)	2,76,67,37,168	-	-	2,61,56,87,555	-	-	3,42,92,275.00	-	-
18	Landed cost of coal (2+17)/(1+7)	(Rs./MT)	2,473.08	-	-	2,301.33	-	-	2,489.51	-	-
19	Blending Ratio	%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%
20	Weighted average cost of coal (including biomass)	(Rs./MT)	2473.08	0.00%	0.00%	2301.33	0.00%	0.00%	2489.51	0.00%	0.00%
21	GCV of Domestic Coal of the opening stock as per bill of Coal Company	(kCal/Kg)	4572	-	-	4851	-	-	4748	-	-
22	GCV of Domestic Coal supplied as per bill of Coal Company	(kCal/Kg)	4958	-	-	4723	-	-	4855	-	-
23	GCV of Imported Coal of the opening stock as per bill of Coal Company	(kCal/Kg)	-	-	-	-	-	-	-	-	-
24	GCV of Imported Coal supplied as per bill of Coal Company	(kCal/Kg)	-	-	-	-	-	-	-	-	-
25	Weighted average GCV of coal/Lignite as Billed (including Biomass)	(kCal/Kg)	-	4851	-	-	4748	-	-	4876	-
26	GCV of Domestic Coal of opening stock as received at Station	(kCal/Kg)	3663	-	-	4373	-	-	4216	-	-
27	GCV of Domestic Coal Supplied as received at Station	(kCal/Kg)	4322	-	-	4307	-	-	4472	-	-
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)	-	-	-	-	-	-	-	-	-
29	GCV of Imported Coal Supplied as received at Station	(kCal/Kg)	-	-	-	-	-	-	-	-	-
30	Weighted average GCV of coal as Received (including biomass)	(kCal/Kg)	-	4272	-	-	4216	-	-	4439	-

Note: Break-up of coal receipt through different modes for computation of Normative Transit loss attached as Annexure-3.

(Addl. General Manager)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)



**Details of Secondary Fuel for Computation of Energy Charges**

PART-I  
FORM- 15A

Name of the Company : **NTPC Limited**  
Name of the Power Station : **Rihand Super Thermal Power Station Stage-III**

Sl.No	Month	Unit	Oct-21		Nov-21		Dec-21	
			LDO	HFO	LDO	HFO	LDO	HFO
1	Opening Stock of Oil	KL	4,360.090	-	7,027.170	-	6,865.170	-
2	Value of Opening Stock	Rs.	22,02,87,492	-	40,75,86,271	-	39,81,90,030	-
3	Quantity of Oil supplied by Oil Company	KL	3,162.080	-	-	-	-	-
4	Adjustment (+/-) in quantity supplied made by Oil Company	KL	-	-	-	-	-	-
5	Oil supplied by oil company (3+4)	KL	3,162.080	-	-	-	-	-
6	Normative Transit & Handling Losses	KL	-	-	-	-	-	-
7	Net Oil Supplied (3-4)	KL	3,162.080	-	-	-	-	-
8	Amount charged by the Oil Company*	(Rs)	21,60,09,516.00	-	-	-	-	-
9	Adjustment(+/-) in amount charged made by Oil Company	(Rs)	-	-	-	-	-	-
10	Handling, Sampling & Such other charges	(Rs)	-	-	-	-	-	-
11	Total amount charged (8+7)	(Rs)	21,60,09,516.00	-	-	-	-	-
12	Transportation charges by rail / ship / road transport	(Rs)	-	-	-	-	-	-
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs)	-	-	-	-	-	-
14	Demurrage Charges, if any	(Rs)	-	-	-	-	-	-
15	Cost of Diesel in transporting Secondary Fuel through MGR system, if applicable	(Rs)	-	-	-	-	-	-
16	Total transportation charges	(Rs)	-	-	-	-	-	-
17	Total amount charged for the Oil supplied including transportation	(Rs.)	21,60,09,516.00	-	-	-	-	-
18	Landed Cost of Oil	Rs/KL	58,001.48	-	58,001.48	-	58,001.49	-
19	Blending Ratio (Domestic/ Imported)	%	1.00	-	1.00	-	1.00	-
20	Weighted average cost of Oil	Rs/KL	58,001.48	-	58,001.48	-	58,001.49	-
21	GCV of Domestic Oil of the Opening Oil stock as per bill of Oil Company	kCal/KL	-	-	-	-	-	-
22	GCV of Domestic Oil supplied as per bill of Oil Company	kCal/KL	-	-	-	-	-	-
23	GCV of Imported Oil of the opening stock as per bill of Oil Company	kCal/KL	-	-	-	-	-	-
24	GCV of Imported Oil supplied as per bill of Company	kCal/KL	-	-	-	-	-	-
25	Weighted average GCV of Oil/ Lignite as Billed	kCal/KL	-	-	-	-	-	-
26	GCV of Domestic Oil of the Opening Oil stock as received at Station	kCal/KL	-	-	-	-	-	-
27	GCV of Domestic Oil supplied as received at Station	kCal/KL	9,232.00	-	9,232.00	-	9,232.00	-
28	GCV of Imported Oil of the Opening Oil stock as received at Station	kCal/KL	-	-	-	-	-	-
29	GCV of Imported Oil supplied as received at Station	kCal/KL	-	-	-	-	-	-
30	Weighted average GCV of Oil as received	kCal/KL	9,232.00	-	9,232.00	-	9,232.00	-

Note: In terms of the order of Hon'ble Supreme Court regarding ban on use of furnace oil, main secondary fuel at Rihand-III is LDO w.e.f. 01.01.2019 and the same has been considered for calculation of Working Capital.

(Petitioner)

**परिमल पीयूष / PARIMAL PIYUSH**  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड / NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Details of Source wise Fuel for Computation of Energy Charges

PART-I  
FORM- 15

Name of the Company :		NTPC Limited									
Name of the Power Station :		Rihand Super Thermal Power Station Stage-II									
S. No.	Month	Unit	Oct-22			Nov-22			Dec-22		
			Domestic	Imported	Biomass	Domestic	Imported	Biomass	Domestic	Imported	Biomass
1	Opening Quantity of Coal/Lignite	(MT)	8,20,569	-	-	6,49,142.29	-	-	8,37,711.48	-	-
2	Value of Stock	(Rs.)	2,27,74,29,302	-	-	1,87,41,75,366	-	-	1,97,06,80,724	-	-
3	Quantity of Coal supplied by Coal Company	(MT)	9,82,297,480	-	-	12,17,064,320	-	-	11,18,452,95	-	-
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	-	-	-	-	-	-	-	-	-
5	Coal supplied by Coal Company (3+4)	(MT)	9,82,297,480	-	-	12,17,064,320	-	-	11,18,452,95	-	-
6	Normative Transit & Handling Losses	(MT)	1,964,590	-	-	2,434,130	-	-	2,236,91	-	-
7	Net coal / Lignite Supplied (5-6)	(MT)	9,80,332,870	-	-	12,14,630,190	-	-	11,16,216,05	-	-
8	Amount charged by the Coal Company	(Rs.)	1,95,99,95,106	-	-	2,42,23,52,582	-	-	2,22,82,10,032.00	-	-
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	37,55,49,879	-	-	20,61,95,971	-	-	22,89,89,574.00	-	-
10	Handling, Sampling and such other similar charges	(Rs.)	4,36,76,433.00	-	-	4,97,90,307	-	-	4,55,79,768.00	-	-
11	Total amount charged (8+9+10)	(Rs.)	2,37,91,61,418	-	-	2,67,83,38,771	-	-	2,50,37,79,374	-	-
12	Transportation charges by rail, ship, road transport	(Rs.)	-	-	-	-	-	-	-	-	-
13	Adjustment (+/-) in amount charged made by Railways/ Transport Company	(Rs.)	-	-	-	-	-	-	-	-	-
14	Demurrage Charges, if any	(Rs.)	-	-	-	-	-	-	-	-	-
15	Cost of diesel in transporting coal through MGR system, if applicable	(Rs.)	2,67,29,361.00	-	-	3,19,30,967.00	-	-	2,98,47,437.00	-	-
16	Total Transportation Charges (12-13+14+15)	(Rs.)	2,67,29,361	-	-	3,19,30,966	-	-	2,98,47,437.00	-	-
17	Total amount charged for coal supplied including Transportation (11+16)	(Rs.)	2,40,68,90,779	-	-	2,71,02,69,737	-	-	2,53,36,26,811	-	-
18	Landed cost of coal (2+17)/(1+7)	(Rs./MT)	2,579.06	-	-	2,352.46	-	-	2,305.26	-	-
19	Blending Ratio	%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%
20	Weighted average cost of coal (including biomass)	(Rs./MT)	2579.06	-	-	2352.46	-	-	2305.26	-	-
21	GCV of Domestic Coal of the opening stock as per bill of Coal Company	(kCal/Kg)	5045	-	-	4948	-	-	4708	-	-
22	GCV of Domestic Coal supplied as per bill Coal Company	(kCal/Kg)	4865	-	-	4579	-	-	4389	-	-
23	GCV of Imported Coal of the opening stock as per bill of Coal Company	(kCal/Kg)	-	-	-	-	-	-	-	-	-
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)	-	-	-	-	-	-	-	-	-
25	Weighted average GCV of coal/ Lignite as billed (including Biomass)	(kCal/Kg)	-	-	-	4948	-	-	4708	-	-
26	GCV of Domestic Coal of opening stock as received at Station	(kCal/Kg)	4431	-	-	4311	-	-	4086	-	-
27	GCV of Domestic Coal Supplied as received at Station	(kCal/Kg)	4209	-	-	3965	-	-	3862	-	-
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)	-	-	-	-	-	-	-	-	-
29	GCV of Imported Coal Supplied as received at Station	(kCal/Kg)	-	-	-	-	-	-	-	-	-
30	Weighted average GCV of coal as Received (including biomass)	(kCal/Kg)	4311	-	-	4086	-	-	3958	-	-

Note: Break-up of coal receipt through different modes for computation of Normative Transit loss attached as Annexure-3

(Petitioner)

परिमल पीयूष / PARIMAL PIYUSH  
 Addl. General Manager (Commercial)  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Details of Secondary Fuel for Computation of Energy Charges**

PART-I  
FORM- 15A

Name of the Company :		NTPC Limited						
Name of the Power Station :		Rihand Super Thermal Power Station Stage-III						
Sl.No	Month	Unit	Oct-21		Nov-21		Dec-21	
			LDO	HFO	LDO	HFO	LDO	HFO
1	Opening Stock of Oil	KL	5,770.920		4,863.920		4,481.920	
2	Value of Opening Stock	Ra.	45,72,64,443		38,53,97,406		35,51,29,260	
3	Quantity of Oil supplied by Oil Company	KL	1,088.000				3,035.630	
4	Adjustment (+/-) in quantity supplied made by Oil Company	KL						
5	Oil supplied by oil company (3+4)	KL					3,035.630	
6	Normative Transit & Handling Losses	KL						
7	Net Oil Supplied (3-4)	KL					3,035.630	
8	Amount charged by the Oil Company*	(Rs)					29,42,39,528.00	
9	Adjustment(+/-) in amount charged made by Oil Company	(Rs)						
10	Handling, Sampling & Such other charges	(Rs)						
11	Total amount charged (6+7)	(Rs)					29,42,39,528.00	
12	Transportation charges by rail / ship / road transport	(Rs)						
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs)						
14	Demurrage Charges, if any	(Rs)						
15	Cost of Diesel in transporting Secondary Fuel through MGR system, if applicable	(Rs)						
16	Total transportation charges	(Rs)						
17	Total amount charged for the Oil supplied including transportation	(Rs.)					29,42,39,528.00	
18	Landed Cost of Oil	Rs/KL	79,235.97		79,235.98		85,380.38	
19	Blending Ratio (Domestic/ Imported)	%	1.00		1.00		1.00	
20	Weighted average cost of Oil	Rs/KL	89,236.00		93,455.00		85,380.38	
21	GCV of Domestic Oil of the Opening Oil stock as per bill of Oil Company	kCal/kL						
22	GCV of Domestic Oil supplied as per bill of Oil Company	kCal/kL						
23	GCV of Imported Oil of the opening stock as per bill of Oil Company	kCal/kL						
24	GCV of Imported Oil supplied as per bill of Company	kCal/kL						
25	Weighted average GCV of Oil/ Lignite as Billed	kCal/kL						
26	GCV of Domestic Oil of the Opening Oil stock as received at Station	kCal/kL						
27	GCV of Domestic Oil supplied as received at Station	kCal/kL	9,362.00		9,382.00		9,302.00	
28	GCV of Imported Oil of the Opening Oil stock as received at Station	kCal/kL						
29	GCV of Imported Oil supplied as received at Station	kCal/kL						
30	Weighted average GCV of Oil as received	kCal/kL	9,362.00		9,362.00		9,302.00	

Note: In terms of the order of Hon'ble Supreme Court regarding ban on use of furnace oil, main secondary fuel at Rihand-III is LDO w.e.f. 01.01.2019 and the same has been considered for calculation of Working Capital.

(Petitioner)

  
**परिमल पीयूष / PARIMAL PIYUSH**  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड / NTPC LIMITED  
 EOC, A-2A, Sector-24, Noida-201301 (U.P.)

**Computation of Energy Charges**

Name of the Company	NTPC Limited
Name of the Power Station	Rihand Super Thermal Power Station Stage-II

Form-15B  
ADDITIONAL FORM

**Computation of Energy Charges**

	2019-20	2020-21	2021-22	2022-23	2023-24
1 Rate of Energy Charge from Sec. Fuel OR Alternate Fuel (p/kWh) $(P_1) = (Q_1) \times P_1$	2.945	2.649	2.298	2.900	4.110
2 Heat Contribution from SFO / Alternate Fuel $(H_1) = (Q_1) \times (GCV_1)$	4.895	4.804	4.742	4.616	4.671
3 Heat Contribution from coal $(H_2) = Q_2R - H_1$	2353.95	2354.04	2354.10	2354.22	2354.17
4 Specific Primary Fuel Consumption Rate of Energy charge from Primary Fuel (p/kWh) $(R_1) = H_1 / (GCV_1)$	0.575	0.574	0.595	0.557	0.584
5 Rate of Energy charge $(R_2) = (R_1) \times P_1$	128.119	129.137	128.693	135.028	140.616
6 Rate of Energy charge $(R_3) = (R_2) + (R_1) \times P_1 / (1 - ADR)$	139.801	140.571	139.690	147.121	154.374

		2019-20	2020-21	2021-22	2022-23	2023-24
No of Days in the period	Days	365	365	365	365	365
No of Days in the year	Days	365	365	365	365	365
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	2,359.84	2,358.84	2,358.84	2,358.84	2,358.84

**Computation of Variable Charges**

		2019-20	2020-21	2021-22	2022-23	2023-24
Variable Charge (Coal)	p/kwh	136.660	137.746	137.273	144.028	149.990
Variable Charge (Oil)	p/kwh	3.142	2.825	2.418	3.093	4.384
Total	p/kwh	139.801	140.571	139.690	147.121	154.374

**Price of fuel from Form-15/15A**

		2019-20	2020-21	2021-22	2022-23	2023-24
Coal Cost	(Rs./MT)	2228.51	2248.08	2161.19	2422.68	2409.13
Oil Cost	(Rs./kg)	58903.64	52973.63	45328.92	58001.48	82194.72

**Computation of Fuel Expenses for Calculation of IWC:**

	(MUs)	2019-20	2020-21	2021-22	2022-23	2023-24
ESD in a year	(MUs)	6999.75	6990.63	6990.63	6990.63	6996.75
ESD for 45 days	(MUs)	765.000	765.000	765.000	765.000	765.000
Cost of coal for 45 Days	(Rs. Lakh)	10454.48	10537.56	10501.35	11018.11	11474.23
Cost of oil for 2 months	(Rs. Lakh)	356.90	328.70	281.27	359.60	511.42
Energy Expenses for 45 day	(Rs. Lakh)	12031.69	12097.90	12022.08	12667.60	13285.79

		2019-20	2020-21	2021-22	2022-23	2023-24
Coal						
Wtd. Avg. Price of Coal	Rs./MT	2228.51	2248.08	2161.19	2422.68	2409.13
Wtd. Avg. GCV of Coal as received	kCal/Kg	4179.67	4183.00	4038.33	4309.00	4118.93
Sec. Oil						
Wtd. Avg. Price of Secondary Fuel	Rs/KL	58903.64	52973.63	45328.92	58001.48	82194.72
Wtd. Avg. GCV of Secondary Fuel	kCal/L	9790.00	9607.67	9483.67	9232.00	9342.00

  
(Petitioner)

**परिमल पीयूष/PARIMAL PIYUSH**  
अवर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-BA, Sector-24, Noida-201301 (U.P.)

## Details/ Information to be Submitted in respect of Capital Spares (2019-20)

Name of the Petitioner: NTPC Ltd.		NTPC Limited					
Name of the Generating Station:		Rihand Super Thermal Power Station Stage-III					
Date of Commercial Operation:		27-03-2014					
Details of Capital Spares and Expenses in 2019-20							Amount in Rs Lakh
Sl. No.	Name of Spare	Value of the Asset	Claimed as a part of additional Capitalisation	Funded through Compensatory Allowance	Funded through Special Allowance (If Applicable)	Claimed as a part of stores and spares	Remarks
1	GV-IS:10611-H.O-BW-A216 WCC:2500-100MM	0.35	No	No	No	No	
2	C.S. GATE VALVE SIZE 100mm	0.27	No	No	No	No	
3	400 NB MAN OPTD BUTTERFLY VALVE	0.40	No	No	No	No	
4	C.I GATE VALVE SIZE B(200MM)	0.25	No	No	No	No	
5	FLUIDOMAT HFD-7 COMPLETE ASSEMBLY	0.28	No	No	No	No	
6	COMP ASSY FLUIDOMAT COUPLING SC-10	15.97	No	No	No	No	
7	COMP ASSY FLUIDOMAT COUPLING SC-14	42.48	No	No	No	No	
8	COMP ASSY BREVENI GEAR BOX SC8504	5.00	No	No	No	No	
9	COMP UNIT DAVID BROWN GEAR BOX B3-355	85.75	No	No	No	No	
10	COMPLETE ASSY DAVID BROWN GEAR BOX	8.70	No	No	No	No	
11	COMP ASSY ELECON GEAR BOX NK-KCU200.80-1	49.79	No	No	No	No	
12	COMP ASSY ELECON GEAR BOX SBN280.14-1	30.81	No	No	No	No	
13	COMP ASSY ELECON GEAR BOX VK55-424.570-1	43.31	No	No	No	No	
14	COMP ASSY PCT GEAR BOX SR 32.2(12.93.1)	27.98	No	No	No	No	
15	COMP ASSY PREMIUM ENERGY GEAR BOX B232	35.55	No	No	No	No	
16	COMP ASSY PREMIUM ENERGY GEAR BOX B3-355	3.50	No	No	No	No	
17	GEAR COUPLING E028400 COMP UNIT ELECON	4.42	No	No	No	No	
18	ELECON BZWE-5800 COMP ASSY	1.49	No	No	No	No	
19	CH 500-2000-2-SJ COMPLETE CATRIDGE ASSY	11.22	No	No	No	No	
20	IMPELLER SHAFT 1800101 BHM-125	16.19	No	No	No	No	
21	5/8"HLG:COMP ASSY	3.28	No	No	No	No	
22	COMPLETE PUMP ASSY. ST.4MD 80205DMAKE	2.49	No	No	No	No	
23	COMPLETE CATRIDGE ASSEMBLY TDBPPS-AOP	37.92	No	No	No	No	
24	SIZE200 WATER RING VACUUM PUMP ASSY	22.24	No	No	No	No	
25	COMPRESSOR COMPLETE TYPE-30	27.11	No	No	No	No	
26	4-C150-GV-HW-BW-WCB COMPLETE VALVE ASSY.	2.00	No	No	No	No	
27	4-C150-FV-BW-WCB COMP V/V ASSY.:	0.27	No	No	No	No	
28	BOCZY H95325&1 HOPKINSON	6.92	No	No	No	No	
29	FLUID DRIVE HYD CPLG 38SCR24R 960RPM	11.59	No	No	No	No	
30	HP DOSING PUMP WITH MOTOR ASSY BHEL	4.49	No	No	No	No	
31	ECC COIL LOWER ASSY	531.48	No	No	No	No	
32	DOUBLE CKT.22 TUBE ECC COIL PAIR ASSY	580.91	No	No	No	No	
33	WALL BLOWER ASSY.	6.03	No	No	No	No	
34	ENTRAL TRUNNION SHAFT MAIN PREHEATER	59.00	No	No	No	No	
35	GEAR BOX TYPE-II.3 INPUT DOWNSHAFT	41.85	No	No	No	No	
36	PIN RACK ASSY FOR SAPH 30.0 VIM 2000	5.75	No	No	No	No	
37	PIN RACK ASSY FOR SAPH-27.5 VIM 2000	4.32	No	No	No	No	
38	SECONDARY GEAR BOX	64.27	No	No	No	No	
39	OVERKUNNING CLUTCH FOR SAPH	3.65	No	No	No	No	

परिमल पीयूष/PARIMAL PIYUSH  
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 Addl. General Manager (Commercial)  
 एन टी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

40	SHAFT&IMPELLER ASSY.05652001	309.05	No	No	No	No
41	IMPELLER BLADE 0-55-216-00829 (OM)+ BHEL	52.11	No	No	No	No
42	MULTI PORT ASSY.814600011.03.01.G.BHEL	18.66	No	No	No	No
43	BULL RING SEGMENTS ASSEMBLY,MILL XRP1003	28.99	No	No	No	No
44	GRINDING ROLL FOR XRP 1003	80.29	No	No	No	No
45	MILL BOTTOM FOR XRP-1003 MILLS	4.56	No	No	No	No
46	BELT DRIVE REDUCER	71.37	No	No	No	No
47	BELT DRIVE REDUCER,SWM150V150R,500MW	7.72	No	No	No	No
48	UNITROL-6000.POWER SUPPLY QUINT	0.46	No	No	No	No
49	UNITROL-6000.COMM. CTRL. MEASU DEVICE	5.70	No	No	No	No
50	CONTROLLER,30HE023784R2530,ABB	12.51	No	No	No	No
51	UNITROL-6000 FIRING UNIT	3.82	No	No	No	No
52	TOP/BOTTOM SHELL, R210/A011175,NEI	8.86	No	No	No	No
53	TOP/BOTTOM SHELL, R210/A011170&4.5,NEI	11.55	No	No	No	No
54	U-SEALING RING MACHINED.810501060007	3.93	No	No	No	No
55	JOURNAL BRG ASSLY,D250X180,01160418000&0	44.90	No	No	No	No
56	IV SERVOMOTOR COMPLETE 0-11403-27000	16.61	No	No	No	No
57	ANGLE DRAIN VALVE,ER20-2,AR1180/81	14.84	No	No	No	No
58	ESV SERVOMOTOR COMPLETE 0-11401-27000	45.41	No	No	No	No
59	BEARING SHELL ASSY.91139101000	67.05	No	No	No	No
60	BEARING SHELL ASSY.9138120100300000	64.54	No	No	No	No
61	MAIN OIL PUMP IMPELLER PartNO. 3156377	14.28	No	No	No	No
62	COMPLETE HP GOVERNING W/V K1401-2	1.15	No	No	No	No
63	DIESEL GENERATOR,250KVA,GPW11-P11-250	19.61	No	No	No	No
64	ROTOR ASSY.M072191 EKK 48X114	63.71	No	No	No	No
65	PADDLE ASSY.2322016&3,FLSMIDTH,1125MTPH	13.91	No	No	No	No
66	HYD MOTOR.2322016&10,FLSMIDTH,1125TPH	11.35	No	No	No	No
67	1125MTPH TRAVEL DRIVE GEARED MOTOR	1.84	No	No	No	No
68	DRIVE UNIT ASSY,TRF,TE-13	1.72	No	No	No	No
69	LUFF HYD CYLINDER HL09632&2,ILECON EPC	110.27	No	No	No	No
70	MAGNET ASSY,BD X14 010 OV501039+	43.15	No	No	No	No
71	ASSLY OF FLUID COUP. FCU. 17.75	0.81	No	No	No	No
72	COMP FLUID COUPLING FOR ASH SLURRY PUMP	10.14	No	No	No	No
73	200X200MM COMPLETE ASSEMBLY	9.67	No	No	No	No
74	PVC FILL PK.CF.(1218X1829X305) THK-0.3MM	418.97	No	No	No	No
75	PVC FILL PK.CF.(868X1829X305) THK-0.3MM	40.39	No	No	No	No
76	VEHICLE PLATFORM TRUCK,JOISTS,FW+FB 40	6.14	No	No	No	No
77	TORQUE CNVRTR ASSY.1951319001,BEML,8D355	24.64	No	No	No	No
78	TRACK SHOE ASSY.130CT00268,BEML DOZER	20.42	No	No	No	No
79	TRANSMISSION ASSY.130TM01008,BEML,8D355	51.20	No	No	No	No
80	ENGINE ASSY.512000022,BEML,8D355	52.48	No	No	No	No
81	SCREW COMPRESSOR	23.13	No	No	No	No
82	TURBOCHARGER ASSY.10080193,DLW	60.78	No	No	No	No
83	CB SP6-11KV,3150A,ABB	1.17	No	No	No	No
84	3PH,SCIM,90KW/415V,1462RPM,280M,TEFC	6.30	No	No	No	No
85	MOTOR 55KW,1475 RPM,ND250M,	1.22	No	No	No	No
86	SQ.CG.MOTOR: 415V,180KW,6P,V1,TEFC,315LK	4.53	No	No	No	No
87	MOTOR,SQ CAGE IND,415VAC,3PH,81,315L,83	5.00	No	No	No	No
88	MTR SGL,415V,200KW,4P-83,TEFC,FR-315ML	3.82	No	No	No	No
89	MOTOR,DC JOP,220VDC,81,ALU5280M,FLG,IP55	6.40	No	No	No	No
90	MOTOR,SGL,SQ CAGE IND,3.3KV,D3158,83	14.50	No	No	No	No
91	MOTOR,SGL,SQ CAGE IND,3.3KV,3PH,D355-88	24.99	No	No	No	No
92	MOTOR,SGL,SQ CAGE IND,3.3KV,ILA7713,83,F	63.60	No	No	No	No

In order to meet the customers demand and maintain high machine availability at all times by the instant station, units' equipment are taken under overhaul/ maintenance and inspected regularly for wear and tear. During such works, spare parts of equipment's which became damaged/ unserviceable are replaced/ consumed so that the machine continue to perform at expected efficiency on sustained basis. Further as per Regulation 35(b) of TR 2018, capital spares are admissible separately as part of O&M expenses. Therefore, it is prayed that the capital spares consumed by the instant station during the period may please be allowed by Hon'ble Commission.

परिमल पीयूष / PARIMAL PIYUSH  
 Addl. General Manager (Commercial)  
 एन टी सी लिमिटेड / NTPC LIMITED  
 EDC, A-8A, Sector-24, Noida-201301 (U.P.)

93	LBB RELAY MCT1140 TYPE MCT1140F1AK1001A	0.08	No	No	No	No
94	NUMERICAL TRANSFORMER PROTECTION RELAY 1A	4.50	No	No	No	No
95	DISTANCE PROTECTION RELAY MICOM P442	3.09	No	No	No	No
96	RELY NUM:220VDC:RET-830 A8B ZAANBXA	10.33	No	No	No	No
97	RELY NUM:220VDC:REF-615,A8B:GNBA1BBN1XD	5.28	No	No	No	No
98	RELY NUM:220VDC:REM-615,A8B:GNBA1BBN1XD	8.61	No	No	No	No
99	RELAY NUMBER GE MULTILIN F650	13.77	No	No	No	No
100	RELAY NUM GENERATOR PROT 5A 220VDC	95.27	No	No	No	No
101	BATTERY RECHLEAD ACID 220V,560AH	34.95	No	No	No	No
102	ANALYZER 0-200V 0-50MA 0.1MILLI-0-10KHZ	22.30	No	No	No	No
103	PRDP TRANSMTR -100+950MMWC	0.23	No	No	No	No
104	PRDP TRANSMTR 0-1900MBAR	0.08	No	No	No	No
105	ABSOLUTE SHAFT & BRG VIBRATION MONITOR	0.10	No	No	No	No
106	DUAL SEISMIC VIBR.MONITOR, MAKE SHINKAWA	0.19	No	No	No	No
107	C&I PGB-10 KGCM2BRD 1/2" NPTBCK150MM	0.03	No	No	No	No
108	VALVE SOL HERION,2334809,1500 024 00	8.71	No	No	No	No
109	TAC: K-TYPE HEAD TYPE DUPL EX 6MMX7655MM	0.31	No	No	No	No
110	VALVE SOL 24VDC,2432581,1362 024 00	11.23	No	No	No	No
111	OH CONVERTOR: DSG B07112, VOITH TURBO	16.47	No	No	No	No
112	PNEU ACTUATOR 3W18", MAKE: MIL	0.86	No	No	No	No
113	ACTUATOR,HYD,ELECTRO,ADVANCE ACTUATOR	20.02	No	No	No	No
114	ANALOG INPUT MODULE AAI143-S00K4A00	84.55	No	No	No	No
115	LED BASED LVS SYSTEM/MVL6715SXGA,BARCO	41.01	No	No	No	No
116	24V DC-DC CONVERTER, MODEL-302S	0.35	No	No	No	No
117	MAX OPERATOR STATION	25.22	No	No	No	No
	Total (A)	4,168.21				
	Total for Rihand-II station (I=A*2*500(1*2*500))	1,389.46				

  
(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबंधक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Details/Information to be Submitted in respect of Capital Spares

PART-I  
FORM-17

Name of the Petitioner:		NTPC Limited					
Name of the Generating Station:		Rihand Super Thermal Power Station Stage-II					
Sl. No.	Details of Capital Spares and Expenses in 2020-21 Name of Spare	Value of the Asset	Claimed as a part of additional Capitalisation	Funded through Compensatory Allowance (if Applicable)	Funded through Special Allowance	Claimed as a part of stores and spares	Amount in Rs Lakhs Remarks
1	350 NR C.I. CHECK VALVE 0-10/33CMG	0.02	No	NA	No	No	
2	100 NR GATE VALVE CI BODY NP=1, FLANGED	0.09	No	NA	No	No	
3	CI GLOBE VALVE 50 NR RISING SPINDLE TYPE	0.10	No	NA	No	No	
4	REGULATING VV 55NB CCS WCS MO	5.31	No	NA	No	No	
5	200 NR CI GATE VALVE	0.05	No	NA	No	No	
6	450 MM RISE/NO SPINDLE TYPE CI GATE VV	0.03	No	NA	No	No	
7	C.I SWING CHECK VALVE 400 NB (BRV)	0.03	No	NA	No	No	
8	BEARING EM-25496	28.29	No	NA	No	No	
9	BEARING BLR SPHERICAL THRUST 204/750	96.80	No	NA	No	No	
10	FLUID COUPLING CDR-480 COMP ASSY	3.03	No	NA	No	No	
11	FLUIDOMAT HFD-7 COMPLETE ASSEMBLY	0.31	No	NA	No	No	
12	FC-FLUIDOMAT HFD-8 COMP ASSY	0.84	No	NA	No	No	
13	FC-FLUIDOMAT HFD-8R COMP ASSY	1.00	No	NA	No	No	
14	FC-FLUIDOMAT HFD-9 COMP ASSY	0.80	No	NA	No	No	
15	FLUID COUPLING MODEL SC11A-FLUIDOMAT	18.49	No	NA	No	No	
16	COMP UNIT DAVID BROWN GEAR BOX 83-356	37.89	No	NA	No	No	
17	COMP ASSY ELEC CON GEAR BOX KCG250	25.10	No	NA	No	No	
18	COMP ASSY ELEC CON GEAR BOX 58N250 14 1	18.21	No	NA	No	No	
19	COMP ASSY PCT GEAR BOX 8R 32.2(12 93 1)	14.07	No	NA	No	No	
20	DR ASSY R15.01 PETL 83 315	3.05	No	NA	No	No	
21	COMP ASSY PREMIUM ENERGY GEAR BOX B232	71.10	No	NA	No	No	
22	COMP ASSY PREMIUM ENERGY GEAR BOX B3-400	3.50	No	NA	No	No	
23	ELECON B2WE-2240 COMP ASSY	0.99	No	NA	No	No	
24	ELECON B2WE-3000 COMP ASSY	2.20	No	NA	No	No	
25	COUPLING ELECON ED6250 COMPL ASSY	1.37	No	NA	No	No	
26	ELECON ED6200 COMP ASSY	1.19	No	NA	No	No	
27	DIESEL ENG. DRIVEN CENTRIFUGAL PP SET	2.53	No	NA	No	No	
28	DH 600-2000-2-SJ COMPLETE CATREXGE ASSY	22.43	No	NA	No	No	
29	PUMP ASSY DH 540-1080-35	12.80	No	NA	No	No	
30	CARTRIDGE ASSY DH 540-1080-35	20.92	No	NA	No	No	
31	COMPLETE VACUUM PUMP ASSY W/O MOTOR	85.36	No	NA	No	No	
32	THRUST BEARING MITO-BELL PUMP ENL140	15.65	No	NA	No	No	
33	IMPELLER 1560101 BHM-125	72.29	No	NA	No	No	
34	TRANSMISSION SHAFT 1840101 BHM-125	11.40	No	NA	No	No	
35	HEAD SHAFT 1850101 BHM-125	16.19	No	NA	No	No	
36	IMPELLER SHAFT 1880101 BHM-125	15.87	No	NA	No	No	
37	PUMP ASSEMBLY	6.80	No	NA	No	No	
38	COMPLETE ASSY P2140RL 1K1T 1VPHS	23.72	No	NA	No	No	
39	SCREW PUMP ASSY ROTO RMAA 701 ROCDON	5.49	No	NA	No	No	
40	PUMP ASSY SAM TURBO AR 300/750 AM	23.63	No	NA	No	No	
41	RA20B IMPELLER	1.19	No	NA	No	No	
42	SIZE200 WATER RING VACUUM PUMP ASSY	23.58	No	NA	No	No	
43	SHAFT PUMP FK4E 38	39.65	No	NA	No	No	
44	THRUST BRG ASSY FK4E38	11.79	No	NA	No	No	
45	LP ELEMENT 1816802581 COMPRESSOR ZR-350	45.42	No	NA	No	No	
46	ROTOR DRUM 1817505076 ATLAS COPCO ZR-290	20.07	No	NA	No	No	
47	HP ELEMENT 1816803811 COMPRESSOR ZR-350	43.72	No	NA	No	No	
48	ZR SERIES MD 1000 DRIER ROTAR DRLM	13.49	No	NA	No	No	
49	SECOND STAGE PISTON AND CYLINDER ASSY	2.63	No	NA	No	No	
50	SCREW ELEMENT ASSY 46 001 880 20	18.06	No	NA	No	No	
51	60NB-C-300-BW-MOHVY COMP VV ASSY(HW)	2.10	No	NA	No	No	
52	6-C300-GV-BW-HWMO-WCB COMP VALVE ASSY	1.38	No	NA	No	No	
53	COMPLETE VALVE ASSY M278420AWRC	39.42	No	NA	No	No	
54	BODY R17802681 HOPKINSON	9.63	No	NA	No	No	
55	ANGLE DRAIN VLV ASSY 510+1487+101	7.15	No	NA	No	No	
56	HRH BRV INLET 300 VV PART NO 0024	14.93	No	NA	No	No	
57	ECC COIL LOWER ASSY	531.45	No	NA	No	No	
58	DOUBLE CKT 22 TUBE ECC COIL PAIR ASSY	580.91	No	NA	No	No	
59	COMPLETE DRUM SAFETY VALVE 1740 WB	3.87	No	NA	No	No	
60	BEARING RUNNER PLATE 4X500MM	10.00	No	NA	No	No	
61	SPEED REDUCER TYPE II COV SA/PH-30	44.89	No	NA	No	No	
62	SPEED REDUCER PARN 300MW 27 5VM2000	36.25	No	NA	No	No	

परिमल पीयूष/PARIMAL PIYUSH  
 अप्तु महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड /NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

In order to meet the customer's demand and maintain high machine availability at all times by the instant station, units/equipment are taken under overhaul/maintenance and inspected regularly for wear and tear. During such works,



63	HYD ADJ DEVICE 0-55-215-01108604	24.21	No	NA	No	No
64	ADJUSTMENT ASSY 0-55-334-009600171	46.96	No	NA	No	No
65	GEAR BOX ASSY BHEL BOX ER KRP-1023	110.30	No	NA	No	No
66	SPINDLE/HEAD ASSY 01111170 HRSV	98.35	No	NA	No	No
67	HRSV STRAINER C231M308A1 WFLXMG COWELS	90.39	No	NA	No	No
68	TDR/BOTTOM SHELL R210AC0119585.6.ND	11.79	No	NA	No	No
69	JOURNAL BRG ASSY D500X450.0119140200040	79.87	No	NA	No	No
70	VALVE SPINDLE 11132036000009 BHEL	12.60	No	NA	No	No
71	I.V. VALVE CONE	25.07	No	NA	No	No
72	IP KEEP RING ASSY M255/AJ403281 TO B	159.24	No	NA	No	No
73	HFBP SPRAY VALVE E455 10CM2 AREA	4.15	No	NA	No	No
74	DP REGULATOR VALVE WR0414601444 29N8	130.90	No	NA	No	No
75	CONTROL FLUID PUMP ALONG WITH MOTOR	91.37	No	NA	No	No
76	MAIN OIL PUMP IMPELLER PART NO. 3190377	14.25	No	NA	No	No
77	ROTA SIDE HYD. CYLINDER	23.15	No	NA	No	No
78	DRIVE PULLEY	0.10	No	NA	No	No
79	1400 DRIVE PULLEY DXL 800X1600S-HAFT D200	7.75	No	NA	No	No
80	DRIVE AXLE WHEEL F1378200 ELECTRON EPC	8.14	No	NA	No	No
81	400NR PLATE WV COMP ASSY IN SLURRY LINE	9.31	No	NA	No	No
82	PVC FILL PK CF 1216X1836X305 THK-0.3MM	158.39	No	NA	No	No
83	PVC FILL PK CF 1989X1829X305 THK-0.3MM	7.25	No	NA	No	No
84	MAP 10000 COMPLETE ASSY	5.68	No	NA	No	No
85	TRACK SHOE ASSY 130C100286 BEML DOZER	40.35	No	NA	No	No
86	ENGINE ASSY 5120000022 BEML DOZER	55.53	No	NA	No	No
87	8 PORT 10/100 MBPS ETHERNET SWITCH	0.89	No	NA	No	No
88	ENGINE ASSY 5120000014 BEML DOZER 90-145	83.57	No	NA	No	No
89	TRANSMISSION ASSY 1251M90029 BEML DOZER	47.53	No	NA	No	No
90	TRACK SHOE ASSY 125C100286 BEML DOZER	79.41	No	NA	No	No
91	DELUGE VALVE ASSEMBLY COMPLETE 150NR	0.88	No	NA	No	No
92	COMPLETE DELUGE VALVE ASSEMBLY 150NR	2.30	No	NA	No	No
93	COMPLETE ASSY KT-1150	392.18	No	NA	No	No
94	DOZER ENGINE 5120000014 BEM 0170	53.53	No	NA	No	No
95	CIRCUIT BREAKER SP6.3 3KV/220V 40KA 4RP	18.19	No	NA	No	No
96	CIRCUIT BREAKER SP6.3 132KV 2000A 1P	19.82	No	NA	No	No
97	XFMR POWER 11KV/2.3KV 3.25MVA 3PH/0YN11	28.91	No	NA	No	No
98	XFMR CURR DSKF 420 400KV 20VA S	110.92	No	NA	No	No
99	NUMERICAL TRANSFORMER PROTECTION RELAY 1A	8.49	No	NA	No	No
100	BATTERY CHARGER 3PH 48V 400 A	5.20	No	NA	No	No
101	BATTERY CHARGER 3PH 110V 190 AMP	3.89	No	NA	No	No
102	ART ENERGY METER WITH CT/PT 1A/110V/220V	1.04	No	NA	No	No
103	CT TEST KIT	21.83	No	NA	No	No
104	PROP TRANSMT R - 1900MRAR	0.15	No	NA	No	No
105	RAPCON BHEL ESP ELECTRONIC CONTROLLER	2.75	No	NA	No	No
106	CONTROL PANEL ANNUNCIATOR	12.98	No	NA	No	No
107	ON-LINE ANALYSER FOR CO, CO2, SOX, NOX	79.20	No	NA	No	No
108	MOVING COIL 01142205000855 11.70 TURBINE	25.37	No	NA	No	No
109	WIL CONVERTOR DSG-B07112 100TH TURBO	32.96	No	NA	No	No
110	SWITCH LV RESISTIVE 14PORT	86.34	No	NA	No	No
111	CONTROLLER STOCK GRAVIMETRIC FEEDER DT-9	497.28	No	NA	No	No
112	ON LINE SODIUM ANALYSER	19.59	No	NA	No	No
113	ALUMA POS TX MAG 1002 2WIRE 4-20 MA 24VDC	2.20	No	NA	No	No
114	ACTUATOR ELE PART TURN 11RPM ALUMA	1.40	No	NA	No	No
115	ACTUATOR SA82R0035125 WITH GEAR BOX	0.51	No	NA	No	No
116	ACTUATOR HYD ELECTRO ADVANCE ACTUATOR	20.02	No	NA	No	No
117	ACTUATOR PNEU 100MM 120 AN AIR/BFBP	17.05	No	NA	No	No
118	ARCASA-COLLINS TRANSMTR M3L ED682265805A	0.51	No	NA	No	No
119	ANALOG INPUT MODULE AA1143-500K4A00	21.14	No	NA	No	No
120	DIGITAL INPUT 24 DC IOP330 ED652200300R	1.49	No	NA	No	No
121	DIGITAL I/O CARD MAXDMA IOP351 ED62301351A	0.57	No	NA	No	No
122	DRIVE CONTROL MODULE ED 692265R08A	12.92	No	NA	No	No
123	DRIVE CONTROL MODULE ED692265R08A BHEL	12.92	No	NA	No	No
124	PROMAX SER DVR MOD ED692265R22A	23.51	No	NA	No	No
125	PROMAX TRIP POWER MODULE ED692265R03A	0.51	No	NA	No	No
126	PLC SYSTEM WITH ACCESSORIES	202.11	No	NA	No	No
127	CONTROL PROCESSOR FCP270 MAKE FOXBORO	79.83	No	NA	No	No
128	MAX OPERATOR STATION	37.84	No	NA	No	No
	<b>Total</b>	<b>5,373.22</b>	<b>No</b>	<b>NA</b>	<b>No</b>	<b>No</b>
	<b>Total for R-hand-II station (B-A*2560)(J*2560)</b>	<b>1,791.67</b>				

spare parts of equipment's which became damaged/ unworkable are replaced/ consumed so that the machine continue to perform at expected efficiency on sustained basis. Further as per Regulation 35(i) of TR 2019, capital spares are admissible separately as part of O&M expenses. Therefore, it is prayed that the capital spares consumed by the station during the period may please be allowed by Hon'ble Commission.



**परिमल पीयूष/PARIMAL PIYUSH**  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Add. General Manager (Commercial)  
**एन टी पी सी लिमिटेड/NTPC LIMITED**  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

(Petitioner)

Details/Information to be Submitted in respect of Capital Spares

PART-I  
FORM-17

Name of the Petitioner:		NTPC Limited					
Name of the Generating Station:		Rihand Super Thermal Power Station Stage-II					
Sl. No.	Details of Capital Spares and Expenses in 2021-22		Claimed as a part of additional Capitalisation	Funded through Compensatory Allowance	Funded through Special Allowance	Amount in Rs Lakhs	Remarks
	Name of Spare	Value of the Asset				Claimed as a part of stores and spares	
1	GATE VV SIZE-250MM NON RISING SPINDLE	0.93	No	NA	No	No	
2	BUTTERFLY VLV. SIZE-350 MM,API-609,PN-10	0.98	No	NA	No	No	
3	GUIDE BRG (SP.ROLLER BRG 23060)	0.98	No	NA	No	No	
4	BEARING ROLLER, SPHERICAL 294/580 EM	77.72	No	NA	No	No	
5	BEARING RLR, SPHERICAL THRUST 294/750	45.35	No	NA	No	No	
6	FLUID COUPLING,CDR-480 COMP ASSY	6.06	No	NA	No	No	
7	COMP ASSY,PEMBRIL COUPLING PST-530	10.14	No	NA	No	No	
8	COMP ASSY,PEMBRIL COUPLING 23SCR24R	9.87	No	NA	No	No	
9	GB BONFIGLIOLI 313L 2-25AF,COMPL ASSY	6.09	No	NA	No	No	
10	GEAR BOX,DAVID BROWN B3-200	80.63	No	NA	No	No	
11	COMP ASSY,DAVID BROWN GEAR BOX B3-200	19.26	No	NA	No	No	
12	COMP ASSY,DAVID BROWN GEAR BOX B3-225	45.74	No	NA	No	No	
13	COMPLETE ASSY,DAVID BROWN GEAR BOX	17.40	No	NA	No	No	
14	COMP ASSY,ELECON,GEAR BOX SBN280, 14, 1	23.77	No	NA	No	No	
15	COMP ASSY,PCT GEAR BOX,SR 32,2(12 83,1)	9.32	No	NA	No	No	
16	PET B3-280,COMP GEAR BOX, RATIO-18, 8/1	27.20	No	NA	No	No	
17	DH 600-2000-2-SJ,COMPLETE CARTRIDGE ASSY	11.22	No	NA	No	No	
18	CARTRIDGE ASSY,DH 540-1090-35	22.48	No	NA	No	No	
19	THRUST BRG#78-WEIR BFP,PR PUMP,FK4E36	3.56	No	NA	No	No	
20	SHAFT NUT, 10500015,PUMP	78.73	No	NA	No	No	
21	1800-MFB-VS SUSP MAIN	1.95	No	NA	No	No	
22	ROTATING ASSY,KBL 8UP4FB	2.83	No	NA	No	No	
23	MUFF COUPLING,3450101,BHM-130	42.19	No	NA	No	No	
24	SCREW PUMP ASSY,ROTO,RMAA 701 R2CD3N	5.76	No	NA	No	No	
25	PUMP ASSY, 10A 16 D	10.59	No	NA	No	No	
26	PUMP ASSY,ZM II 530/01	7.78	No	NA	No	No	
27	ROTOR DRUM,1617905173,ATLAS COPCO	31.58	No	NA	No	No	
28	HP STAGE&ELEMENT,1616747281,ATLAS COPCO	54.73	No	NA	No	No	
29	LP STAGE&ELEMENT,1616590801,ATLAS COPCO	64.69	No	NA	No	No	
30	3-C300-GV-BW-MOHW-WCB,COMP. VALVE ASSY	0.90	No	NA	No	No	
31	3-C150-GV-HW-BW-WCB,COMPLETE VALVE ASSY	3.10	No	NA	No	No	
32	FLUID DRIVE HYD CPL G,36SCR24R,900RPM	13.91	No	NA	No	No	
33	ECO INLET HDR DRAIN-REG VV PART NO E021	4.06	No	NA	No	No	
34	WALL BLOWER ASSY	4.02	No	NA	No	No	
35	DRUM EMERGENCY DRAIN B115,BHEL BOILER	8.34	No	NA	No	No	
36	ERV,1538Vx,10W	6.39	No	NA	No	No	
37	SPEED REDUCER 0-52-100-02055,BHEL	11.32	No	NA	No	No	
38	SPEED REDUCER 0-52-100-02055,BHEL	11.32	No	NA	No	No	
39	FLUID COUPLING 12.75 FCU	1.29	No	NA	No	No	
40	GEAR BOX SHANTH,TYPE-IA,3 INPUT,UPSHAFT	96.91	No	NA	No	No	
41	GEAR BOX TYPE-II,3 INPUT,DOWNSHAFT	83.70	No	NA	No	No	
42	OVERRUNNING CLUTCH ASSEMBLY FOR APH	2.04	No	NA	No	No	
43	SPEED REDUCER,TYPE-II,CCW,SAPH-30	41.85	No	NA	No	No	
44	SPEED REDUCER,PAPH,500MW,27.5/M2000	88.58	No	NA	No	No	
45	HE SECTOR PLATE ASSEMBLY FOR PAPH	20.45	No	NA	No	No	
46	BARRING GEAR ASSY,452/03,HOWDEN	50.31	No	NA	No	No	
47	ROTOR ASSY,1,08,00(B)1,BOILER,500MW	135.80	No	NA	No	No	
48	SERVO MOTOR,FD	28.13	No	NA	No	No	
49	HYD ADJ DEVICE,0-55-215-01109&04	48.03	No	NA	No	No	
50	ROTOR ASSY,BOILER,500MW	100.52	No	NA	No	No	
51	ADJUSTMENT ASSY 0-55-334-009600171	46.98	No	NA	No	No	
52	M.A.TI PORT ASSY,614000011,03,01,G,BHEL	111.98	No	NA	No	No	
53	GEAR BOX ASSY,BHEL BOILER,XRP-1003	110.30	No	NA	No	No	

परिमल पीयूष / PARIMAL PIYUSH  
अपर महासंचालक (कार्यवाहक)  
Addl. General Manager (Commercial)  
एन टी सी लिमिटेड / NTPC LIMITED  
ECC, A-8A, Sector-24, Noida-201301 (U.P.)

In order to meet the customers demand and maintain high machine availability at all times by the instant station, units/ equipment are taken under overhaul/ maintenance and inspected regularly for wear and tear. During such works, spares parts of equipment's which became damaged/ unserviceable are replaced/

54	BELT DRIVE REDUCER SWM150V150R 500MW	7.72	No	NA	No	No
55	RING 01050609000/002	1.08	No	NA	No	No
56	RING 01050609000/001	3.58	No	NA	No	No
57	FRONT BEARING D250X180 DRG01160418000-00	44.90	No	NA	No	No
58	DELTD PILOT HPCV 01149205100 ITEM 10	1.71	No	NA	No	No
59	CONT VV S MTR COMPLETE ASSY	48.38	No	NA	No	No
60	EV320-1-PRE CONTROL VALVE COMPLETE ASSY	0.56	No	NA	No	No
61	U-SEALING RING MACHINED 01050109000/5	9.50	No	NA	No	No
62	U-SEALING RING 01050109000/5 UNMACHINED	13.87	No	NA	No	No
63	STUD 01050209000/5 BHEL	0.49	No	NA	No	No
64	RING 01050609000/1 BHEL	14.65	No	NA	No	No
65	U-SEALING RING UNMACHINED 21051541000/2	0.33	No	NA	No	No
66	HPCV SERVOMOTOR COMPLETE 0-11402-41000	4.31	No	NA	No	No
67	SEAL HOUSING 01060627000/6 BHEL	26.08	No	NA	No	No
68	SEALING RING ASSY 01060627000/7 BHEL	11.14	No	NA	No	No
69	SHAFT AQ-104673 BFP FK-4E36	25.83	No	NA	No	No
70	THRUST BEARING 1-30771-00092&1 K1401-2	8.47	No	NA	No	No
71	COMPLETE CARTRIDGE ASSY BHEL DRGNO 2-42	8.11	No	NA	No	No
72	ROTOR ASSY M04204/2&38 ETK/16-54B	76.19	No	NA	No	No
73	CARRIAGE WHL ASSY F129130 PFT1C4HMM1.4	9.15	No	NA	No	No
74	AXIAL PISTON PUMP R902577511 REKROTH	29.47	No	NA	No	No
75	1125MTPH TRAVEL DRIVE GEARED MOTOR	1.84	No	NA	No	No
76	1400 NO PULLEY DXL 830X1500 SHAFT D125	1.78	No	NA	No	No
77	1500TPH HYDRAULIC LUFFING CYLINDER	78.82	No	NA	No	No
78	MAG SEPARATOR ASSY ERIEZ SE775 SC-1	53.10	No	NA	No	No
79	COMPLETE GEARBOX ASSEMBLY TYPE KAN 315	32.92	No	NA	No	No
80	PVC FILL PK CF (1215X1829X305); THK-0.3MM	182.95	No	NA	No	No
81	PVC FILL PK CF (869X1829X305); THK-0.3MM	25.90	No	NA	No	No
82	VEHICLE PLATFORM TRUCK JOBS FWHFB 40	12.14	No	NA	No	No
83	TORQUE CONVTR ASSY 1951319001 BEML BD355	6.08	No	NA	No	No
84	TRACK SHOE ASSY 130CT00268 BEML DOZER	21.75	No	NA	No	No
85	HYDRA CRANE 12 MT CAP	25.84	No	NA	No	No
86	SCREW COMPRESSOR 11.145 14.321 KBL	14.16	No	NA	No	No
87	CYLINDER HEAD FOR WDG3A LOCOS/10040262	1.94	No	NA	No	No
88	DLWSPR ASSLY CYL HEAD 251 PLUS	4.66	No	NA	No	No
89	ACB 2500A 3POLE ELECT OPRT STOR ENERG GE	1.23	No	NA	No	No
90	ACB 3200A 3P ELCT OPRT STOR ENERG GE	2.53	No	NA	No	No
91	C&S ACB 1600A 3 POLES 415V	1.85	No	NA	No	No
92	SENSOR WAVE TRAP - 400KV 1MH 3150A	19.65	No	NA	No	No
93	XFMR POWER 400KV 21KV 200MVA DYN11 OFAF	831.90	No	NA	No	No
94	XFMR CURR: OSKF-420 400KV 20VA 5	6.43	No	NA	No	No
95	RELAY NUMERIC/DIGITAL 220VDC SIEMENS	8.78	No	NA	No	No
96	RELAY DISTURBANCE RECORDER 220VDC IDMT3	6.20	No	NA	No	No
97	BATTERY RECH NI-CD 1.2V 515AH	128.00	No	NA	No	No
98	BATTERY RECH NI-CD 1.2V 693AH	39.61	No	NA	No	No
99	CHARGER BAT 3PH 220VDC 1350A	16.21	No	NA	No	No
100	ABT ENERGY METER WITH CT/PT-1A/110V 220V	2.08	No	NA	No	No
101	ANALYZER 1.5-1000V 5-800A +/-0.1%	4.09	No	NA	No	No
102	CONTROL PANEL ANNUNCIATOR	12.98	No	NA	No	No
103	VALVE SOL 24VDC 2432581 1302 024.00	11.23	No	NA	No	No
104	MAXBOP PR TRANSMITTER (JA430AFB)S4A62EC	0.63	No	NA	No	No
105	24V DC-DC CONVERTER MODEL- 200SI	0.26	No	NA	No	No
106	PROCESSOR MODULE CP451-10 YOKOGAWA DCS	24.20	No	NA	No	No
	Grand Total	3653.06	No	NA	No	No
	Total for Rihand-III station (B-A*2*500/3*2*600)	1,217.69	No	NA	No	No

consumed so that the machine continue to perform at expected efficiency on sustained basis. Further as per Regulation 35(B) of TR 2019, capital spares are admissible separately as part of O&M expenses. Therefore, it is prayed that the capital spares consumed by the instant station during the period may please be allowed by Hon'ble Commission.

परिमल पीयूष / PARIMAL PIYUSH (Petitioner)  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड / NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Details/Information to be Submitted in respect of Capital Spares

PART-I  
FORM-17

Name of the Petitioner: NTPC Limited

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

Sl. No.	Details of Capital Spares and Expenses In 2022-23		Claimed as a part of additional Capitalisation	Funded through Compensatory Allowance	Funded through Special Allowance	Amount in Rs Lakhs Claimed as a part of stores and spares	Remarks
	Name of Spare	Value of the Asset					
1	VALVE GL RISING SPINDLE JS10805, BVV 65MM	40.24	No	NA	No	No	
2	BEARING, ROLLER, SPHERICAL, 29495-FMB	18.80	No	NA	No	No	
3	FLUID COUPLING, CDR-480 COMP ASSY	3.03	No	NA	No	No	
4	FC FLUIDOMAT HDF-7 COMP ASSY	0.96	No	NA	No	No	
5	COMP ASSY, FLUIDOMAT, COUPLING, SC-10	16.59	No	NA	No	No	
6	COMPLETE ASSY, DAVID BROWN, GEAR BOX	20.00	No	NA	No	No	
7	COMP ASSY, ELECON, GEAR BOX, NK-KCU-225	17.40	No	NA	No	No	
8	COMP ASSY, ELECON, GEAR BOX, SBN250, 14:1	14.60	No	NA	No	No	
9	GEAR BOX ASSY, LOUISE, GEAR BOX, FKJH620	33.27	No	NA	No	No	
10	COMP ASSY, PCT, GEAR BOX, SR 32, 2(112 93 1)	73.65	No	NA	No	No	
11	COMP ASSY, PREMIUM ENERGY, GEAR BOX, B232	46.59	No	NA	No	No	
12	COMP ASSY, PREMIUM ENERGY, GEAR BOX, H1-225	35.55	No	NA	No	No	
13	PUMP ASSY, OH 340-1080-35	8.99	No	NA	No	No	
14	THRUST BRG#78-WEIR BFP-PR PUMP, FK4E36	43.19	No	NA	No	No	
15	BEARING, 10500002689 PUMP	5.56	No	NA	No	No	
16	ROTATING ASSY, FLOWMORE, PUMP, F5R26	31.62	No	NA	No	No	
17	MECHANICAL SEAL, EAGLE, BURGMANN, PUMP	9.58	No	NA	No	No	
18	PUMP ASSY, KAKATI, KVL-750	29.13	No	NA	No	No	
19	PUMP ASSY, UP 200/38	46.16	No	NA	No	No	
20	COMPLETE PUMP ASSY, ST 4MO 80/205DMAKE	8.21	No	NA	No	No	
21	PUMP ASSY, BTU 17M	2.61	No	NA	No	No	
22	PUMP ASSY, SAM TURBO AR-300/750 AM	14.78	No	NA	No	No	
23	PUMP ASSY, SAM TURBO, BA208	24.30	No	NA	No	No	
24	PUMP ASSY, ZM II 530/01	10.15	No	NA	No	No	
25	FK4E36 DE BEARING, JOURNAL	7.78	No	NA	No	No	
26	FK4E36 NDE JOURNAL BEARING	3.08	No	NA	No	No	
27	PUMP ASSY, SDC 250/350	0.81	No	NA	No	No	
28	DISPOSAL PUMP ASSY, WARMAN, 14/12GAH	27.10	No	NA	No	No	
29	E18TC COMPLETE ASSY	124.84	No	NA	No	No	
30	2ND STAGE CYLINDER, 2-01-433B, COMPRESSOR	14.70	No	NA	No	No	
31	SCREW ELEMENT ASSY, 48-001-890-00	16.30	No	NA	No	No	
32	COMPRESSOR ASSY, KPCL, 2HA2TERT	49.41	No	NA	No	No	
33	KNIFE GATE VLV ASSY, 17198101, WEIR VALVES	45.52	No	NA	No	No	
34	KNIFE GATE VLV ASSY, A1-0-133-508350	19.62	No	NA	No	No	
35	COMPLETE VALVE ASSY, M279420WVPC	25.64	No	NA	No	No	
36	BODY, H95/32581, HOPKINSON	90.31	No	NA	No	No	
37	ECO INLET HDR DRAIN-REG VIV PART NO F021	6.92	No	NA	No	No	
38	SB PRV 100% MAIN LINE PART NO, SD24	4.06	No	NA	No	No	
39	WALL BLOWER ASSY	6.47	No	NA	No	No	
40	DRUM EMERGENCY DRAIN, B115, BHEL, BOILER	6.03	No	NA	No	No	
41	COMPLETE DRUM SAFETY VALVE 1740 WB	4.17	No	NA	No	No	
42	DRUM SAFETY VALVE, 1740-WB	10.44	No	NA	No	No	
43	ERV 153BVX-10W	12.00	No	NA	No	No	
44	ELECTRO RELIEF VALVE, BHEL, 1525-VX-3	34.80	No	NA	No	No	
45	VALVE, CTRL, A217-WC6, CL 2500, 3IN VSC-VA4R	7.37	No	NA	No	No	
46	AXIAL SEAL SET, 2-52-054-03873, BHEL	13.34	No	NA	No	No	
47	BYPASS SEAL SET, 2-52-055-01151 REV +	0.36	No	NA	No	No	
48	RADIAL SEAL SET, 1-52-013-03181, BHEL	0.93	No	NA	No	No	
49	AXIAL SEAL PLATE, FMAIN, APH	7.17	No	NA	No	No	
50	BEARING SLEEVE, 64100600, HOWDEN	6.70	No	NA	No	No	
51	ROTOR ASSY, 0-55-334-01380524, BHEL	33.04	No	NA	No	No	
52		244.43	No	NA	No	No	

In order to meet the customers demand and maintain high machine availability at all times by the instant station, units/ equipment are taken under overhaul/ maintenance and inspected regularly for wear and tear. During such works, spares parts of equipment's which have same dimension/ interchangeable are returned.

परिचालक प्रमुख/ PARIMAL PIYUSH  
आ.स.स. विभाग प्रमुख (आ.स.स. विभाग)  
Genl. Manager (Commercial)  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

53	HYD SERVO MOTOR, BOILER 500MW	85.34	No	NA	No	No
54	BLADE SET, PAF 19/10 E-2, 1-00-100-21759&7	69.09	No	NA	No	No
55	WORM GEAR & SHAFT SET OF COAL MILL	117.99	No	NA	No	No
56	JOURNAL SHAFT ASSY, FIXRP, 1003 MILL	591.99	No	NA	No	No
57	BELT DRIVE REDUCER, SWM150V150R, 500MW	24.74	No	NA	No	No
58	RING 01050609000/002	1.08	No	NA	No	No
59	U-SEALING RING UNMACHINED, 01050108000/3	32.75	No	NA	No	No
60	U-SEALING RING MACHINED, 01050109000/5	5.90	No	NA	No	No
61	U-SEALING RING MACHINED, 01050109000/7	13.13	No	NA	No	No
62	U-SEALING RING MACHINED, 11051409000/6	19.68	No	NA	No	No
63	IP CONTROL VALVE ASSY, 11132236000/00	200.17	No	NA	No	No
64	DP REGULATING VALVE	16.13	No	NA	No	No
65	AIR SIDE SEAL OIL PUMP SET AC, 13ST52/54	5.37	No	NA	No	No
66	EMERGENCY GOV ASSY DRG 01152705000-0	2.82	No	NA	No	No
67	FOLLOW UP PISTON HYD AMP, 01142305000S00	43.70	No	NA	No	No
68	GEAR BOX, B/W TD6FP TURBINE & BOOSTER P/P	24.19	No	NA	No	No
69	DRIVE SHAFT ASSY, 1 TO 11, PAHARPUR, HP-6.8	6.53	No	NA	No	No
70	BOTTOM CONSEP, ANION REGEN UNIT (ARU) CPU	81.03	No	NA	No	No
71	CENTRIFUGAL SEPARATOR OIL CLEANER	24.78	No	NA	No	No
72	PLATFORM TRUCK MNT HYD AERIAL	40.00	No	NA	No	No
73	TRACK SHOE ASSY, 130CT00268, BEML DOZER	21.75	No	NA	No	No
74	ENGINE ASSY, 31Z0000014, BEML DOZER, BD-155	53.57	No	NA	No	No
75	DELUGE VALVE -100 NB	0.70	No	NA	No	No
76	DELUGE VALVE ASSEMBLY COMPLETE- 150NB	0.86	No	NA	No	No
77	DELUGE VALVE ASSEMBLY SIZE 100 NB	3.66	No	NA	No	No
78	DELUGE VALVE ASSEMBLY SIZE 80 NB	1.67	No	NA	No	No
79	COMPLETE DELUGE VALVE ASSEMBLY 150MM	0.77	No	NA	No	No
80	DLWSPR ASSLY CYL HEAD 251 PLUS	9.32	No	NA	No	No
81	CB SF6 11KV 3150A-ABB	4.78	No	NA	No	No
82	CIRCUIT BREAKER, SF6, 400KV, 4000A, 3AT3-1	63.80	No	NA	No	No
83	MOTOR, SGL SQ CAGE IND, 3.3KV, DC400F3, 4P	20.56	No	NA	No	No
84	MOTOR, SGL SQ CAGE IND, 3.3KV, DC450U900, 4P	7.12	No	NA	No	No
85	XFMR, POWER, 400KV, 21KV, 200MVA, DYN11, OFAF	1,892.72	No	NA	No	No
86	XFMR, CURR. OSKF 420, 400KV, 20VA 5	292.72	No	NA	No	No
87	XFMR, POT, CAPACITIVE VOLTAGE, 400KV/110V	13.18	No	NA	No	No
88	CONTROL RELAY	2.14	No	NA	No	No
89	RELAY, NUMERIC/DIGITAL, 5A, 7UT, SIEMENS	15.08	No	NA	No	No
90	ABT ENERGY METER WITH CT/PT-1A/110V, 220V	8.32	No	NA	No	No
91	3 PH POWER QUALITY ANALYZER WITH PRINTER	4.20	No	NA	No	No
92	COMPLETE ACTUATOR TYPE ASM 03	9.70	No	NA	No	No
93	ACTUATOR, HYD, ASM250-10, CCI	27.14	No	NA	No	No
94	ACTUATOR, HYD, SULZER, ASM100-10	14.67	No	NA	No	No
95	CONTROLLER STOCK GRAVIMETRIC FEEDER, DT-9	22.25	No	NA	No	No
96	ACTUATOR, PNEU, A48FKZ, BLAKEBOROUGH	22.30	No	NA	No	No
97	ACTUATOR, PNEU, GS 700-100 RA, COPEL-VULCAN	13.38	No	NA	No	No
98	ACTUATOR, PNEU, GS 700-100 DA, COPEL-VULCAN	13.38	No	NA	No	No
99	ACTUATOR, PNEU, SD-700-160L-DA	31.80	No	NA	No	No
100	PNEU ACTUATOR MDL 38-41024, SIZE 15", MIL	0.57	No	NA	No	No
101	ANALYZER WATER, SILICA, 0-5000PPB	21.24	No	NA	No	No
102	ELECTRICAL ACTUATORS COMPLETE ACTUATOR	1.74	No	NA	No	No
103	FIELD CONTROL MODULE, AFV30D-S41451	199.89	No	NA	No	No
104	CHANNEL ISO EXT SOURCE DO MODULE, FBM242	1.20	No	NA	No	No
105	FIBER OPTIC PREPATION TOOL KIT	2.67	No	NA	No	No
	Grand Total	5,543.51	No	NA	No	No
	Total for Rihand-III station (B=A*2*500)(3*2*500)	1,847.84	No	NA	No	No

consumed so that the machine continue to perform at expected efficiency on sustained basis. Further as per Regulation 35(6) of TR 2019, capital spares are admissible separately as part of O&M expenses. Therefore, it is prayed that the capital spares consumed by the instant station during the period may please be allowed by Hon'ble Commission.

परिमल पीयूष/PARIMAL PIYUSH

(Petitioner)

अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.) \* 108

Details/Information to be Submitted in respect of Capital Spares

PART-I  
FORM-17

Name of the Petitioner: NTPC Limited							
Name of the Generating Station: Rihand Super Thermal Power Station Stage-III							
Sl. No.	Details of Capital Spares and Expenses in 2023-24		Amount in Rs Lakhs			Remarks	
	Name of Spare	Value of the Asset	Claimed as a part of additional Capitalisation	Funded through Compensatory Allowance (If Applicable)	Funded through Special Allowance		Claimed as a part of stores and spares
1	MOVING BLADE LP 3R DRG 01030741000-7	308.45	No	NA	No	No	
2	MOVING BLADE LP3L DRG 01030741000-3	308.45	No	NA	No	No	
3	THDF 115 500 MW GENERATOR ROTOR (BHEL)	3,853.00	No	NA	No	No	
4	DRUM SAFETY VALVE 1740-WB	24.00	No	NA	No	No	
5	SH SPRAY BRANCH BLOCK VALVE SD4	4.37	No	NA	No	No	
6	SUPER HEATER SPRAY CONTROL VALVE BHEL	29.68	No	NA	No	No	
7	1400-ND PULLEY DXL630X1600 SHAFT D150	2.26	No	NA	No	No	
8	DAVR-R2 SMPS 90-250VAC, 220V-24V DC 10A	0.79	No	NA	No	No	
9	SHF3, SIZE: 162MM:COMPLETE MECHANICAL SE	22.50	No	NA	No	No	
10	XFMR CURR OSKF-420,400KV, 20VA, 5	13.83	No	NA	No	No	
11	IN-MOTION WEIGH BRDG, 140 MT	63.72	No	NA	No	No	
12	COMP ASSY PCT GEAR BOX SR 32.2(12.93.1)	9.32	No	NA	No	No	
13	BEARING PART NO 68 CLYDE UNION PUMP	31.82	No	NA	No	No	
14	SHAFT NUT, 10500015 PUMP	157.47	No	NA	No	No	
15	COMP ASSY FLUIDOMAT COUPLING, SC-10	20.11	No	NA	No	No	
16	RELAY PANEL	7.08	No	NA	No	No	
17	TRANSMISSION ASSY, 130TMD1008, BEML, BD355	44.18	No	NA	No	No	
18	COMP ASSY FLUIDOMAT COUPLING, SC-14	54.58	No	NA	No	No	
19	BUS CONTROLLER MODULE, FEM100, FOXBORO	0.48	No	NA	No	No	
20	CONTROL PROCESSOR, FCP270, MAKE, FOXBORO	0.71	No	NA	No	No	
21	COMP ASSY PEMBRIL COUPLING 21SCR24R	12.58	No	NA	No	No	
22	CYLINDER BARCOCK MOXEY, BM1250/1500	119.25	No	NA	No	No	
23	ROTOR DRUM, 1617505078, ATLAS COPCO, ZR-250	60.20	No	NA	No	No	
24	HP STAGE&ELEMENT, 1616747281, ATLAS COPCO	18.24	No	NA	No	No	
25	LP STAGE&ELEMENT, 1616590481, ATLAS COPCO	32.35	No	NA	No	No	
26	JOURNAL SHAFT ASSY, FIXRP 1003 MILL	52.77	No	NA	No	No	
27	ROTOR ASSY, M07210/1, EKK 48X114	88.90	No	NA	No	No	
28	SHAFT, 12.02.01.01, FLSMIDTH	9.09	No	NA	No	No	
29	PINION-SHAFT ASSY, 05.03.03.23, FLSMIDTH	9.89	No	NA	No	No	
30	ACR 1600A 3 POLE, ELECT OPRTD GE MAKE	1.32	No	NA	No	No	
31	FAN BLADE ASSY, 04-21-0043/M/16 REV+	8.25	No	NA	No	No	
32	COMP ASSY PCT GEAR BOX SR 32.2(12.93.1)	9.32	No	NA	No	No	
33	ENGINE ASSY, 5120000022, BEML, BD355	133.82	No	NA	No	No	
34	HOIST, ELECTRIC OPER, 0.51-1TON, 5.01-10M	6.52	No	NA	No	No	
35	HOIST, ELECTRIC OPER, 3.01-4TON, 66.01-80M	23.78	No	NA	No	No	
36	HOIST, ELECTRIC OPER, 4.01-5TON, 65.01-70M	6.05	No	NA	No	No	
37	HOIST, ELECTRIC OPER, 0.51-1TON, 20.01-25M	3.71	No	NA	No	No	
38	HOIST, ELECTRIC OPER, 0.51-1TON, 10.01-15M	3.41	No	NA	No	No	
39	EL OP, HOIST-4.01-5.0T, ELECT HOIST 5MT	9.05	No	NA	No	No	
40	EL OP, HOIST-4.01-5.0T, LIFT 10.01-15M	18.17	No	NA	No	No	
41	FAN BLADE ASSY, 04-21-0043/M/16 REV+	16.42	No	NA	No	No	
42	POWER SUPPLY UNIT FOR MASTER CLOCK SYS	0.48	No	NA	No	No	
43	PUMP ASSY, SAM TURBO, BA20B	10.00	No	NA	No	No	
44	S/BEHLG COMP ASSY	3.98	No	NA	No	No	
45	CONTROL PROCESSOR, FCP270, MAKE, FOXBORO	0.54	No	NA	No	No	
46	COMP ASSY FLUIDOMAT COUPLING, SC-11A	2.90	No	NA	No	No	
47	COMP ASSY FLUIDOMAT COUPLING, SC-10	20.11	No	NA	No	No	
48	CONSEP BOTTOM DWEL/CPUIREGN/001, DRIPLEX	84.95	No	NA	No	No	
49	BOTTOM CONSEP, ANION REGEN UNIT (ARU), CPU	83.54	No	NA	No	No	
50	TILTING PAD, 41778/127, HAYWARD TYLER	5.96	No	NA	No	No	

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (व्यावसायिक)  
Addl. General Manager (Commercial)  
एन टी सी लीमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

51	BEARING ASSY,0S-2406,HOWDEN	88.50	No	NA	No	No
52	BEARING SLEEVE 64100800,HOWDEN	33.04	No	NA	No	No
53	VFD - 7.5KW, 415V, FOR RC FEEDER	2.80	No	NA	No	No
54	HEAD PULLEY ASSEMBLY(RCF)	1.29	No	NA	No	No
55	VEE BEE 250NB DUPL EX.FILTER ASSY	40.38	No	NA	No	No
56	ELECON ED-8400,COMP ASSY	4.51	No	NA	No	No
57	COMP PUMP ASSY, 12A, 198-06/TMC/IP2+	23.17	No	NA	No	No
58	COUPLING, ELECON ED3200,COMPL ASSY	1.37	No	NA	No	No
59	BUS CONTROLLER MODULE, FEM100, FOXBORO	0.48	No	NA	No	No
60	DISCRETE I/P MODULE,FBM217, MAKE, FOXBORO	0.58	No	NA	No	No
61	CONTROL PROCESSOR, FCP270, MAKE, FOXBORO	0.71	No	NA	No	No
62	DIGITAL O/P MODULE,FBM237, MAKE, FOXBORO	0.38	No	NA	No	No
63	COMP ASSY FLUIDOMAT,COUPLING,SC-14	54.50	No	NA	No	No
64	ISOLATOR,420KV,2000A,HAPAM	138.91	No	NA	No	No
65	U-SEALING RING MACHINED,11051409000/6	19.66	No	NA	No	No
66	ARRNG OF JRNL BRG,D450X450,11181841000/80	74.37	No	NA	No	No
67	COMP ASSY,PREMIUM ENERGY GEAR BOX,B232	24.54	No	NA	No	No
68	SERVOMOTOR,01323500000/00,BHEL,CRH NRV	6.22	No	NA	No	No
69	FLUID DRIVE HYD CPLG 36SCR24R 960RPM	16.72	No	NA	No	No
70	THDF 115.500 MW GENERATOR ROTOR (BHEL)	3.953.00	No	NA	No	No
71	MUFF COUPLING,3450101,BHM-130	95.14	No	NA	No	No
72	U-SEALING RING UNMACHINED,21051541000/2	4.27	No	NA	No	No
73	U-SEALING RING,01050109000/5,UNMACHINED	5.90	No	NA	No	No
74	U-SEALING RING MACHINED,01050109000/7	3.93	No	NA	No	No
75	U-SEALING RING,01050109000/33,MACHINED	8.12	No	NA	No	No
76	BEARING SEGMENT,3610101,BHM-125	25.81	No	NA	No	No
77	COMP ASSY,PREMIUM ENERGY GEAR BOX,B3-400	3.50	No	NA	No	No
78	PILOT VALVE ASSY,DRG 01230725800-09	0.78	No	NA	No	No
79	TRANSMISSION SHAFT,1840101,BHM-125	11.92	No	NA	No	No
80	IMPELLER SHAFT,1860101,BHM-125	16.60	No	NA	No	No
81	MOVING COIL,01142205000/65,11.70 TURBINE	13.24	No	NA	No	No
82	B SHFT PP ASSY,SS-CF8M,EDWARDS SHR22500	130.86	No	NA	No	No
83	ROTOR,270/3.3KV/0365-9B/4P,MARATHON	11.59	No	NA	No	No
84	COUPLING BOLT M54 DRG 11183341000-001	5.99	No	NA	No	No
85	OVERRUNNING CLUTCH ASSEMBLY FOR APH	3.07	No	NA	No	No
86	PUMP ASSY,UP 200/38	9.47	No	NA	No	No
87	ANALYZER,WATER,PHOSPHATE,0.2-10PPM,4CH,	25.06	No	NA	No	No
88	HYDRAULIC PUMP,R902217898,REXROTH	9.98	No	NA	No	No
89	TURBO SUPERCHARGER,10083479,LOCOMOTIVE	51.75	No	NA	No	No
90	CONT V.V SERVO MOTOR,R222(A0)1177,NEI	71.32	No	NA	No	No
91	AIR MOTOR,SAPH-IPM400	3.38	No	NA	No	No
92	HP ELEMENT,1616580381,COMPRESSOR,ZR-300	22.05	No	NA	No	No
93	LP ELEMENT,1618530581,COMPRESSOR,ZR-355	92.48	No	NA	No	No
94	TSI SERVER	26.29	No	NA	No	No
95	SEALING RING MACHINED,01081227000/3,BHEL	18.15	No	NA	No	No
96	U-SEALING RING MACHINED,01050109000/3	33.97	No	NA	No	No
97	PUMP ASSY,DSM 80/36	6.83	No	NA	No	No
98	OFC TO ETHERNET MEDIA CONVERTOR,STANDARD	0.05	No	NA	No	No
99	COMP ASSY,PCT,GEAR BOX,SR 32 (12.93-1)	31.28	No	NA	No	No
100	HYDRAULIC PUMP,R902217898,REXROTH	10.76	No	NA	No	No
101	SHAFT,BHEL,SPEED REDUCER,R52290340003	10.51	No	NA	No	No
102	SHAFT,BHEL,SPEED REDUCER,R52290350003	7.96	No	NA	No	No
103	VH CONVERTER,43971120,VDITH TURBO	8.24	No	NA	No	No
104	SHAFT BEARING ASSY 0-55-215-01109&1,BHEL	15.48	No	NA	No	No
105	BELT DRIVE REDUCER,SWM150V150R,500MMW	7.72	No	NA	No	No
106	BEARING HOUSING,0-55-335-00374,BHEL	49.17	No	NA	No	No
107	SEAL OIL PUMP,TUSHACO,T3552/54	7.63	No	NA	No	No
108	SHF2/135,COMP MECH SEAL ASSY	22.31	No	NA	No	No
109	ELECTRO RELIEF VALVE,BHEL,1525-VX-3	33.25	No	NA	No	No
110	HOIST H-02,CAP 2MT, LIFT 13M, 223-22SH	3.60	No	NA	No	No

In order to meet the customers demand and maintain high machine availability at all times by the instant station, units/ equipment are taken under overhaul/ maintenance and inspected regularly for wear and tear. During such works, spares parts of equipment's which became damaged/ unserviceable are replaced/ consumed so that the machine continue to perform at expected efficiency on sustained basis. Further as per Regulation 35(B) of TR 2019, capital spares are admissible separately as part of O&M expenses. Therefore, it is prayed

परिमल पीयूश / PARIMAL PIYUSH  
 अवर. प्रबंधक (वै.मि.विभाग)  
 Addl. General Manager (Commercial)  
 एन.टी.पी.सी. लिमिटेड / NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

111	DAVR TY DIODE BDG 12A, VRRM, 400-800V	0.10	No	NA	No	No
112	DAVR TY CURT FLOW MONT. CARD	1.48	No	NA	No	No
113	DAVR R2 DIODE REDNY MODULE	0.14	No	NA	No	No
114	DISPOSAL PUMP ASSY WEIR, 14/12GAH	71.18	No	NA	No	No
115	CAGE FRAME GN30248114, TKK, 48X114	33.32	No	NA	No	No
116	COMP ASSY, ELECON, GEAR BOX, KGN250	25.10	No	NA	No	No
117	HEAD SHAFT, 1850101, BHM-125	15.87	No	NA	No	No
118	IMPELLER SHAFT, 1880101, BHM-125	15.87	No	NA	No	No
119	FLEX GRID COUPLING RT/GR-113/0, 888BY	11.09	No	NA	No	No
120	COMP ASSY ELECON, GEAR BOX, JU-400, 1.1	19.83	No	NA	No	No
121	PUMP ASSY, EM12TC	7.25	No	NA	No	No
122	MULTI PORT ASSY, 614000011, 03 01, G, BHEL	18.64	No	NA	No	No
123	HYDRAULIC AMPLIFIER ASSLY, 011428010008, 00	22.00	No	NA	No	No
124	BATTERY, RECH, NI-CD, 380V, 410AH	35.51	No	NA	No	No
125	RADIAL SEAL, BHEL, 27.5 VIM 2150	9.10	No	NA	No	No
126	RADIAL SEALS SET CW+CCW, 30 VIM 2000	16.72	No	NA	No	No
127	24V DC-DC CONVERTER, MODEL- 200SI	1.22	No	NA	No	No
128	DRUM SAFETY VALVE, 1740-WB	12.00	No	NA	No	No
129	PUMP ASSY, 2H, 100 M1	10.29	No	NA	No	No
130	VEHICLE PLATFORM TRUCK, JOISTS, FWHFB 40	29.62	No	NA	No	No
131	ANGLE DRN VV EXV101, 102-CRHV101-DN50/65	15.12	No	NA	No	No
132	ANGLE DRAIN VV-HRHV109, 110-DN25/40	2.40	No	NA	No	No
133	ANGLE DRN VV EXV101, 102-CRHV101-DN50/65	3.78	No	NA	No	No
134	ASSY, 088010, VOITH, COUPLING, R18KGS1	13.91	No	NA	No	No
135	VALVE, GL, BW, 150MM, CL-2500	9.73	No	NA	No	No
136	TY PWR MODULE CN0086209777, BHEL	8.03	No	NA	No	No
137	ROTOR, 1.02&1.01, PUMP, 2BE1 353 OZY 4	47.82	No	NA	No	No
138	COMPLETE SAFETY VV TYPE 1740WD	13.41	No	NA	No	No
139	SIZE200: WATER RING VACUUM PUMP ASSY	83.49	No	NA	No	No
140	TRANSMISSION SHAFT, 1840101, BHM-130	13.27	No	NA	No	No
141	RELAY, NUMERIC/DIGITAL, 220VDC, SIEMENS	9.54	No	NA	No	No
142	LV BSNG+MTL, PR1&GSKT, 1PH, 200MVA, 21.400KV	10.50	No	NA	No	No
143	PLATE STACK, 21, DRESSER, MASONELAN	54.14	No	NA	No	No
144	DAVR TY DC TDR DUL 0-60MV, 4-20MA, 220VAC	1.10	No	NA	No	No
145	DAVR R2 CT370AV1 MEM. CARD	0.47	No	NA	No	No
146	DAVR TY CURT FLOW MONT. CARD	1.48	No	NA	No	No
147	DAVR R2 DC (-)15V, +15V, 4-20MAMP, 240VAC	0.55	No	NA	No	No
148	DAVR R2 SMPS 90-280VAC, 220V-24V DC, 10A	0.79	No	NA	No	No
149	PUMP ASSY, SAM TURBO, AF-300/750 AM	24.85	No	NA	No	No
150	BATTERY RECH, NI-CD, 220V, 890AH	187.19	No	NA	No	No
151	BEARING PART NO. 69, CLYDE UNION PUMP	15.59	No	NA	No	No
152	LP STAGE&ELEMENT, 1818590481, ATLAS COPCO	32.35	No	NA	No	No
153	GEAR COUPLING ED4500, COMP ASSY, ELECON	2.17	No	NA	No	No
154	TRACK SHOE ASSY, 130CT00288, BEML, DOZER	58.34	No	NA	No	No
155	ONLINE OPAC MONITOR, FLUE GAS	13.45	No	NA	No	No
156	PUMP ASSY, 100V400+TPS 3VD	6.08	No	NA	No	No
157	SHAFT BEARING ASSY, 0-55-215-011085.1, BHEL	15.48	No	NA	No	No
158	GEAR COUPLING NO ED 6200	1.15	No	NA	No	No
159	G-CPLG, ELECON-ED 4500, COMP ASSY	2.07	No	NA	No	No
160	CIRCUIT BREAKER, SF6, 420KV, 3150A, 50KA	34.62	No	NA	No	No
161	1400 ND PULLEY DXL630X1600, SHAFT D150	2.26	No	NA	No	No
162	COMPLETE VALVE ASSY, HS450/5, HOPKINSON	46.15	No	NA	No	No
163	1800 DRIVE DXL400X2000XSHAFT D60	0.52	No	NA	No	No
164	CARTRIDGE ASSY, BHEL, PUMP, FK4E36	153.31	No	NA	No	No
165	COMP ASSY, ELECON, GEAR BOX, KBN280	30.99	No	NA	No	No
166	CIRCUIT BREAKER, SF6, 132KV, 1250A	6.87	No	NA	No	No
167	XFMR, CURR, 2000/1/1A, 400/420KV	21.80	No	NA	No	No
168	K1401-2 FRONT JOURNAL BEARING	5.85	No	NA	No	No
169	K1401-2 REAR JOURNAL BEARING	5.55	No	NA	No	No
170	COMP ASSY, FLUIDOMAT, COUPLING, SC-10	17.15	No	NA	No	No

that the capital spaces consumed by the instant station during the period may please be allowed by Hon'ble Commission.


परिमल पीयूष / PARIMAL PIYUSH  
 अपर महाप्रबन्धक (व्यवसायिक)  
 Addl. General Manager (Commercial)  
 एन टी सी लिमिटेड / NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)



171	PUMP ASSY, EM12TC	7.25	No	NA	No	No
172	FLUID DRIVE HYD CPLG, 30SCR24R, 860RPM	13.91	No	NA	No	No
173	COMP ASSY, PREMIUM ENERGY, GEAR BOX, B3-355	51.04	No	NA	No	No
174	PLATE STACK, 21, DRESSER MASON/ILAN	32.97	No	NA	No	No
175	EDDY CURRENT CLUTCH, 12440115, DIW	10.20	No	NA	No	No
176	ROTOR ASSY, PA FAN, AP2-20/12	257.78	No	NA	No	No
177	XFMR, POT, CAPACITIVE VOLTAGE, 400KV/110V	13.18	No	NA	No	No
178	PUMP ASSY, RMD 100/250 D	5.76	No	NA	No	No
179	PUMP ASSY, ZM # 530/01	8.08	No	NA	No	No
180	HOIST, ELECTRIC OPER, 1.51-2TON, 5.01-10M	10.00	No	NA	No	No
181	EL OP, HOIST-1.51-2.0T, LIFT 15.01-20M	11.06	No	NA	No	No
182	HOIST, ELECTRIC OPER, 1.51-2TON, 20.01-25M	3.85	No	NA	No	No
183	HOIST, ELECTRIC OPER, 0.51-1TON, 5M	3.28	No	NA	No	No
184	HOIST, ELECTRIC OPER, 1.51-2TON, 50.01-55M	8.88	No	NA	No	No
185	EL OP, HOIST-2.01-3.0T, LIFT 25.01-30M	14.71	No	NA	No	No
186	EL OP, HOIST-1.01-1.5T, ELECTRICAL HOIST	3.31	No	NA	No	No
187	HOIST, ELECTRIC OPER, 3.01-4TON, 5.01-10M	4.33	No	NA	No	No
188	HOIST, ELECTRIC OPER, 0.51-1TON, 50.01-55M	12.22	No	NA	No	No
189	FUR WALL DESLAG BLOWER, LESS DRIVE UNIT	21.38	No	NA	No	No
190	DRUM SAFETY VALVE, 1740-WB	24.00	No	NA	No	No
191	DRUM SAFETY VALVE ASSY, 1750-WB	26.95	No	NA	No	No
192	ASSY VOITH, COUPLING, R18KGS1	1,530.46	No	NA	No	No
193	HEAT EXCHANGER ASSY, AP9, APV, SR14-AP	443.68	No	NA	No	No
194	CARTRIDGE ASSY, FK4E36	479.47	No	NA	No	No
195	ONLINE OPAC MONITOR, FLUE GAS	13.45	No	NA	No	No
196	ANGLE DRAIN VV-HRHV100, 110-DN2540	4.81	No	NA	No	No
197	SUPER HEATR SPRAY CONTRLV/(WCAPITALISED)	7.49	No	NA	No	No
198	SH SPRAY BRANCH BLOCK VALVE, 504	8.73	No	NA	No	No
199	PVC FILL PK, CF, (869X1829X305), THK-0.3MM	0.98	No	NA	No	No
200	PVC FILL PK, CF, (1218X1829X305), THK-0.3MM	7.44	No	NA	No	No
201	BATTERY, RECH, NI-CD, 220V, 890AH	167.19	No	NA	No	No
202	SECTOR PLATE SET, 0-52-041-00881, BHEL	25.25	No	NA	No	No
203	SECTOR PLATE SET, 0-52-045-00885, BHEL	22.23	No	NA	No	No
204	NRV/SWING CHECK VALVE ASSY, BHEL, BIN	27.81	No	NA	No	No
205	ROTOR, 1.02&1.01, PUMP, 2BE1 353 OZY 4	95.65	No	NA	No	No
206	COMP ASSY, GREAVES, GEAR BOX, H1-200	19.18	No	NA	No	No
207	GEAR BOX ASLY, PREMIUM, H1-225, 1.98.1	11.43	No	NA	No	No
208	COMP ASSY, PEMBRIL, COUPLING, PST-530	13.27	No	NA	No	No
209	COMP ASSY, FLUIDOMAT, COUPLING, SC-10	40.22	No	NA	No	No
210	XFMR, POT, CAPACITIVE VOLTAGE, 400KV/110V	28.90	No	NA	No	No
	Grand Total	16,055.06				
	Total for Rihand-III station (B-A*2*500(3*2*500))	5,355.61				

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबंधक (राजिनिग स)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

PART 1							
Form-18							
Non-Tariff Income							
Name of the Petitioner		NTPC Limited					
Name of the Generating Station		Rihand Super Thermal Power Station Stage-III					
(in Rs. Lakh)							
S. No.	Parameters	Existing 2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
1	Income from rent of land or buildings	NA	37.91	44.10	37.39	53.10	52.83
2	Income from sale of scrap		64.59	243.08	187.74	352.04	263.23
<b>Total</b>			102.50	287.17	225.13	405.13	316.06
Note- Auditor's certificate in support of Non-Tariff Income is attached as <b>Annexure-4</b> .							
							 (Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड / NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)


## Details of Water Charges

Name of the Petitioner NTPC Limited

Name of the Generating Station Rihand Super Thermal Power Station Stage-III


S. No.	Year*	Details of Water charges (excluding water cess)		Quantity allocated	Normative consumption at 100% PLF	Rate specified (as per govt. notification or agreement)	Spillage of water (in percentage)	Amount (in Rs. Lakh) Claimed (Annualized)
		Name of source and quantity	Amount (in Rs. Lakh) (Annualized)	Unit- Cusec	Unit-m3			
1	2019-20	Rihand Reservoir	466.24	37.19		PL refer Form-19A.	Nil	466.24
2	2020-21		466.24		3,07,44,000			
3	2021-22		466.24		3,06,60,000			
4	2022-23		466.24		3,06,60,000			
5	2023-24		477.83		3,07,44,000			

\* Additional Column




(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Part-I FORM-19A ADDITIONAL FORM						
Details of Water Charges Computation						
Name of the Company :	NTPC Limited					
Name of the Power Station :	Rihand Super Thermal Power Station Stage-III					
ITEM	Units	2019-20	2020-21	2021-22	2022-23	2023-24
Water Allocation/Contracted	CUSEC	37.19	37.19	37.19	37.19	37.19
Actual water Consumption	CUSEC	37.19	37.19	37.19	37.19	37.19
Rate of Water Charges	Paise/kWh	295.54	295.54	295.54	295.54	325.10
Water Charges Paid	Rs. Lakhs	466.24	466.24	466.24	466.24	477.83
<b>Total water Charges Paid</b>	<b>Rs. Lakhs</b>	<b>466.24</b>	<b>466.24</b>	<b>466.24</b>	<b>466.24</b>	<b>477.83</b>
Record note of discussion of the meeting held on 03.04.1999 is attached as Annexure-5 as supporting document for rate of water charges.						
Petitioner						 (Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-6A, Sector-24, Noida-201301 (U.P.)

<b>PART 1</b>			
<b>FORM- 20</b>			
<b>Details of Statutory Charges</b>			
<b>Name of the Petitioner</b>	NTPC Limited		
<b>Name of the Generating Station</b>	Rihand Super Thermal Power Station Stage-III		
<b>Particulars</b>	<b>Unit Rate</b>	<b>No of Units</b>	<b>Amount Claimed</b>
Electricity Duty			NIL
Water Cess			
 <b>(Petitioner)</b>			

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Add. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Name of the Petitioner NTPC Limited  
 Name of the Generating Station Rihand Super Thermal Power Station Stage-III  
 Date of Commercial Operation 27-03-2014  
 For Financial Year 2019-20

Period	Rate of Depreciation	Period	Rate of Depreciation
19.11.2012 to 31.3.2013	5.3801%	2019-20	5.4624%
1.4.2013 to 25.3.2014	5.6217%		
27.3.2014 to 31.3.2014	5.5495%		
2014-15	5.5495%		
2015-16	5.5559%		
2016-17	5.5350%		
2017-18	5.4702%		
2018-19	5.4899%		

## Decap of Spares- Part of capital cost

S.N	Name of the Asset	Nature of de-capitalization (whether claimed under exclusion or as additional capital expenditure)	Original Value of the Asset Capitalised (As per IndAS Balance Sheet)	IndAS Adjustment	Original Value of the Asset Capitalised (As per IGAAP)	Year Put to use	Depreciation recovered till date of decapitalization	Whether earning RoE at the normal rate of weightage average rate of interest on loan
<b>A Decap of Spares: Part of Capital Cost</b>								
1	Decap of Spares: Part of Capital Cost	Claimed as additional capital expenditure	14.01	3.00	17.02	2012-13	6.57	No
2			19.62	7.53	27.16	2013-14	8.99	No
3			12.61	-	12.61	2015-16	2.77	No
	<b>Subtotal (A)</b>		<b>46.25</b>	<b>10.53</b>	<b>56.79</b>		<b>18.34</b>	
<b>B Decap of MBOA: Part of Capital Cost</b>								
1	Decap of MBOA	Claimed under additional capital expenditure	123.88	-	123.88	2016-17	20.36	No
	<b>Subtotal (B)</b>		<b>123.88</b>	<b>-</b>	<b>123.88</b>		<b>20.36</b>	
<b>C Decap of MBOA- Not Part of Capital Cost</b>								
1	EDP, WP Machines and SATCOM Equipment	Claimed under Exclusion	2.91	-	2.91	2019-20	-	NA
	<b>Subtotal (C)</b>		<b>2.91</b>	<b>-</b>	<b>2.91</b>		<b>-</b>	
<b>Grand Total of Decap of assets</b>			<b>173.04</b>	<b>10.53</b>	<b>183.58</b>		<b>38.70</b>	

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
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 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-BA, Sector-24, Noida-201301 (U.P.)

Name of the Petitioner		NTPC Limited						
Name of the Generating Station		Rihand Super Thermal Power Station Stage-II						
Date of Commercial Operation		27.03.2014						
For Financial Year		2020-21						
Period	Rate of Depreciation	Period	Rate of Depreciation					
19.11.2012 to 31.3.2013	5.2801%	2019-20	5.4524%					
1.4.2013 to 26.3.2014	5.6217%	2020-21	5.4524%					
27.3.2014 to 31.3.2014	5.5485%							
2014-15	5.5486%							
2015-16	5.5559%							
2016-17	5.5380%							
2017-18	5.4702%							
2018-19	5.4599%							
<b>A Decap of Spares: Part of capital cost</b>								
S.N	Name of the Asset	Nature of de-capitalization (whether claimed under exclusion or as additional capital expenditure)	Original Value of the Asset Capitalised (As per IndAS Balance Sheet)	IndAS Adjustment	Original Value of the Asset Capitalised (As per IGAAP)	Year Put to use	Depreciation recovered till date of decapitalization	Whether earning RoE at the normal rate of weightage average rate of interest on loan
1	Decap of Spares: Part of Capital Cost	Claimed as additional capital expenditure	455.89	186.19	643.67	2012-13	283.79	No
2			189.79	106.16	297.95	2013-14	114.95	No
3			155.44	-	155.44	2015-16	42.94	No
4			26.42	-	26.42	2016-17	5.79	
	<b>Subtotal (A)</b>		<b>828.33</b>	<b>296.35</b>	<b>1,134.69</b>		<b>447.78</b>	
<b>B Decap of MROA: Part of Capital Cost</b>								
1	EOP, WP Machines and	Claimed as additional capital expenditure	8.54	0.22	9.76	2014-15	2.89	No
2	SATCOM Equipment		4.57	-	4.57	2016-17	1.00	No
	<b>Subtotal (B)</b>		<b>13.11</b>	<b>0.22</b>	<b>13.33</b>		<b>2.89</b>	
<b>C Decap of Spares: Not Part of Capital Cost</b>								
1	Decap of Spares: Not Part of Capital Cost	Claimed under Exclusion	19.41	-	19.41	2017-18	-	Hon'ble Commission vide para 14 of order dttd. 13.11.1020 in petition no. 238/GT/2020 has allowed Capitalisation of capital spares after cut-off date under exclusion hence their decap is kept under exclusion here. Hon'ble Commission may be pleased to allow the same.
2	Decap of Spares: Not Part of Capital Cost	Claimed under Exclusion	276.75	-	276.75	2019-20	-	Capitalization of spares beyond cut-off date is not admissible as per Tariff Regulations 2016 accordingly the decapitalization of these spares are claimed under exclusion. Hon'ble Commission may be pleased to allow the same.
	<b>Subtotal (C)</b>		<b>296.16</b>	<b>-</b>	<b>296.16</b>		<b>-</b>	
<b>Grand Total of Decap of assets</b>			<b>1,137.61</b>	<b>296.57</b>	<b>1,434.18</b>		<b>444.58</b>	

  
 (Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबंधक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Details of decapitalization during 2021-22							PART-I FORM-I	
Name of the Petitioner		MTPC Limited						
Name of the Generating Station		Rihand Super Thermal Power Station Stage-II						
Station COD		27-03-2014						
For Financial Year		2021-22						
Period	Rate of Depreciation	Period	Rate of Depreciation	Amount in Rs Lakh				
19.11.2012 to 31.3.2013	5.3601%	2019-20	5.4624%					
1.4.2013 to 28.3.2014	5.6217%	2020-21	5.4592%					
27.3.2014 to 31.3.2014	5.5496%	2021-22	5.4578%					
2014-15	5.5496%	2022-23	5.4560%					
2015-16	5.5559%	2023-24	5.4619%					
2016-17	5.5350%							
2017-18	5.4702%							
2018-19	5.4689%							
<b>A Decap of Spares - Part of Capital Cost</b>								
S.N	Name of the Asset	Nature of de-capitalization (whether claimed under exclusion or as additional capital expenditure)	Value of the Asset decapitalised as per IndAS	IndAS Adjustment	Value of the Asset decapitalised as per IGAAP	Year Put to use	Depreciation recovered till date of decapitalization	Whether earning RoE at the normal rate of weightage average rate of interest on loan
1	Decap of Spares	Claimed under Additional Capitalization	56.85	38.06	94.91	2012-13	52.28*	No
			7.00	4.59	11.56	2013-14	5.75	No
			7.46	-	7.46	2015-16	2.45	No
			53.70	-	53.70	2016-17	14.63	No
<b>Subtotal (A)</b>			<b>126.01</b>	<b>42.65</b>	<b>167.66</b>		<b>58.03</b>	
<b>B Decap of MBOAs - Part of Capital Cost</b>								
2	Furniture and Fixtures	Claimed under Additional Capitalization	0.99	0.07	1.06	2013-14	0.52	No
3	EDP, WP machines & SATCOM equipment	Claimed under Additional Capitalization	5.52	3.90	9.42	2013-14	4.67	No
			13.90	0.36	14.26	2014-15	35.50	No
			0.36	-	0.36	2015-16	0.12	No
6	Hospital Equipment	Claimed under Additional Capitalization	1.81	-	1.81	2016-17	0.50	No
7	Other Office Equipment	Claimed under Additional Capitalization	0.08	-	0.08	2016-17	0.02*	No
<b>Subtotal (B)</b>			<b>2.52</b>	<b>-</b>	<b>2.52</b>	2016-17	<b>0.69</b>	<b>No</b>
<b>Subtotal (B)</b>			<b>25.18</b>	<b>4.33</b>	<b>29.51</b>		<b>43.02</b>	
<b>C Decap of Spares - Not part of Capital Cost</b>								
S.N	Name of the Asset	Nature of de-capitalization (whether claimed under exclusion or as additional capital expenditure)	Value of the Asset decapitalised as per IndAS	IndAS Adjustment	Value of the Asset decapitalised as per IGAAP	Year Put to use	Justification	
1	Decap of Spares	Claimed under Exclusion	132.76	-	132.76	2019-20	Since capitalization of spares after cut-off date is not admissible as per Tariff Regulations, 2019, hence their decapitalization has been claimed under exclusion.  Hon'ble Commission may be pleased to allow the same.	NA
<b>Subtotal (C)</b>			<b>132.76</b>	<b>-</b>	<b>132.76</b>			
<b>D Decap of MBOAs - Not part of Capital Cost</b>								



1	Plant and Machinery	Claimed under Exclusion	6.43	-	6.43	2019-20	Since capitalization of MBOA after cut-off date is not admissible as per Tariff Regulations, 2019, hence their decapitalization has been claimed under exclusion.  Hon'ble Commission may be pleased to allow the same.	NA
2	EDP, WP machines & SATCOM equipment	Claimed under Exclusion	0.23		0.23	2017-18	Capitalization of these assets was kept under exclusion and allowed by Hon'ble Commission vide para 16 of order dtd 13.11.2023 in Petition no 238/GT/2020. Accordingly, decap of these assets is kept under exclusion.  Hon'ble Commission may be pleased to allow the same.	
Subtotal (D)			6.66	-	6.66			
E	Decap of Overhauling Assets	Claimed under Exclusion	935.77	- 935.77	-	2021-22	This Decapitalisation entry is on account of Change in Accounting Practice wherein decap during overhauling have been capitalised as per Ind AS with net amount under IGAAP as zero. The same is kept under exclusion.  Hon'ble Commission may be pleased to allow the same under exclusion.	NA
Subtotal (E)			935.77	-935.77	-			
Grand Total of Decap of assets			1,226.38	-866.80	359.58			101.05

  
(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Details of decapitalization during 2022-23							PART-I FORM-I	
Name of the Petitioner		NTPC Limited						
Name of the Generating Station		Rihand Super Thermal Power Station Stage-II						
Station COD		27-03-2014						
For Financial Year		2022-23						
Period	Rate of Depreciation	Period	Rate of Depreciation					
19.11.2012 to 31.3.2013	5.3621%	2019-20	5.4624%					
1.4.2013 to 28.3.2014	5.6217%	2020-21	5.4592%					
27.3.2014 to 31.3.2014	5.5495%	2021-22	5.4578%					
2014-15	5.5495%	2022-23	5.4560%					
2015-16	5.5559%	2023-24	5.4519%					
2016-17	5.5360%							
2017-18	5.4702%							
2018-19	5.4695%							
						Amount in Rs Lakh		
<b>A Decap of Spares - Part of Capital Cost</b>								
S.N	Name of the Asset	Nature of de-capitalization (whether claimed under exclusion or as additional capital expenditure)	Value of the Asset decapitalised as per IndAS	IndAS Adjustment	Value of the Asset decapitalised as per IGAAP	Year Put to use	Depreciation recovered till date of decapitalization	Whether earning RoE at the normal rate of weightage average rate of interest on loan
1	Decap of Spares	Claimed under Additional Capitalization	96.01	97.28	193.30	2012-13	117.03	No
			209.55	187.14	396.70	2013-14	218.37	No
			7.46	-	7.46	2015-16	2.86	No
			52.45	-	52.45	2016-17	17.21	No
			<b>Subtotal (A)</b>	<b>365.48</b>	<b>284.42</b>	<b>649.91</b>		<b>335.40</b>
<b>B Decap of MBOAs - Part of Capital Cost</b>								
1	EDP, WP machines & SATCOM equipment	Claimed under Additional Capitalization	52.72	1.35	54.08	2014-15	23.79	No
			30.99	-	30.99	2016-17	10.17	No
			<b>Subtotal (B)</b>	<b>83.71</b>	<b>1.35</b>	<b>85.07</b>		<b>33.92</b>
<b>C Decap of MBOAs - Not part of Capital Cost</b>								
1	EDP, WP machines & SATCOM equipment	Claimed under Exclusion	26.48	-	26.48	2018-19	Capitalization of these assets was kept under exclusion and allowed by Hon'ble Commission vide para 16 of order dttd 13.11.2023 in Petition no 238/STI/2023. Accordingly, decap of these assets is kept under exclusion.  Hon'ble Commission may be pleased to allow the same.	NA
<b>Subtotal (C)</b>			<b>26.48</b>	<b>-</b>	<b>26.48</b>			
<b>D Decap of Overhauling Assets</b>								
	Decap of Overhauling Assets	Claimed under Exclusion	412.71	-	412.71	2022-23	This Decapitalisation entry is on account of Change in Accounting Practice wherein decap during overhauling have been capitalised as per Ind AS with net amount under IGAAP as zero. The same is kept under exclusion.  Hon'ble Commission may be pleased to allow the same under exclusion.	NA
<b>Subtotal (D)</b>			<b>412.71</b>	<b>-412.71</b>	<b>-</b>			
<b>Grand Total of Decap of assets</b>			<b>890.39</b>	<b>-126.94</b>	<b>763.45</b>		<b>399</b>	

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वित्त/निष्पादन)  
Addl. General Manager (Finance/Operations)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Details of decapitalization during 2023-24

Name of the Petitioner		NTPC Limited						
Name of the Generating Station		Rihand Super Thermal Power Station Stage-II						
Station COD		27-03-2014						
For Financial Year		2023-24						
Period		Rate of Depreciation		Period		Rate of Depreciation		
19.11.2012 to 31.3.2013		5.3001%		2019-20		5.4624%		
1.4.2013 to 26.3.2014		5.6217%		2020-21		5.4592%		
27.3.2014 to 31.3.2014		5.5495%		2021-22		5.4579%		
2014-15		5.5496%		2022-23		5.4560%		
2015-16		5.5509%		2023-24		5.4619%		
2016-17		5.5350%						
2017-18		5.4702%						
2018-19		5.4695%						
						Amount in Rs Lakh		
<b>A Decap of Spares - Part of Capital Cost</b>								
S.N	Name of the Asset	Nature of de-capitalization (whether claimed under exclusion or as additional capital expenditure)	Value of the Asset decapitalised as per IndAS	IndAS Adjustment	Value of the Asset decapitalised as per IGAAP	Year Put to use	Depreciation recovered till date of decapitalization	Whether earning Roll at the normal rate of weightage average rate of interest on loan
1	Decap of Spares	Claimed under Additional Capitalization	273.38	264.90	538.28	2012-13	355.20	No
			174.03	98.05	272.08	2013-14	164.63	No
			112.49	-	112.49	2016-17	43.06	No
			<b>Subtotal (A)</b>	<b>559.91</b>	<b>362.95</b>	<b>922.86</b>		<b>519.89</b>
<b>B Decap on Upgradation of HMI</b>								
1	Decap on Upgradation of HMI	Claimed under Additional Capitalization	82.14	122.49	204.63	2012-13	135.05	No
		<b>Subtotal (B)</b>	<b>82.14</b>	<b>122.49</b>	<b>204.63</b>		<b>135.05</b>	
<b>C Decap of MitOAs - Part of Capital Cost</b>								
1	Other Office Equipment	Claimed under Additional Capitalization		1.36	1.36	2012-13	0.90	No
2			0.47	0.19	0.66	2013-14	0.40	No
3			0.82	-	0.82	2015-16	0.36	No
4			0.90	-	0.90	2016-17	0.34	No
5			0.78	0.39	1.18	2013-14	0.71	No
6	EDP, WP machines & SATCOM equipment	Claimed under Additional Capitalization	17.41	9.88	27.30	2014-15	13.48	No
7			0.06	-	0.06	2015-16	0.03	No
8			11.42	-	11.42	2016-17	4.37	No
9	Communication Equipment		0.23	-	0.23	2015-16	0.10	No
		<b>Subtotal (C)</b>	<b>32.69</b>	<b>11.82</b>	<b>43.91</b>		<b>17.87</b>	
<b>D Decap of Spares - Not-Part of Capital Cost</b>								
1	Decap of Spares	Claimed under Exclusion	16.19	-	16.19	2019-20		NA
			15.87	-	15.87	2020-21		NA
			100.13	-	100.13	2022-23		NA

Capitalization of spares beyond cut-off date is not admissible as per Tariff Regulations 2019 accordingly the decapitalization of these spares are claimed under exclusion. Hon'ble Commission may be pleased to allow the same.

			5.57		5.57	2023-24		NA
		Subtotal (D)	137.77	-	137.77			
E	Decap of MBOAs - Not part of Capital Cost							
1	EDP, WP machines & SATCOM equipment	Claimed under Exclusion	14.24		14.24	2018-19	Capitalization of these assets was kept under exclusion and allowed by Hon'ble Commission vide para 16 of order dtd 13.11.2023 in Petition no 238/GT/2020. Accordingly, decap of these assets is kept under exclusion. Hon'ble Commission may be pleased to allow the same.	NA
			0.77		0.77	2022-23	Since capitalization of MBOA after out off date is not admissible as per Tariff Regulations, 2019, hence their decapitalization has been claimed under exclusion. Hon'ble Commission may be pleased to allow the same.	NA
		Subtotal (E)	15.01	-	15.01			
F	Decap of Overhauling Assets	Claimed under Exclusion	2,218.87	(2,218.87)	-	2023-24	This Decapitalisation entry is on account of Change in Accounting Practice wherein decap during overhauling have been capitalised as per Ind AS with net amount under IGAAP as zero. The same is kept under exclusion. Hon'ble Commission may be pleased to allow the same under exclusion.	NA
		Subtotal (F)	2,218.87	-2,218.87	-			
Grand Total of Decap of assets (A+B+C+D+E+F)			3,045.79	-1,721.61	1,324.18			673

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Part-I Form-J						
Summary of Gross Block reconciliation						
Name of the Petitioner:		NTPC Limited				
Name of the Generating Station:		Rihand Super Thermal Power Station Stage-II				
COB:						
		Amt in Rs Lacs				
Sl No	Particular	2019-20	2020-21	2021-22	2022-23	2023-24
1	Closing Gross Block as per IND AS	5,06,796	5,20,449	5,27,576	5,50,117	5,95,141
2	Add: cumulative Ind AS Adjustment (breakup given below)	3,91,788.22	3,80,337.89	3,89,105.97	3,87,282.97	3,81,938.40
2.1	Adjustment of accumulated depreciation as on 1.4.2015	4,12,944	4,12,944	4,12,944	4,12,944	4,12,944
2.2	Less: Cumulative Gross block adjustment with regard to Acc. Dep for decapitalisation	7,229	8,314	9,494	11,490	13,581
2.3	Less: Cumulative capital overhauling/major inspection capitalised out of revenue	15,217	18,624	23,317	32,761	39,610
2.4	Add: Cumulative Decapitalisation of capital Overhauling	1,529	705	9,335	16,548	19,560
2.5	Less: spares capitalised out of inventory system circular 129	2,680	2,680	2,680	2,680	2,680
2.6	Less: spares capitalised out of inventory system circular 149	-	-	-	-	-
2.7	Less: Cumulative Capitalisation of PV of Future minimum lease obligation in Lease hold land	-	-	-	-	-
2.8	Less: Cumulative Unwinding expenses Capitalised	83	139	139	181	198
2.9	Add: Cumulative Vendor Discounting	126	149	151	184	194
2.10	Add: Borrowing cost (all) due to change in interest rate (EIR)	-	-	-	-	-
2.11	Add/Less: Any other Adj in PPE due to IND AS implementation	-382	-383	-384	2,038	2,228
2.12	Cumulative Capital spares Capitalised	2,680	2,680	2,680	2,680	2,680
3	Closing Gross Block as per IGAAP	11,98,584.18	12,06,788.54	12,15,783.31	12,47,399.97	12,77,079.90
4	Opening Gross Block as per IND AS	7,85,394	8,06,796	8,20,449	8,27,576	8,50,117
5	Add: cumulative Ind AS Adjustment (breakup given below)	3,88,079	3,91,788	3,86,338	3,88,107	3,87,293
5.1	Adjustment of accumulated depreciation as on 1.4.2015	4,12,944	4,12,944	4,12,944	4,12,944	4,12,944
5.2	Less: Cumulative Gross Block adjustment with regard to Acc. Dep for decapitalisation	6,643	7,229	8,314	9,494	11,490
5.3	Less: Cumulative capital overhauling/major inspection capitalised out of revenue	10,259	15,217	18,624	23,317	30,761
5.4	Add: Cumulative Decapitalisation of capital Overhauling	2,410	1,529	705	9,335	16,548
5.5	Less: spares capitalised out of inventory system circular 129	2,680	2,680	2,680	2,680	2,680
5.6	Less: spares capitalised out of inventory system circular 149	-	-	-	-	-
5.7	Less: Cumulative Capitalisation of PV of Future minimum lease obligation in Lease hold land	-	-	-	-	-
5.8	Less: Cumulative Unwinding expenses Capitalised	83	139	139	181	198
5.9	Add: Cumulative Vendor Discounting	87	126	149	151	184
5.10	Add: Cumulative Borrowing cost (all) due to change in interest rate (EIR)	-	-	-	-	-
5.11	Add/Less: Any other Adj in PPE due to IND AS implementation	-381	-382	-383	-384	2,038
5.12	Cumulative Capital spares Capitalised	2,680	2,680	2,680	2,680	2,680
6	Opening Gross Block as per IGAAP	11,83,473.09	11,86,584.18	12,06,788.54	12,16,783.31	12,47,399.97
7	Total Additions as per books (3 + 6)	15,111.10	8,202.38	9,995.76	30,616.66	29,679.93
8A	Addition as per IGAAP corresponding to Rihand-I	5,201.59	1,358	2,732	22,600	15,222
8B	Addition as per IGAAP corresponding to Rihand-II	379.75	985.09	2,263.20	3,701	1,968
9	Net Additions pertaining to instant project/Unit/Stage	9,529.76	5,879.73	4,878.70	4,015.38	12,490.21
10	Less: Exclusions (Items not allowable / not claimed)	9,110.44	-185	1,791	3,872	8,230
11	Net Additional Capital Expenditure Claimed (on accrual basis)	419.32	6,065.58	3,087.59	143.24	5,260.14
12	Less: Un-discharged liabilities (as per IGAAP)	53.11	854	549	187	-33
13	Add: Discharges of un-discharged liabilities, corresponding to admitted assets/works (as per IGAAP)	491.83	1,715.92	890	721	641
14	Net Additional Capital Expenditure Claimed (on cash basis)	858.05	7,117.30	3,596.51	677.48	5,934.70

(Petitioner)

  
**परिमल पीयूष/PARIMAL PIYUSH**  
 अपर महाप्रबन्धक (व्यावसायिक)  
 Addl. General Manager (Commercial)  
 एन टी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Year wise Statement of Additional Capitalisation										PART-I Form-K
Name of the Positioner		NTPC Limited							Amount in Rs. Lakh	
Name of the Generating Station		Rihand Super Thermal Power Station Stage-III								
Date of Commercial Operation		27-03-2014								
For Financial Year		2019-20								
Sl. No.	Head of Work /Equipment	Party Name	ACE Claimed						Justification	
			Accrual basis as per Note 2	Ind AS Adj.	Accrual Basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3		
1	2	3	4	5.00	6.00	7.00	8.00	9.00	10	
B	Exclusions									
B.1	Capitalization of Spares	Various Parties	647.90	-	647.90	-	647.90	-	Capitalization of spares beyond cut-off date is not admissible as per Tariff Regulations 2019 accordingly the capitalization of these spares are claimed under exclusion.  Hon'ble Commission may be pleased to allow the same.	
B.2	Decap of MBOA- Not Part of Capital Cost		-2.91	-	-2.91	-	-2.91	-	Justification given in 'Form-I 2019-20'.	
B.3	IndAS Adjustment		-	-	-	-	-	-		
1	Unit Overhauling		718.53	-718.53	-	-	-	-	This Capitalization is on account of Change in Accounting Practice. Therefore, it is kept under exclusion. Hon'ble Commission may be pleased to allow the same under exclusion.	
	Subtotal(B.3)		718.53	-718.53	-	-	-	-		
B.4	Loan ERV		8,579.25	-	8,579.25	14.38	8,564.86	-	As per CERC Tariff Regulations 2019, NTPC can directly claim ERV on Foreign Currency Loans from beneficiaries. Therefore, FERV has been kept under exclusion.	
B.5	Inter Unit Transfer		31.38	-1.43	29.96	-	29.96	-		
B.5.1	EDP, WP machines & SATCOM equipment	To CC-EOC	-4.72	-1.21	-5.93	-	-5.93	-	As per practice, the Hon'ble Commission is not considering the temporary inter unit transfers for tariff, hence kept under exclusion.	
		To Vidhyachal	-11.19	-0.22	-11.41	-	-11.41	-		
		From Rihand (Interunit transfer)	0.60	-	0.60	-	0.60	-		
		From Unchahar	0.53	-	0.53	-	0.53	-		
		From Farakka	0.51	-	0.51	-	0.51	-		
		From Koldam	0.65	-	0.65	-	0.65	-		
B.5.2	Plant and machinery	From Tapovan Vishnugad	0.62	-	0.62	-	0.62	-	Hon'ble Commission may be pleased to allow the same.	
		From Vidhyachal	44.38	-	44.38	-	44.38	-		
B.6	Reversal of Liability		-143.75	-	-143.75	-143.75	-	-	Since tariff is on cash basis, hence reversal of liability is kept under exclusion.  Hon'ble Commission may be pleased to allow the same.	

परिमल पीयूष/PARIMAL PIYUSH  
 अधीकृत प्रबन्धक (वित्त/वित्त) /  
 Addl. General Manager (Commercial)  
 एन टी सी वी लिमिटेड / NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Total Exclusion (B)	9,830.39	-719.96	8,110.44	-129.37	9,239.80	-	
							(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Name of the Petitioner		Year wise Statement of Additional Capitalisation							Amount in Rs. Lakh
Name of the Generating Station		NTPC Limited							
Date of Commercial Operation		Rihand Super Thermal Power Station Stage-III							
For Financial Year		27-03-2014							
For Financial Year		2020-21							
Sl. No.	Head of Work /Equipment	Party Name	ACE Claimed					Justification	
			Accrual basis as per Note 2	Ind AS Adj.	Accrual Basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis		IDC included in col. 3
1	2	3	4	5.00	6.00	7.00	8.00	9.00	10 <sup>7</sup>
B	Exclusions								
B.1	Capitalization of Spares	Various Parties	3,261.60	0.16	3,261.76	25.80	3,235.96	-	Capitalization of spares beyond cut-off date is not admissible as per Tariff Regulations 2019 accordingly the capitalization of these spares are claimed under exclusion. Hon'ble Commission may be pleased to allow the same.
B.2	Decap of Spares: Not-Part of Capital Cost		-296.16	-	-296.16	-	-296.16	-	Justification given in 'Form-I 2020-21'
B.3	IndAS Adjustment		-	-	-	-	-	-	This Capitalisation is on account of Change in Accounting Practice. Therefore, it is kept under exclusion. Hon'ble Commission may be pleased to allow the same under exclusion.
1	Unit Overhauling		777.69	-777.69	-	-	-	-	
2	De-Cap of Overhauling Assets		-470.53	470.53	-	-	-	-	
	Subtotal (B.3)		307.17	-307.17	-	-	-	-	
B.4	Loan ERV		-2,656.44	-	-2,656.44	-	-2,656.44	-	As per CERC Tariff Regulations 2019, NTPC can directly claim ERV on Foreign Currency Loans from beneficiaries. Therefore, FERV has been kept under exclusion.
B.5	Inter Unit Transfer		143.62	-	143.62	-	143.62	-	As per practice, the Hon'ble Commission is not considering the temporary Inter unit transfers for tariff, hence kept under exclusion.
B.5.1	EDP, WP machines & SATCOM equipment	To Vindhyachal	-0.51	-	-0.51	-	-0.51	-	
B.5.2	Plant and machinery	From Badarpur	144.13	-	144.13	-	144.13	-	Hon'ble Commission may be pleased to allow the same.



B.6	Reversal of Liability			-638.12	-	-638.12	-638.12	-	-	Since, tariff is on cash basis, liability reversal is kept under exclusion.
				-	-	-	-	-	-	
	Total Exclusion (B)			121.66	-307.01	-185.34	-612.32	426.98	-	



(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

PART-I									
Form-K									
Amount in Rs. Lakh									
Name of the Petitioner		Year wise Statement of Additional Capitalisation after COD							
Name of the Generating Station		Rihand Super Thermal Power Station Stage-II							
Station COD		27-03-2014							
For Financial Year		2021-22							
Sl. No.	Head of Work /Equipment	Party Name	ACE Claimed						Justification
			Accrual basis as per Note-2 of BS	IND AS Adj	Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3	
1	2	3	4	5	6	7	8	9	10
B	Exclusions			6.00	6.00	7.00	8.00	9.00	
B.1	Items not claimed		-	-	-	-	-	-	
1	Combustion Modification Package		-	-	-	-	-	-	
1.1	Combustion Modification Package-Unit#5	Bharat Heavy Electricals Limited	759.49	-	759.49	-	759.49	-	This additional capitalization is on account of Revised Emission Standards. The Petitioner has filed a separate Appendix I.e. Appendix-IA with the present petition for determination of the tariff for this capitalization. Hence, this add-cap is kept under exclusion here.
1.2	Combustion Modification Package-Unit#6	Bharat Heavy Electricals Limited	759.49	-	759.49	-	759.49	-	
	Subtotal (B.1)		1,518.99	-	1,518.99	-	1,518.99	-	
B.2	Loan ERV		1,604.73	-	1,604.73	-	1,604.73	-	As per CERC Tariff Regulations 2019, NTPC can directly claim ERV on Foreign Currency Loans from beneficiaries. Therefore, FERV has been kept under exclusion.
B.3	Ind AS Adjustment		-	-	-	-	-	-	
1	Overhauling		1,546.62	-1,546.62	-	-	-	-	
2	Decap of Overhauling Assets		-935.77	935.77	-	-	-	-	This Capitalisation is on account of Change in Accounting Practice. Therefore, it is kept under exclusion. Hon'ble Commission may be pleased to allow the same under exclusion.
	Subtotal (B.3)		610.85	-610.85	-	-	-	-	
B.4	Capitalization of Capital Spares	Various Parties	622.19	0.18	622.37	160.33	682.04	-	Capitalization of spares beyond cut-off date is not admissible as per Tariff Regulations 2019 accordingly the capitalization of these spares are claimed under exclusion. Hon'ble Commission may be pleased to allow the same.
B.5	Decap of MBOAs (Not Part of Capital Cost)		-6.66	-	-6.66	-	-6.66	-	Justification given in 'Form-I 2021-22'.
B.6	Decap of Spares: Not Part of Capital Cost		-132.76	-	-132.76	-	-132.76	-	Justification given in 'Form-I 2021-22'.
B.7	Inter Unit Transfer		-1,921.71	-0.29	-1,921.99	-	-1,921.99	-	
B.7.1	Plant & Machinery	To Unchahar	-3.72	-0.20	-3.91	-	-3.91	-	
		TO Ramagundam	-1,438.91	-	-1,438.91	-	-1,438.91	-	As per practice, the Hon'ble Commission is not considering the inter unit transfers for tariff, hence kept under exclusion.
		To Vindhyachal	-3.49	-	-3.49	-	-3.49	-	
B.7.2	Other Office Equipments	To Jhajjar	-466.01	-	-466.01	-	-466.01	-	
		TO Singrauli	-9.06	-	-9.06	-	-9.06	-	Hon'ble Commission may be pleased to allow the same.
B.7.3	EDP, WP machines & SATCOM equipment	To Auraiya	-0.62	-0.66	-0.61	-	-0.61	-	
B.8	Reversal of Liabilities	Various Parties	-86.91	-6.55	-93.56	-93.56	-	-	Since, tariff is on cash basis, liability reversal is kept under exclusion.
	Total Exclusion Claimed (B)		2,408.72	-417.61	1,791.11	66.77	1,724.34	-	

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (ए.मि.डि.एफ.)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Year wise Statement of Additional Capitalization after CDD

Amount in Rs. Lakh

Name of the Petitioner	NTPC Limited
Name of the Generating Station	Rihand Super Thermal Power Station Stage-III
Station CDD	27-01-2014
For Financial Year	2022-23

Sl. No.	Head of Work /Equipment	Party Name	ACE Claimed					Justification	
			Accrual basis as per Note-2 of BS	IND AS Adj	Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis		IDC included in col. 3
1	2	3	4	5.00	6.00	7.00	8.00	9.00	10
B	Exclusions								
B.1	Items not claimed								
1	Combustion Modification Package								
1.1	Combustion Modification Package-Unit#5	Bharat Heavy Electricals Limited	7.53	-	7.53	7.53	-	-	This additional capitalization is on account of Revised Emission Standards. The Petitioner has filed a separate Appendix i.e. Appendix-IA with the present petition for determination of the tariff for this capitalization. Hence, this add-cap is kept under exclusion here.
1.2	Combustion Modification Package-Unit#6	Bharat Heavy Electricals Limited	7.53	-	7.53	7.53	-	-	
Subtotal (B.1)			15.06	-	15.06	15.06	-	-	
B.2	Capitalization of Capital Spares	Various Parties	1,236.44	-	1,236.44	10.85	1,225.59	-	Capitalization of spares beyond cut-off date is not admissible as per Tariff Regulations 2019 accordingly the capitalization of these spares are claimed under exclusion. Hon'ble Commission may be pleased to allow the same.
B.3	Loan ERV		2,682.41	-	2,682.41	-	2,682.41	-	As per CERC Tariff Regulations 2019, NTPC can directly claim ERV on Foreign Currency Loans from beneficiaries. Therefore, FERV has been kept under exclusion.
B.4	Decap of MBOAs: Not Part of Capital Cost		-28.48	-	-28.48	-	-28.48	-	Justification given in 'Form-I 2022-23'.
B.5	Ind AS Adjustment								
1	Overhauling		1,740.05	-1,740.05	-	-	-	-	This Capitalization is on account of Change in Accounting Practice. Therefore, it is kept under exclusion. Hon'ble Commission may be pleased to allow the same under exclusion.
2	Decap. of Overhauling Assets		-412.71	412.71	-	-	-	-	
Subtotal (B.5)			1,327.34	-1,327.34	-	-	-	-	
B.6	Inter Unit Transfer		-	0.00	0.00	-	0.00	-	As per practice, the Hon'ble Commission is not considering the temporary inter unit transfers for tariff, hence kept under exclusion.
B.6.1	EDP, WP machines & SATCOM equipment	WR-II Raipur	-	0.00	0.00	-	0.00	-	Hon'ble Commission may be pleased to allow the same.
B.7	Reversal of Liability		-15.13	-18.18	-33.30	-33.30	-	-	Since, tariff is on cash basis, liability reversal is kept under exclusion.
Total Exclusion Claimed (B)			5,217.65	-1,345.81	3,872.14	-7.39	3,879.53	-	

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

PART-I									
Form-K									
Year wise Statement of Additional Capitalisation after COD									
Amount in Rs. Lakh									
Name of the Petitioner		NTPC Limited							
Name of the Generating Station		Rihand Super Thermal Power Station Stage-III							
Station COD		27-03-2014							
For Financial Year		2023-24							
Sl. No.	Head of Work /Equipment	Party Name	ACE Claimed						Justification
			Accrual basis as per Note-2 of BS	IND AS Adj	Accrual basis as per IGAAP	Un-discharge d Liability included in col. 3	Cash basis	IDC included in col. 3	
1	2	3	4	5.00	6.00	7.00	8.00	9.00	10
B	Exclusions								
B.1	Capitalization of Capital Spares	Various Parties	6,386.27	-	6,386.27	59.80	6,326.47	-	Capitalization of spares beyond cut-off date is not admissible as per Tariff Regulations 2019 accordingly the capitalization of these spares are claimed under exclusion. Hon'ble Commission may be pleased to allow the same.
B.2	Decap of MBOAs: Not Part of Capital Cost		-15.01	-	-15.01	-	-15.01	-	Justification given in 'Form-I 2023-24'.
B.3	Decap of Spares: Not Part of Capital Cost		-137.77	-	-137.77	-	-137.77	-	Justification given in 'Form-I 2023-24'.
B.4	Ind AS Adjustment		-	-	-	-	-	-	
1	Overhauling		2,372.27	-2,372.27	-	-	-	-	This Capitalisation is on account of Change in Accounting Practice. Therefore, it is kept under exclusion. Hon'ble Commission may be pleased to allow the same under exclusion.
2	Decap of Overhauling Assets		-2,218.87	2,218.87	-	-	-	-	
	<b>Subtotal (B.4)</b>		<b>153.40</b>	<b>-153.40</b>	-	-	-	-	
B.5	Reversal of Liability		-3.43	-	-3.43	-3.43	-	-	Since, tariff is on cash basis, liability reversal is kept under exclusion.
	<b>Total Exclusion Claimed (B)</b>		<b>6,383.46</b>	<b>-153.40</b>	<b>6,230.07</b>	<b>56.37</b>	<b>6,173.70</b>	-	

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Najda-201301 (U.P.)

Name of the Petitioner	NTPC Limited	Statement of Capital cost
Name of the Generating Station	Rihand Super Thermal Power Station Stage-II	
COI	27-03-2014	
For Financial Year	2013-14	

Sl. No.	Particulars	2011-20			2020-21			2021-22			2022-23			2023-24		
		Accrual Basis	Un-discharged Liabilities	Cash Basis	Accrual Basis	Un-discharged Liabilities	Cash Basis	Accrual Basis	Un-discharged Liabilities	Cash Basis	Accrual Basis	Un-discharged Liabilities	Cash Basis	Accrual Basis	Un-discharged Liabilities	Cash Basis
A	a) Opening Gross Block Amount as per books	5,98,255.78	15,166.03	5,73,690.13	5,98,385.51	14,597.54	5,83,787.97	6,04,265.24	12,993.09	5,91,332.24	6,06,143.95	12,463.99	5,96,679.95	6,13,158.93	11,798.31	6,01,361.62
	b) Amount of IDC in A(a) above	55,292.98	-	-	55,402.33	-	-	55,402.33	-	55,402.78	-	-	55,402.78	-	-	-
	c) Amount of FC in A(a) above	1,004.00	-	-	1,004.00	-	-	1,004.00	-	1,004.00	-	-	1,004.00	-	-	-
	d) Amount of FFRV in A(a) above	42,626.33	-	-	51,191.18	-	-	48,534.75	-	50,139.48	-	-	52,821.89	-	-	-
	e) Amount of Hedging Cost in A(a) above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	f) Amount of JEDC in A(a) above	17,417.16	-	-	17,417.16	-	-	17,417.16	-	17,417.16	-	-	17,417.16	-	-	-
B	a) Addition in Gross Block Amount during the period (Direct purchase)	9,127.00	152.43	9,279.49	7,170.91	51.38	7,119.53	4900.10	361.71	4,444.39	4575.14	179.48	4,195.65	6,073.12	(182.14)	6,255.26
	b) Amount of IDC in B(a) above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	c) Amount of FC in B(a) above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	d) Amount of FFRV in B(a) above	8,204.85	-	-	(2,656.44)	-	-	1,604.73	-	2,552.41	-	-	-	-	-	-
	e) Amount of Hedging Cost in B(a) above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	f) Amount of JEDC in B(a) above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C	a) Addition in Gross Block Amount during the period (Transferred from CWIP)	585.29	76.17	510.12	143.00	-	143.00	-	-	354.41	404.30	484.30	7,535.04	206.95	7,330.59	
	b) Amount of IDC in C(a) above	8.30	-	-	-	-	-	489.18	64.74	-	-	-	-	-	-	
	c) Amount of FC in C(a) above	-	-	-	-	-	-	3.45	-	-	-	-	418.02	-	-	
	d) Amount of FFRV in C(a) above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	e) Amount of Hedging Cost in C(a) above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	f) Amount of JEDC in C(a) above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
D	a) Deletion in Gross Block Amount during the period	183.58	-	183.00	1434.16	-	1,434.16	-	-	336.58	763.45	763.45	1,119.54	-	1,119.54	
	b) Amount of IDC in D(a) above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	c) Amount of FC in D(a) above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	d) Amount of FFRV in D(a) above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	e) Amount of Hedging Cost in D(a) above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	f) Amount of JEDC in D(a) above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
E	a) Closing Gross Block Amount as per books	5,96,385.51	14,597.54	5,83,787.97	6,04,265.24	12,933.00	5,91,332.24	6,06,143.95	12,693.89	5,96,679.95	6,13,159.93	11,798.31	6,01,361.62	6,25,642.14	11,168.09	6,14,474.15
	b) Amount of IDC in E(a) above	55,492.33	-	-	55,402.33	-	-	55,402.78	-	55,402.78	-	-	55,402.78	-	-	-
	c) Amount of FC in E(a) above	1,004.00	-	-	1,004.00	-	-	1,004.00	-	1,004.00	-	0.00	1,004.00	-	-	-
	d) Amount of FFRV in E(a) above	51,191.19	-	-	48,534.75	-	-	50,139.48	-	52,821.89	-	-	52,821.89	-	-	-
	e) Amount of Hedging Cost in E(a) above	0.00	-	-	0.00	-	-	0.00	-	0.00	-	-	0.00	-	-	-
	f) Amount of JEDC in E(a) above	17,417.16	-	-	17,417.16	-	-	17,417.16	-	17,417.16	-	-	17,417.16	-	-	-


  
Petitioner

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Statement of Capital Works in Progress

PART-I  
FORM-M

Name of the Petitioner: NTPC Limited  
 Name of the Generating Station: Rihand Super Thermal Power Station Stage-II  
 COD: 27-03-2014  
 For Financial Year: 2019-24

Sl. No.	Particulars	2019-20			2020-21			2021-22			2022-23			2023-24			(Rs Lakh)
		Accrual Basis	Un-discharged Liabilities	Cash Basis	Accrual Basis	Un-discharge d Liabilities	Cash Basis	Accrual Basis	Un-discharge d Liabilities	Cash Basis	Accrual Basis	Un-discharged Liabilities	Cash Basis	Accrual Basis	Un-discharged Liabilities	Cash Basis	
A	a) Opening CWIP as per books	3,138.96	171.23	2,967.73	3,924.25	409.31	3,514.94	15,525.42	4,832.50	10,692.92	31,207.00	10,385.52	20,821.48	42,051.26	12,350.25	29,701.01	
	b) Amount of IDC in A(a) above	532.06	-	-	539.14	-	-	604.20	-	-	687.48	-	-	908.61	-	-	
	c) Amount of FC in A(a) above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	d) Amount of FERV in A(a) above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	e) Amount of Hedging Cost in A(a) above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	f) Amount of IEDC in A(a) above	-	-	-	36.64	-	-	158.23	-	-	268.98	-	-	396.41	-	-	
B	a) Addition in CWIP during the period	1,371.58	390.84	980.75	11,744.17	4,643.10	7,101.07	15,208.38	5,752.32	9,456.06	11,249	2,038	9,210.49	109,29.64	2021.74	8897.90	
	b) Amount of IDC in B(a) above	15.42	-	-	65.08	-	-	86.73	-	-	821	-	-	256.60	-	-	
	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	36.64	-	-	121.59	-	-	110.75	-	-	127	-	-	108.55	-	-	
C	a) Transferred to Gross Block Amount during the period	586.29	78.17	510.12	143.00	-	143.00	408.95	54.74	354.21	404	-	404.30	7535.64	206.05	7,330.59	
	b) Amount of IDC in C(a) above	5.34	-	-	-	-	-	3.45	-	-	-	-	-	418.02	-	-	
	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	-	-	-	-	-	-	-882.15	-	-882.15	-	-	-	-35.63	-	-	
	b) Amount of IDC in D(a) above	-	-	-	-	-	-	-	-	-	-	-	-	0.00	-	-	
	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	3,924.25	409.31	3,514.94	15,525.42	4,833	10,692.92	31,207.00	10,386	20,821.48	42,051.26	12,350	29,701.01	45,445.26	12,699	32,746.54	
	b) Amount of IDC in E(a) above	539.14	-	-	604.20	-	-	687.48	-	-	908.61	-	-	746.20	-	-	
	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	36.64	-	-	158.23	-	-	268.98	-	-	396.41	-	-	540.59	-	-	

Petitioner

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (व्यापारिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Calculation of Interest on Normative Loan

Name of the Company :		NTPC Limited						
Name of the Power Station :		Rihand Super Thermal Power Station Stage-III						
		(Amount in Rs Lakh)						
S. No.	Particulars		2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7	8	9
1	Gross Normative loan – Opening	A	3,85,406.39	3,85,969.74	3,86,570.37	3,91,552.48	3,94,071.44	3,94,545.67
2	Cumulative repayment of Normative loan up to previous year	B	1,31,929.71	1,61,707.70	1,91,815.92	2,21,718.48	2,52,248.92	2,82,617.63
3	<b>Net Normative loan – Opening</b>	<b>C=A-B</b>	2,53,476.68	2,24,262.04	1,94,754.45	1,69,834.00	1,41,822.52	1,11,928.04
4	Add: Increase due to addition during the year / period	D	1,109.88	382.81	4,577.57	2,055.20	483.93	5,082.26
5	Less: Decrease due to de-capitalisation during the year / period	E	938.88	126.47	796.61	138.01	514.49	676.74
6	Less: Decrease due to reversal during the year / period	F						
7	Add: Increase due to discharges during the year / period	G	392.39	344.28	1,201.14	601.76	504.79	448.77
8	Normative Loan Closing	H=C+D-E-F+G	254040.04	224862.67	199736.56	172352.95	142296.76	116782.33
9	Repayment of Loan during the year	I	30138.31	30146.92	30347.15	30631.48	30738.03	30978.39
10	Repayment adjustment on account of decapitalization	J	360.32	38.70	444.58	101.05	369.31	672.81
11	Net Repayment of loan during the year	K=I-J	29,777.99	30,108.22	29,902.56	30,530.43	30,368.71	30,305.58
12	<b>Net Normative loan - Closing</b>	<b>L=H-K</b>	2,24,262.06	1,94,754.45	1,69,834.00	1,41,822.52	1,11,928.04	86,476.75
13	<b>Average Normative loan</b>	<b>M=Average(C,L)</b>	2,38,869.37	2,09,508.25	1,82,294.22	1,55,828.26	1,26,875.28	99,202.39
14	Weighted average rate of interest	N	7.832%	7.577%	7.104%	6.880%	7.270%	7.625%
15	<b>Interest on Loan</b>	<b>O=MxN</b>	<b>18231.23</b>	<b>15873.51</b>	<b>12951.00</b>	<b>10720.40</b>	<b>9223.41</b>	<b>7564.11</b>
15	Cumulative repayment of Normative loan at the end of the period	P=B+K	1,61,707.70	1,91,815.92	2,21,718.48	2,52,248.92	2,82,617.63	3,12,923.21


  
(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (व्यावसायिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Calculation of Interest on Working Capital

Name of the Company : NTPC Limited

Name of the Power Station : Rihand Super Thermal Power Station Stage-III

(Amount in Rs Lakh)

S. No.	Particulars	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7	8
1	Cost of Coal/Lignite	11,034.21	10454.48	10537.56	10501.35	11018.11	11474.23
2	Cost of Main Secondary Fuel Oil	330.80	366.50	328.70	281.27	359.90	511.42
3	Fuel Cost						
4	Liquid Fuel Stock						
5	O & M Expenses	1,738.69	2134.18	2257.74	2254.59	2398.94	2778.38
6	Maintenance Spares	4,172.86	5122.03	5418.59	5411.01	5757.45	6668.08
7	Receivables	33,344.88	25304.27	25244.60	24915.41	25635.30	26763.15
8	Total Working Capital	50621.45	43381.45	43787.19	43363.63	45169.70	48195.21
9	Rate of Interest	13.50%	12.05%	11.25%	10.50%	10.50%	12.00%
10	Interest on Working Capital	6833.90	5227.46	4926.06	4553.18	4742.82	5783.43

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)





Statement of Liability Flow

Part B  
Form-B

Name of the Company : NTPC Limited		Name of the Power Station : Noida Super Thermal Power Station Stage		Amount in Rs						
Sr. No	Name of the Party	Name of the work	Year of creation of liability (capitalised a Gross Asset)	Liability in additional captionation for 2021 as per Annexure III return 2	Contractors/DRP updation	Discharge during the year 2020-21	Discharge during the year 2020-21	Discharge during the year 2020-21	Uncharged liability relating to 08.31.2021	Uncharged liability relating to 08.31.2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
For assets eligible for normal rule (A)						-By payment	-By payment	Total		
1	ISIL NEW DELHI	Oil pipeline	2013-14							100000000.00
2	ISIL NEW DELHI	Oil pipeline	2013-14							
3	ISIL NEW DELHI	Oil pipeline	2013-14							
4	ISIL NEW DELHI	Oil pipeline	2013-14							
5	ISIL NEW DELHI	Oil pipeline	2013-14							
6	ISIL NEW DELHI	Oil pipeline	2013-14							
7	ISIL NEW DELHI	Oil pipeline	2013-14							
8	ISIL NEW DELHI	Oil pipeline	2013-14							
9	ISIL NEW DELHI	Oil pipeline	2013-14							
10	ISIL NEW DELHI	Oil pipeline	2013-14							
11	ISIL NEW DELHI	Oil pipeline	2013-14							
12	ISIL NEW DELHI	Oil pipeline	2013-14							
13	ISIL NEW DELHI	Oil pipeline	2013-14							
14	ISIL NEW DELHI	Oil pipeline	2013-14							
15	ISIL NEW DELHI	Oil pipeline	2013-14							
16	MAHL CONSTRUCTIONS	MCC/LABOUR CHIL WORKS FOR STABULARS INSIDE PLANT BOUNDARY	2013-14						2,17,747.00	2,17,747.00
17	Abhay Enterprises	Strengthening of MGR road from village street to Ganyan	2013-14						4,15,100.00	4,15,100.00
18	SACHIN INFRASTRUCTURE	Direction of East North & West of Plant drainage and installation of	2013-14		12,46,736.00			12,46,736.00	12,46,736.00	12,46,736.00
19	MAHJ CONSTRUCTION	CONCRETE WORKS AT TOWER	2013-14						5,54,480.00	5,54,480.00
20	A H VERMA	CONSTRUCTION OF TIE BUILDING AT STABULARS	2014-15		8,81,484.00			8,81,484.00		
21	ARNO TECHNOLOGIES PVT LTD	Procurement of Portable Sounding Machine for CHP, Stage 1	2014-15					3,93,184.00		
22	ARNO TECHNOLOGIES PVT LTD	Procurement of 1000 Items for Portable Sounding Machine for CHP, Stage 1	2014-15							
23	DAR-ME SYSTEM PVT LTD	RFID based Automatic Vehicle Identification and Access Control System	2014-15							
24	DR NIDA INDUSTRIAL PVT LTD	Procurement of One Point Magnetic Induction Type 5000 KILOGRAMS OF LAMP ROAD FROM SUPPLY DATE TO MGR PATROL LANE ROAD	2014-15						81,500.00	81,500.00
25	MAHJ CONSTRUCTION	CONSTRUCTION OF TIE BUILDING AT STABULARS	2014-15		10,000.00			10,000.00		
26	A H VERMA	CONSTRUCTION OF TIE BUILDING AT STABULARS	2014-15		40,000.00			40,000.00		
27	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					3,18,100.00		3,18,100.00
28	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
29	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,30,480.00		1,30,480.00
30	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					3,00,242.00		3,00,242.00
31	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16		24,50,440.00			24,50,440.00		
32	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					8,81,484.00		8,81,484.00
33	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
34	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
35	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
36	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
37	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
38	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
39	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
40	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
41	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
42	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
43	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
44	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
45	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
46	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
47	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
48	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
49	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
50	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
51	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
52	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
53	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
54	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
55	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
56	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
57	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
58	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00
59	UNILITH POWERTECH LT	Management of CHP Controlling Activities (Stage 1)	2015-16					1,67,254.00		1,67,254.00

परिमल पीयूष/PARIMAL PIYUSH  
अपर मॅनेजर-एवर (ऑडिटिंग)  
Addl. General Manager (Commercial)  
ए ए टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

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Statement of Liabilities Page

Name of the Company		NTPC Limited		Amount in Rs.						
Name of the Power Station		Bhand Super Thermal Power Station Stage								
Sl. No.	Name of the Party	Name of the work	Year of creation of liability captured in Charge Sheet	Liability in additional explanation for 2021-22 as per annexure 1B column 6	Contracted E&M updated	Discharge during the year 2021-22		Discharge during the year 2021-22	Discharge during the year 2021-22	Un-discharged liability relating to 01.01.03.2022
						By amount	By receipt			
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)
<b>For assets eligible for normal fuel use</b>										
1	WEL NEW TECH	SG packages	2012-14							
2	WEL NEW TECH	TG Packages	2012-14							
3	WELCOAS ENGINEERS	CG System	2012-14			30,30,30,77	50,81,88,67	85,94,88,32		34,12,41,314.34
4	WORLDLY SHARAF FOOD	PT plant	2012-14							4.00
5	TECHNO SYSTEMS LTD	Accessories	2012-14							
6	FLUORIN Power Ltd	CCP	2012-14							15,17,30,288.00
7	WELCOAS ENGINEERS	SG Packages	2012-14	2,90,00,000.00				2,90,00,000.00		1,97,24,888.00
8	WELCOAS ENGINEERS	SG Packages	2012-14	19,219.00				19,219.00		49,82,812.00
9	WELCOAS ENGINEERS	SG Packages	2012-14	25,14,948.00			4,81,719.00	28,11,259.00		
10	WELCOAS ENGINEERS LTD	Power Transformers	2012-14							
11	WELCOAS ENGINEERS LTD	LT Packages	2012-14							18,88,210.00
12	WELCOAS ENGINEERS LTD	LT Packages	2012-14							19,19,748.00
13	WELCOAS ENGINEERS LTD	LT Packages	2012-14							82,60,178.00
14	WELCOAS ENGINEERS LTD	LT Packages	2012-14							7,48,288.00
15	NATIONAL G.S. ENGINEER	Contractors	2012-14			12,15,876.00		12,15,876.00	14,25,11,076.00	
16	RAVAL CONSTRUCTIONS	MISCELLANEOUS CIVIL WORKS FOR STAGE-1 INSIDE PLANT BOUNDARY	2012-14							8,17,787.00
17	Abney Enterprises	Strengthening of MGR road from village Sreeth to Geyath	2012-14							6,15,188.00
18	SAGAL INFRASTRUCTURE	Division of Cost Estimation & routing of Plant drainage and installation of	2012-14			11,26,738.00		11,26,738.00		
19	WELCOAS ENGINEERS LTD	CONSTRUCTION OF 11KV CABLE IN TUNNEL	2012-14							5,64,486.00
20	A.K.VERMA	CONSTRUCTION OF 11KV BUILDING AT BURNED	2014-15							
21	ABRO TECHNOLOGIES PVT LTD	Procurement of Protective Relaying Hardware for GMR Station	2016-15							
22	ABRO TECHNOLOGIES PVT LTD	Procurement of Sida Items for Protective Relaying Hardware for GMR Station	2016-15							
23	DAFINE SYSTEM PVT LTD	RFD based Automatic Vehicle Identification and Access Control System	2016-15							
24	SHRINIA INDUSTRIAL PVT LTD	Procurement of Day Post (Metal) (Other Metal Type)	2016-15			81,899.00		81,899.00		
25	WELCOAS ENGINEERS LTD	STRENGTHENING OF 11KV ROAD FROM DULPUR GATE TO MGR PATROL ROAD ROAD	2016-15							
26	A.K.VERMA	CONSTRUCTION OF 11KV BUILDING AT BURNED	2016-15							
27	WELCOAS ENGINEERS LTD	CG System	2015-16							3,86,182.00
28	FLUORIN Power Ltd	CCP	2015-16							1,67,254.00
29	UTILITY POWERTECH LT	Management of CRP Commissioning Activities Stage II	2015-16							1,67,254.00
30	WELCOAS ENGINEERS LTD	SG Packages	2015-16							1,20,280.00
31	WELCOAS ENGINEERS LTD	SG Packages	2015-16							1,20,280.00
32	WELCOAS ENGINEERS LTD	SG Packages	2015-16							1,20,280.00
33	WELCOAS ENGINEERS LTD	SG Packages	2015-16			3,26,947.00		3,26,947.00		3,26,947.00
34	WELCOAS ENGINEERS LTD	CG System	2015-16							8,88,888.00
35	RAM MOHAN	ALUMINATION OF 22KV BRICK BLDG 3 & 4 AND ITS SUBSTATION	2015-16							1,64,767.00
36	Abney Enterprises	Strengthening of MGR road from village Sreeth to Geyath	2015-16							53,488.00
37	ANM TRADING CO	PROCUREMENT OF TUBE BENDING MACHINE	2015-16							
38	CSPL COMPL/WORKS PVT	Procurement of Poles of 11KV Packages	2015-16			85,008.00		85,008.00		28,325.00
39	SIEMENS LTD	Supply of CRP Relay Panels for Unit 4	2015-16							
40	REPROGRAPHY INDIA	Procurement of 40 copy Color Scanner	2015-16							
41	AMBAI T&E India Ltd	40KV Circuit Breaker, CT and 40KV CVT for Substation ST-11	2015-16							
42	MATHILY BHANAN CORP	Development of Area for Installation of Two New Ash Silos	2015-16							1,52,800.00
43	MATHILY BHANAN CORP	CONSTRUCTION OF MULTIPURPOSE HALL AT BANGALU (BURN) CLUB & MODIFICATION OF AUDITORS ROOM IN ADM BUILDING	2015-16							
44	RAMAN CONSTRUCTION	Costs of Vehicle Stands & Signs Outside	2015-16							
45	PARAN CONSTRUCTION	Crane Tracks & Type & Mass Exp.	2015-16							
46	WAGHYA CONSTRUCTION	11KV Development Power Transformer Cable Trenching (work with accessories)	2015-16							
47	DIRECTOR CSOS -UP JA	Subsidence Land L&D 21-80 Year	2015-16							1,48,08,288.00
48	DAKAT ENTERPRISES	Procurement of Computerized Universal Testing Machine, Capacity 800kN	2015-16			1,81,808.00		1,81,808.00		
49	ADA TECHNOLOGIES	Procurement of Fixed 80W Solar STN Transceiver Radio Set	2015-16							
50	SGS TECHNOLOGY SERV	Procurement of 12 LAN Switch	2015-16							
51	DALA PRECISION BRASS	Procurement of Vibration Isolating Springs	2015-16			2,47,500.00		2,47,500.00		
52	JACKSON FOUNDRY (P) LTD	Supply of 40KV Installation of 800 kVA CT	2015-16							
53	WELCOAS ENGINEERS LTD	SG Packages	2015-17							70,74,028.00
54	WELCOAS ENGINEERS LTD	TG Packages	2015-17							30,82,884.34
55	WELCOAS ENGINEERS LTD	SG Packages	2015-17							44,70,000.00
56	FLUORIN Power Ltd	CCP	2015-17							15,17,30,288.00
57	WELCOAS ENGINEERS LTD	CG System	2015-17							
58	WELCOAS ENGINEERS LTD	CG System	2015-17			4,12,300.00		4,12,300.00		
59	WELCOAS ENGINEERS LTD	CG System	2015-17							8,88,888.00

परिमल पीयूष/PARIMAL PIYUSH  
 अपर नरेश्वर (नरेश्वर)  
 Addl. General Manager (Commercial)  
 एन टी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement of Liability Page

Part I  
Form-B

Name of the Company / Name of the Power Station		NTPC Limited Rajind Super Thermal Power Station Stage		Amount in Rs						
Sl. No.	Name of the Party	Name of the work	Year of creation of liability (as per Bill)	Undischarged liability relating to 30.03.2023	Liability in additional liquidation for 2023-24 per schedule B (Annex I)	Conclusive RTI opinion	Discharge during the year 2022-23	Discharge during the year 2023-24	Discharge during the year 2022-23	Undischarged liability relating to 30.03.2023
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)
<b>For Assets available for special debt (A)</b>										
1	SHRI. NEW DELHI	Oil handling	2013-14	34,12,03,214.34						
2	SHRI. NEW DELHI	T/D Facilities	2013-15	15,72,48,727.22			51,36,228.08	51,36,228.08	51,36,228.08	34,07,55,114.08
3	SHRI. NEW DELHI	Oil System	2013-14	6,39,403.18			6,39,403.18	6,39,403.18	6,39,403.18	13,72,96,507.28
4	MICROTECH PVT LTD	Oil plant	2013-14	5.00						5.00
5	INDIAPOLYMER LTD	Oil handling	2013-14	19,07,00,238.24						
6	PLUMBO POLYMER	CIP	2013-14	12,37,54,388.00						13,17,14,286.00
7	SHRI. NEW DELHI	Oil Refining Facilities	2013-14	49,49,572.00			3,46,80,809.00	3,46,80,809.00	3,46,80,809.00	304,184,286.00
8	U. OYO. SOLUTIONS PVT	Oil Handling	2013-14	-						49,02,572.00
9	COGNITION OPERATOR LTD	Power Transformer	2013-14	-						-
10	INDIA INDUSTRIAL	LT Facilities	2013-14	18,40,232.30						-
11	INDIA INDUSTRIAL	LT Facilities	2013-14	42,24,136.30						-
12	INDIA INDUSTRIAL	LT Facilities	2013-14	13,80,113.00						15,80,218.00
13	INDIA INDUSTRIAL	Oil	2013-14	1,49,268.71			82,00,178.90	82,00,178.90	82,00,178.90	57,90,748.00
14	INDIA INDUSTRIAL	Water plant installation	2013-14	-			7,22,850.00	7,22,850.00	7,22,850.00	59,26,000.00
15	NATIONAL INFRASTRUCTURE	Control Room	2013-14	14,05,11,872.88						14,05,11,872.88
16	PARUL CONSTRUCTIONS	MISCELLANEOUS CIVIL WORKS FOR STAGE-III PHASE PLANT BOUNDARY	2013-14	3,17,747.00						3,17,747.00
17	Asky Enterprises	Strengthening of MGR road from village Sarai to Gopalpur	2013-14	6,15,100.00						6,15,100.00
18	SAGHEL INFRASTRUCTURE	Construction of Coal Trestle & reworking of Road storage and installation of CONCRETE ROAD CRANES AT TRESTLE	2013-14	5,64,486.00						5,64,486.00
19	A.K. VERMA	CONSTRUCTION OF ITI BUILDING AT BANGALUR	2014-15	-						5,84,486.00
20	ABRO TECHNOLOGIES PVT LTD	Procurement of Portable Grinding Machine for CPP, Stage-I	2014-15	-						-
21	ABRO TECHNOLOGIES PVT LTD	Procurement of Grits Sizer for Portable Grinding Machine for CPP, Stage-I	2014-15	-						-
22	CHRYSE SYSTEM PVT LTD	RFID based Automatic Vehicle Identification and Access Control System	2014-15	-						-
23	OE INDIA INDUSTRIAL PVT LTD	Procurement of Open Point Water Cooling Tower	2014-15	-						-
24	VIJAY CONSTRUCTION	CONSTRUCTION OF 1.50 KM ROAD FROM SUPPLY GATE TO MGR PATROL LANE ROAD	2014-15	-						-
25	A.K. VERMA	CONSTRUCTION OF ITI BUILDING AT BANGALUR	2014-15	-						-
26	INDIA INDUSTRIAL	CIP System	2014-15	-						-
27	PLUMBO POLYMER	CIP	2014-15	3,38,192.00						3,38,192.00
28	UTILITY POWERTECH LT	Management of CIP Commissioning Activities	2014-15	1,07,254.00						1,07,254.00
29	SHRI. NEW DELHI	Oil Refining Facilities	2014-15	1,30,490.00						1,30,490.00
30	SHRI. NEW DELHI	Oil Refining Facilities	2014-15	3,00,000.00						3,00,000.00
31	LUCHY INFRASTRUCTURE	Oil Handling	2014-15	2,00,000.00						2,00,000.00
32	INDIA INDUSTRIAL	Oil Handling	2014-15	4,99,999.99			4,99,999.99	4,99,999.99	4,99,999.99	4,99,999.99
33	RAM BOWAR	AUGMENTATION OF ASH BRICK ROAD 3 & 4 AND ITS SUBSIDIARY AREA	2015-16	1,64,701.00			1,64,701.00	1,64,701.00	1,64,701.00	-
34	Rony Enterprises	Strengthening of MGR road from village Sarai to Gopalpur	2015-16	61,869.00						61,869.00
35	JAY TRADING CO	PROCUREMENT OF TUBES BENDING MACHINE	2015-16	-						-
36	CSPL COMPUTERS PVT	Procurement of Portable Vehicle Database	2015-16	38,525.00						38,525.00
37	BEMONS LTD	Supply of CPP Relay Panels for Line 4 & 5	2015-16	-						38,525.00
38	SCORCON PVTCS INDIA	Procurement of RO Water Control System	2015-16	-						-
39	AMON TSD India Ltd	ASBY Circuit Breaker, CT & CB for Substation (S.S.)	2015-16	-						-
40	WITHELY SHARAN CONG	Development of Area for installation of Two New Ash Sizer Machine	2015-16	1,52,889.00			1,52,889.00	1,52,889.00	1,52,889.00	-
41	WITHELY SHARAN CONG	CONSTRUCTION OF MULTIPURPOSE HALL AT BANGALUR CLUB & MODIFICATION OF AUDITORS ROOM IN ASH BUILDING	2015-16	-						-
42	RAWAN CONSTRUCTION	Construction of Vehicle Stands & Road Over a	2015-16	-						-
43	RAWAN CONSTRUCTION	Construction of Road & Type & Size	2015-16	-						-
44	WADHA CONSTRUCTION	11KV Construction Power Distribution Cable Rerouting	2015-16	-						-
45	DIRECTOR CMDR-UPA	Subsidence Land Use 21-10-11	2015-16	1,45,90,286.56			1,15,80,434.75	33,20,854.81	1,48,00,289.56	-
46	SHRI ENTERPRISES	Procurement of Computerized Universal Testing Machine Capacity 500KN	2015-16	-						-
47	AGA TECHNOLOGIES	Procurement of Feed Water STN Transformer Pads 5M	2015-16	-						-
48	SHRI TECHNOLOGY SOVM	Procurement of LT LAR Panels	2015-16	-						-
49	GALA PRECISION ENGR	Procurement of 1000 Capacitor	2015-16	-						-
50	JAGDEEP FOUNDRY (PVT)	Supply of 1000 Capacitor of 500 PLATES	2015-16	-						-
51	SHRI. NEW DELHI	Oil Handling	2015-17	85,00,000.00						85,00,000.00
52	SHRI. NEW DELHI	Oil Handling	2015-17	82,00,000.00						82,00,000.00
53	INDIAPOLYMER LTD	Oil Handling	2015-17	44,20,000.00						44,20,000.00
54	PLUMBO POLYMER	CIP	2015-17	15,37,750.00						15,37,750.00
55	SHRI. NEW DELHI	Oil Handling	2015-17	-						-
56	INDIAPOLYMER LTD	Oil Handling	2015-17	-						-
57	INDIAPOLYMER LTD	Power Transformer	2015-17	4,38,200.00						4,38,200.00
										8,80,328.00

परिमल पीयूष / PARIMAL PIYUSH  
 Addl. General Manager (Commercial)  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)



Statement of Liabilities Due

Part  
Form-B

Name of the Company Name of the Power Station		NTPC Limited Rohat Super Thermal Power Station Stage		Amount in Rs.						
Sr. No.	Name of the Party	Name of the work	Year of creation of liability captured in Gross Book	Uncharged liabilities relating to 30.03.2024	Liability in additional capitalisation for 2023-24 as per annexure 8, clause B	Contractors ERV Liability	Discharge during the year 2023-24	Discharge during the year 2023-24	Discharge during the year 2023-24	Uncharged liabilities relating to 30.03.2024
				(a)	(b)	(c)	(d)	(e)	(f)	(g)
				By payment	By reversal	Total				
<b>For assets eligible for normal Book Up</b>										
1	SHRI. NEW DELHI	DC Substation	2013-14	34,12,51,114.34	-	-	32,40,13,661.85	1,72,34,217.32	3,68,81,211.32	20,21,83,138.14
2	SHRI. NEW DELHI	TD Substation	2013-14	12,72,86,322.28	-	-	1,24,116.41	-	-	12,74,00,438.69
3	SHRI. NEW DELHI	DCV System	2013-14	0.00	-	-	-	-	-	0.00
4	SHRI. NEW DELHI	DCV plant	2013-14	-	-	-	-	-	-	-
5	SHRI. NEW DELHI	DCV System	2013-14	13,17,18,229.00	-	-	-	-	-	13,17,18,229.00
6	SHRI. NEW DELHI	DCV	2013-14	18,41,94,386.00	-	-	-	-	-	18,41,94,386.00
7	SHRI. NEW DELHI	DCV Substation	2013-14	40,00,512.00	-	-	-	-	-	40,00,512.00
8	SHRI. NEW DELHI	DCV Substation	2013-14	-	-	-	-	-	-	-
9	SHRI. NEW DELHI	DCV Substation	2013-14	-	-	-	-	-	-	-
10	SHRI. NEW DELHI	DCV Substation	2013-14	15,60,252.00	-	-	-	-	-	15,60,252.00
11	SHRI. NEW DELHI	DCV Substation	2013-14	14,15,198.00	-	-	-	-	-	14,15,198.00
12	SHRI. NEW DELHI	DCV Substation	2013-14	-	-	-	-	-	-	-
13	SHRI. NEW DELHI	DCV	2013-14	15,209.31	-	-	-	-	-	15,209.31
14	SHRI. NEW DELHI	DCV Substation	2013-14	-	-	-	-	-	-	-
15	SHRI. NEW DELHI	DCV Substation	2013-14	14,86,11,873.08	-	-	1,20,87,888.36	1,20,87,888.36	15,27,00,761.44	15,27,00,761.44
16	RAVIL CONSTRUCTION	RECONSTRUCTION CIVIL WORKS FOR STAGE-1 MGR DE PLANT BOUNDARY	2013-14	2,17,147.00	-	-	-	-	-	2,17,147.00
17	Other Expenses	Strengthening of MGR road from village Samba to Gansari	2013-14	8,15,160.00	-	-	-	-	-	8,15,160.00
18	RAVIL CONSTRUCTION	Division of Plant Storage and Stacking of COAL	2013-14	-	-	-	-	-	-	-
19	RAVIL CONSTRUCTION	CONSTRUCTION OF ROAD CROSSING OF 100HP CONSTRUCTION OF 110KV BUILDING AT BOUNDARY	2013-14	3,04,480.00	-	-	-	-	-	3,04,480.00
20	A. K. VERMA	Procurement of Portable Blasting Machine for CSC, Bhand	2014-15	-	-	-	-	-	-	-
21	ABRO TECHNOLOGIES PVT LTD	Procurement of Samba Series for Portable Blasting Machine for CSC	2014-15	-	-	-	-	-	-	-
22	ABRO TECHNOLOGIES PVT LTD	Procurement of Samba Series for Portable Blasting Machine for CSC	2014-15	-	-	-	-	-	-	-
23	DAHIND SYSTEM PVT LTD	110KV based Automatic Voltage Controller and SCADA control system	2014-15	-	-	-	-	-	-	-
24	GE INDIA INDUSTRIAL PVT LTD	Procurement of Gas Plant Meter/Control Meter, Type	2014-15	-	-	-	-	-	-	-
25	RAVIL CONSTRUCTION	RECONSTRUCTION OF 110KV ROAD FROM B. S. PURI GATE TO MGR PATROL LINE ROAD	2014-15	-	-	-	-	-	-	-
26	A. K. VERMA	CONSTRUCTION OF 110KV BUILDING AT BOUNDARY	2014-15	-	-	-	-	-	-	-
27	SHRI. NEW DELHI	DCV Substation	2013-14	-	-	-	-	-	-	-
28	SHRI. NEW DELHI	DCV	2013-14	3,86,100.00	-	-	-	-	-	3,86,100.00
29	UTILITY POWERTECH LT	Management of Gas Compressing Activities	2014-15	1,87,254.00	-	-	-	-	-	1,87,254.00
30	SHRI. NEW DELHI	DCV Substation	2013-14	1,30,480.00	-	-	-	-	-	1,30,480.00
31	SHRI. NEW DELHI	DCV Substation	2013-14	1,30,480.00	-	-	-	-	-	1,30,480.00
32	SHRI. NEW DELHI	DCV Substation	2013-14	1,30,480.00	-	-	-	-	-	1,30,480.00
33	SHRI. NEW DELHI	DCV Substation	2013-14	1,30,480.00	-	-	-	-	-	1,30,480.00
34	SHRI. NEW DELHI	DCV Substation	2013-14	-	-	-	-	-	-	-
35	RAMESHVAR	ALUMINATION OF ASH BRICK SHED 3 & 4 AND ITS SUBSEQUENT AREA	2015-16	-	-	-	-	-	-	-
36	Atari Enterprises	Strengthening of MGR road from village Samba to Gansari	2015-16	63,480.00	-	-	-	-	-	63,480.00
37	JRN TRADING CO	PROCUREMENT OF TURBO GENERATOR MACHINE	2015-16	-	-	-	-	-	-	-
38	CSPL COMPUTERS PVT	Procurement of Plates (Carbon Paper)	2015-16	28,829.08	-	-	-	-	-	28,829.08
39	SIEMENS LTD	Supply of 110KV Panels, 110KV GIS	2015-16	-	-	-	-	-	-	-
40	REPROGRAPHICS INDIA	Procurement of 110KV Color Printer	2015-16	-	-	-	-	-	-	-
41	Alston TMD India Ltd	400V Circuit Breaker, CT 40A/5, CVT for Switchyard 110KV	2015-16	-	-	-	-	-	-	-
42	MATHILY SHARAN CONS	Development of Area for installation of Two New Ash Bank Machine	2015-16	-	-	-	-	-	-	-
43	MATHILY SHARAN CONS	CONSTRUCTION OF MULTIPURPOSE HALL AT BANSMAN URBAN CLUB & RELOCATION OF AUDITORS ROOM IN 40M BUILDING	2015-16	-	-	-	-	-	-	-
44	PAVAY CONSTRUCTION	Constn. of Vehicle Stands & Gate	2015-16	-	-	-	-	-	-	-
45	PARAN CONSTRUCTION	Constn. of 110KV Type B Meter Cabin	2015-16	-	-	-	-	-	-	-
46	VINDHYA CONSTRUCTION	110KV Constn. of Power Transformer Cable Shelving with accessories	2015-16	-	-	-	-	-	-	-
47	DIRECTOR CHIEF-UP-IA	Submersible Lead Line 20-30 Tonn	2015-16	-	-	-	-	-	-	-
48	EMKAY ENTERPRISES	Procurement of Comprehensive Universal Testing Machine, Capacity 500KN	2015-16	-	-	-	-	-	-	-
49	ACA TECHNOLOGIES	Procurement of Fixed Wireless STN Transceiver (Radio Set)	2015-16	-	-	-	-	-	-	-
50	SYS TECHNOLOGY SERVIC	Procurement of 110KV GIS	2015-16	-	-	-	-	-	-	-
51	IGALA PRECISION ENGRS	Supply of 110KV GIS	2015-16	-	-	-	-	-	-	-
52	JAGDEEP FOUNDRY (REG)	Supply of 110KV GIS	2015-16	-	-	-	-	-	-	-
53	SHRI. NEW DELHI	DC Substation	2015-17	81,84,488.00	-	-	-	-	-	81,84,488.00
54	SHRI. NEW DELHI	TD Substation	2015-17	81,84,488.00	-	-	-	-	-	81,84,488.00
55	SHRI. NEW DELHI	DCV Substation	2015-17	44,70,000.00	-	-	-	-	-	44,70,000.00
56	SHRI. NEW DELHI	DCV Substation	2015-17	18,15,254.00	-	-	-	-	-	18,15,254.00
57	SHRI. NEW DELHI	DCV Substation	2015-17	-	-	-	-	-	-	-
58	SHRI. NEW DELHI	DCV Substation	2015-17	-	-	-	-	-	-	-
59	SHRI. NEW DELHI	DCV Substation	2015-17	8,88,900.00	-	-	-	-	-	8,88,900.00

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Statement of Liability Due

Name of the Company/ Name of the Power Station		NTPC Ltd./for Rajind Expt Thermal Power Station Stage-II		Amount in Rs.						
Sr. No.	Name of the Party	Name of the work	Year of creation of liability (registered in Cross Book)	Undischarged liabilities relating to GE 21 03 2019	liability in addition/retention for 2019-20 as per annexure B attached in 5	Correction DTV updation	Discharge during the year 2019-20	Discharge during the year 2019-20	Discharge during the year 2019-20	Undischarged liabilities relating to GE 21 03 2019
							By payment	In arrears	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<b>For assets eligible for some of Rail I&amp;E</b>										
01	INDIUM ENGINEERING CO	Elect Exp	2019-17	8,18,806	-	-	-	-	-	8,18,806
02	SHRI EXHIBITIONS&C	Sign plate replacement	2019-17	2,62,18,746	-	-	-	-	-	2,62,18,746
03	INDIUM ENGINEERING CO	Coaling work	2019-17	14,75,080	-	-	-	-	-	14,75,080
03	PLUM WORKS	MAINTENANCE OF ASH SHED 3 & 4 AND ITS SUBSTRUCTURE ASQA	2019-17	1,40,390	-	-	-	-	-	1,40,390
04	Mony Enterprises	Strengthening of MGR wall Fire village Street to bridge	2019-17	1,48,90,100	-	-	-	-	-	1,48,90,100
04	VJAY CONSTRUCTION	CIVIL WORKS FOR SEPARATION OF DRAINAGE FOR 2010 DISCHARGE AT STPC BUNNIA	2019-17	4,77,804	-	-	1,13,360.00	-	1,13,360.00	3,64,444
06	VJAY CONSTRUCTION	STRENGTHENING OF LINK ROAD FROM B.PUR GATE TO MGR PATROLLING ROAD	2019-17	4,29,813	-	-	4,29,813.00	-	4,29,813.00	-
07	CBPL COMPUTERS PVT	Procurement of Multimedia Package	2019-17	1,78,384	-	-	-	-	-	1,78,384
08	A.K. VERMA	CONSTRUCTION OF ITI BUILDING AT BHAND	2019-17	19,11,000	-	-	-	-	-	19,11,000
09	A.K. VERMA	CONSTRUCTION OF ROW RESIDENTIAL BUILDINGS PACKAGE 8	2019-17	47,88,308	-	-	8,76,425.00	-	8,76,425.00	39,11,883
10	A.K. VERMA	CONSTRUCTION OF ROW RESIDENTIAL BUILDINGS PACKAGE 1	2019-17	28,88,891	-	-	8,77,313.00	-	8,77,313.00	20,11,578
11	CHALUJI BROTHERS CONSTRUCTION	DRILLING OF ANCHOR BOLTS FOR INSTALLATION OF 960 PLATES IN FABRICATION SHOP 1 & 2 HEAVY MACHINE SHOP FLOOR IN PLANT AREA	2019-17	31,225	-	-	31,225.11	-	31,225.11	-
12	RS & RC ELECTRICALS	Laying of 13KV cable for BT 5	2019-17	12,01,211	-	-	-	-	-	12,01,211
13	D.K. SHYAM	CONSTRUCTION OF PREDIGESTALS FOR LAYING OF 13KV CABLES LINE	2019-17	3,91,885	-	-	-	-	-	3,91,885
14	RAMAN CONSTRUCTION	Cont. Stages B Type & New Gates	2019-17	72,244	-	-	-	-	-	72,244
15	HITESH AUDIO SYSTEMS PVT LTD	PA CONFERENCE SYSTEM	2019-17	74,723	-	-	74,723.00	-	74,723.00	-
16	UNIK HEALTH CARE PVT LTD	LAMOUR TABLES BIRTHING ROOM	2019-17	10,700	-	-	10,700.00	-	10,700.00	-
17	RITES LTD	FIG FOR RAILWAY SIGNAL AND SAT SYSTEM ALIMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR BHAND STPC STAGE II	2019-17	97,46,428	-	-	-	-	-	97,46,428
18	RITES LTD	RAILWAY SIGNAL AND SAT SYSTEM ALIMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR BHAND STPC STAGE II (2 x 500 MW)	2019-17	4,53,73,864	-	-	-	-	-	4,53,73,864
19	RITES LTD	RAILWAY SIGNAL AND SAT SYSTEM ALIMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR BHAND STPC STAGE II (2 x 808 MW)	2019-17	6,34,572	-	-	-	-	-	6,34,572
05	USHA INTERNATIONAL LTD	PAPE COILING 130MM SWEEP	2019-17	89,800	-	-	89,800.00	-	89,800.00	89,800
01	STANLUX INDUSTRIES LTD	1 CEMENT HYDRAULIC MOTOR	2019-17	1,12,000	-	-	1,12,000.00	-	1,12,000.00	-
02	IDEAL ASSOCIATES	Construction of Storage shed in Central Area	2019-17	3,45,504	-	-	-	-	-	3,45,504
03	IDEAL ASSOCIATES	CONTR WORK FOR RCC water supply line	2019-17	2,98,804	-	-	-	-	-	2,98,804
04	IDEAL ASSOCIATES	Construction work of 1000000	2019-17	9,72,815	-	-	-	-	-	9,72,815
05	AKSHAY INDUSTRIAL CORPORATION LTD	Procurement of Multiple Equipment	2019-17	1,48,830	-	-	1,48,830.00	-	1,48,830.00	-
06	UNIQUE INDUSTRIES, HA	Supply, Installation & Commissioning of EDT Crane for 9000 Tonne	2019-17	4,49,430	-	-	-	-	-	4,49,430
07	INDORE COMMUNICATION AND	CONSTRUCTION OF WIRELESS COMMUNICATION SYSTEM	2019-17	1,28,000	-	-	-	-	-	1,28,000
08	PANWAR ENTERPRISES	Demolition of 500 Road	2019-17	2,35,337	-	-	-	-	-	2,35,337
09	PANWAR ENTERPRISES	CONSTRUCTION OF WBM ROAD NEAR KARALI, SASANTURKHAM AND DEORA VILLAGE TO CONNECT UNAUTHORISED LEVEL CROSSING WITH AUTHORIZED LEVEL CROSSING	2019-17	7,17,241	-	-	-	-	-	7,17,241
10	PANWAR ENTERPRISES	CONSTRUCTION OF BALLASTLESS TRACK & BRIDGE CIVIL WORKS IN PLANT AREA	2019-17	4,32,809	-	-	-	-	-	4,32,809
01	INDIFF EMPLOYEES COOPERATIVE SOCIETY	DECKING 20.75	2019-17	10,144	-	-	10,144.00	-	10,144.00	-
02	INDIFF EMPLOYEES COOPERATIVE SOCIETY	Fired Oil Drive 2 TB	2019-17	7,308	-	-	-	-	-	7,308
03	Shant Heavy Equip	ABOITSOV Switchgear Electric Package for 13KV STPC (Stage II)	2019-17	2,25,33,207	-	-	-	-	-	2,25,33,207
04	STAN (P&C) COMMUNICATION PVT LTD	STATION P&C: PROTECTIVE RELAYS, LOGIC, ADDRESS, TESTING	2019-17	89,800	-	-	89,800.00	-	89,800.00	-
05	Shant Heavy Equip	13KV Switchgear	2019-17	2,18,16,412	-	-	-	-	-	2,18,16,412
06	SHANT & SOOP COMPANY	WATER TREATMENT STAGE II	2019-17	9,87,852	-	-	9,87,852.00	-	9,87,852.00	-

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (सि.मि.वि.सं.)  
Addl. General Manager (Control & M)  
एन टी सी लीमिटेड/NTPC LIMITED  
EOC, A-8/A, Sector-24 Noida-201301 (U.P.)

Statement of Liabilities

Part I  
Form B

Name of the Company: NTPC Limited  
Name of the Power Station: Bhand Super Thermal Power Station stage

Sl No.	Name of the Party	Name of the work	Year of creation of liability captured in Regg Block	Liability in additional certification for 2020-21 as per annexure 1B column 2	Contractor ESI's provision	Amount in Rs.				
						Discharge during the year 2020-21	Discharge during the year 2019-21	Discharge during the year 2020-21	Undischarged liability relating to 01.03.2021	Undischarged liability relating to 31.03.2021
(1)	(2)	(3)	(4)			By payment	By interest	Total		
For assets eligible for normal Discharge										
50	PERI CONSULTANCY PVT	Dist. Est.	2016-17							1,05,00,000.00
51	RAMS BY INFRASTRUCTURE	Man. S&C Godown	2016-17						5,33,000.00	5,33,000.00
52	NATIONAL BUILDINGS	Load Shed	2016-17			1,04,17,800.00		1,04,17,800.00	1,78,48,111.85	1,78,48,111.85
53	RAMS Bhand	ALLOCATION OF AGH BRICK SHED 3 & 4 AND ITS SUBROUINGING ASGA	2016-17						14,18,092.00	14,18,092.00
54	Atay Construction	Strengthening of Motor road from Village Street to Ganyal	2016-17			17,62,588.00		17,62,588.00	1,23,77,567.00	1,23,77,567.00
55	KVAFV CONSTRUCTION	CIVIL WORKS FOR REPAIRATION OF DAMNS FOR ZERO DISCHARGE AT RICE ROAD	2016-17						3,64,607.08	3,64,607.08
56	KVAFV CONSTRUCTION	STRENGTHENING OF LEAK ROAD FROM MUPUR GATE TO MOTOR PATROL LANE ROAD	2016-17							
57	CSPL COMPUTERS PVT	Procurement of Networks Devices	2016-17						1,78,304.24	1,78,304.24
58	A K VERMA	CONSTRUCTION OF 15 BUS STOPS AT BHAND	2016-17			10,90,040.00		10,90,040.00	12,967.00	10,967.00
59	A K VERMA	CONSTRUCTION OF 108 RESIDENTIAL GUIDELINE PACKAGE 3	2016-17						30,91,981.00	30,91,981.00
60	A K VERMA	CONSTRUCTION OF 108 RESIDENTIAL GUIDELINE PACKAGE 1	2016-17						22,88,510.00	22,88,510.00
71	CHUGHAN BROTHERS CONSTRUCTION	GRADING OF ANCHOR BOLTS FOR INSTALLATION OF RED PLATES IN FABRICATION SHED. 1 & 2. HEAVY MACHINE SHOP FLOOR IN PLANT AREA	2016-17							
72	RS & RC ELECTRICALS	Laying of 11KV Cable to 11KV	2016-17						12,01,211.00	12,01,211.00
73	D A SINGH	CONSTRUCTION OF PODIUMS FOR LAYING OF WIRE (ST-1) ON LANE	2016-17			3,01,880.46		3,01,880.46		
74	PARAN CONSTRUCTION	Con. Stacks & Type & Mass Est.	2016-17			73,248.00		73,248.00		
75	HITECH AUDIO SYSTEMS PVT LTD	PA CONFERENCE SYSTEM	2016-17							
76	JANUK HEALTH CARE PVT LTD	LABOUR TARIFF BIRTHING BED	2016-17							
77	RITES LTD	FEE FOR RAILWAY SIGN AND SET SYSTEM AUGMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR BHAND STP, St. II	2016-17						37,45,409.19	37,45,409.19
78	RITES LTD	RAILWAY SIGN AND SET SYSTEM AUGMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR BHAND STP, STAGE-II (2 x 500 MW)	2016-17						453,73,884.44	453,73,884.44
79	RITES LTD	RAILWAY SIGN AND SET SYSTEM AUGMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR Bhand STP, STAGE-II (2 x 808 MW)	2016-17						6,34,972.00	6,34,972.00
80	USPA INTERNATIONAL LTD	PAV COILS, 100MM BORE	2016-17						8.00	8.00
81	STREAMLINE INDUSTRIES LTD	11KV HYDRAULIC MOTOR	2016-17							
82	IDEAL ASSOCIATES	Constr. of Storage shed in Diesel Shop	2016-17							
83	IDEAL ASSOCIATES	Constr. shed for MCC water collection	2016-17						2,40,004.00	2,40,004.00
84	IDEAL ASSOCIATES	Construction work of Shed	2016-17						2,35,824.00	2,35,824.00
85	RAHMAN INDUSTRIAL CORPORATION LTD	Procurement of Mopay Equipment	2016-17						8,72,514.71	8,72,514.71
86	UNION INDUSTRIAL RA	Recpt, Installation & Commissioning of DDT Crane 50 TONS, CR	2016-17						4,49,408.00	4,49,408.00
87	INDORE COMMUNICATION AND	MAN SUPPLYING SINGLE SERVICE LEASER	2016-17							
88	PARMAN ENTERPRISES	Construction of POC Shed	2016-17						1,28,000.00	1,28,000.00
89	INDMAN ENTERPRISES	CONSTRUCTION OF 750M ROAD NEAR KARATE, MANRATUGA WARD AND DEDRA VILLAGE TO CONNECT UNAUTHORIZED LEVEL CROSSING WITH AUTHORIZED LEVEL CROSSING	2016-17						7,17,261.00	7,17,261.00
90	PARMAN ENTERPRISES	CONSTRUCTION OF BALLASTLESS TRACK & MISC. CIVIL WORKS IN PLANT AREA	2016-17						4,22,800.00	4,22,800.00
91	RUSTO EMPLOYEES COOPERATIVE	GEYARD 26.7M	2016-17							
92	RUSTO EMPLOYEES COOPERATIVE	Head Desk One 2 TB	2016-17						7,508.00	7,508.00
93	Sheel Heavy Duct	4001320V Substation Extension Package for Bhand STP, Stage-I	2016-17			5,28,579.00	13,28,910.00	18,49,489.00	2,06,813.00	2,06,813.00
94	BYAR LINK COMMUNICATION PVT LTD	IP-CMCC MCC PSENER	2016-17							
95	Shafiq & Co Ltd	IP-CMCC ACCESS SYSTEM	2016-17							
96	SHRIVE & ROOF COMPANY	IP-CMCC ACCESS SYSTEM	2016-17						2,16,18,412.00	2,16,18,412.00
						3,25,330.00		3,25,330.00		

परिमल वीयूष/PARIMAL VIYUSH  
अपर महाप्रबन्धक (वणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Statement of Liabilities Book**

Name of the Company		NTPC Limited								Amount in Rs.	
Name of the Power Station		Rewari Super Thermal Power Station Stage									
Sl. No.	Name of the Party	Name of the Work	Year of creation of liability registered in Gross Book	Liability is additional registration for 2021-22 as per annexure B-column B	Contractor EMTI extension	Discharge during the year 2021-22	Discharge during the year 2021-22	Discharge during the year 2021-22	Discharge during the year 2021-22	Unsettled liabilities relating to 08/31/03/2022	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)	(xii)
<b>For assets eligible for general Book (A)</b>											
01	INTECH INFRASTRUCTURE PVT. LTD.	Elect EOP	2016-17								5,13,396.80
02	MANLEX INFRASTRUCTURE PVT. LTD.	Infrastructure	2015-17			1,79,40,000.00			1,79,40,000.00		14,25,000.00
03	MANICAL, N.J. DEVEDI	Construction	2015-17								1,40,358.00
04	RAM BHOWAN	AUGMENTATION OF ASH BRICK SHED 3 & 4 AND ITS SURROUNDING AREA	2016-17								1,20,77,887.00
05	Ashay Construction	Strengthening of MSH road from village Street to Ganyan	2016-17								3,64,087.00
06	WJAY CONSTRUCTION	CIVIL WORKS FOR SEPARATION OF DRAINAGE FOR ZERO DISCHARGE AT WJAY SHAND	2016-17								1,20,77,887.00
07	WJAY CONSTRUCTION	STRENGTHENING OF LPH ROAD FROM SUPPLY GATE TO MSH PATROLLING ROAD	2016-17								3,64,087.00
08	CGFL COMPUTERS PVT	Procurement of Multimedia Projector	2016-17								1,70,304.04
09	A.K. VERMA	CONSTRUCTION OF THE BUILDING AT SHAND	2016-17								12,857.00
10	A.K. VERMA	CONSTRUCTION OF NON RESIDENTIAL BUILDINGS	2016-17								32,01,681.00
11	A.K. VERMA	CONSTRUCTION OF NON RESIDENTIAL BUILDINGS	2016-17								32,69,516.00
12	CHAUHAN BROTHERS CONSTRUCTION	ERECTING OF ANCHOR BOLTS FOR INSTALLATION OF WED PLATES IN FABRICATION SHOP & E-2 HEAVY MACHINE SHOP FLOOR IN PLANT AREA	2016-17								-
13	RS & RC ELECTRICALS	Laying of 11KV cable for IET	2016-17								12,61,211.00
14	D.K. SHARMA	CONSTRUCTION OF PIPERIAL FOR LAYING OF ASBESTOS ROPE LINES	2016-17								-
15	PAWAN CONSTRUCTION	Cable, Straps & Type & New Gate	2016-17								-
16	HITCHAZERO SYSTEMS PVT LTD	PA CONFERENCE SYSTEM	2016-17								-
17	JANAK HEALTH CARE PVT LTD	LABOUR TABLE BIRTHING BED	2016-17								-
18	RYTES LTD	FEED FOR RAILWAY SIDING AND SET SYSTEM AUGMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR SHAND STPP, 2x3	2016-17			7,44,648.00	8,82,282.00	10,37,308.00			84,08,129.16
19	RYTES LTD	RAILWAY SIDING AND SET SYSTEM AUGMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR SHAND STPP, STAGE-01 (2 x 300 MW)	2016-17								400,73,884.44
20	RYTES LTD	RAILWAY SIDING AND SET SYSTEM AUGMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR SHAND STPP, STAGE-02 (2 x 300 MW)	2016-17								6,34,571.50
21	UBA INTERNATIONAL LTD	FAN COIL UNIT, 1200MM	2016-17								0.00
22	STEAMLINE INDUSTRIES LTD	HYDRAULIC MOTOR	2016-17								-
23	IDEAL ASSOCIATES	Construction of Storage shed in Central Store	2016-17								2,48,504.00
24	IDEAL ASSOCIATES	Construction of shed for MCC cable installation	2016-17								2,08,500.00
25	IDEAL ASSOCIATES	Construction of shed for MCC cable installation	2016-17								9,72,614.71
26	ARVIND INDUSTRIAL CORPORATION LTD	Procurement of Multiple Scales	2016-17								-
27	UNIQUE INDUSTRIAL HR	Supply, installation & Commissioning of BOT Crane 100 Tons	2016-17								4,40,428.00
28	INDORE COMMUNICATION AND NETWORK ENGINEERING	CONSTRUCTION OF WBM ROAD FROM BARALTI BASARU (SARAWADI) AND DEORA VILLAGE TO CONNECT UNAUTHORIZED LEVEL CROSSING WITH AUTHORIZED LEVEL CROSSING	2016-17			1,28,000.00			1,28,000.00		-
29	INDORE COMMUNICATION AND NETWORK ENGINEERING	CONSTRUCTION OF WBM ROAD FROM BARALTI BASARU (SARAWADI) AND DEORA VILLAGE TO CONNECT UNAUTHORIZED LEVEL CROSSING WITH AUTHORIZED LEVEL CROSSING	2016-17								-
30	INDORE COMMUNICATION AND NETWORK ENGINEERING	CONSTRUCTION OF WBM ROAD FROM BARALTI BASARU (SARAWADI) AND DEORA VILLAGE TO CONNECT UNAUTHORIZED LEVEL CROSSING WITH AUTHORIZED LEVEL CROSSING	2016-17			79,809.04	8,38,371.00	7,17,341.00			-
31	PANWAR ENTERPRISES	CONSTRUCTION OF BALLASTLESS TRACK & MISC. CIVIL WORKS IN PLANT AREA	2016-17								4,20,808.00
32	POSTAL WORKERS UNION	BUYER CLERK	2016-17								-
33	POSTAL WORKERS UNION	BUYER CLERK	2016-17								-
34	POSTAL WORKERS UNION	BUYER CLERK	2016-17								-
35	POSTAL WORKERS UNION	BUYER CLERK	2016-17								-
36	Shree Heavy Ditch	400T SWB Switched Station Package for Shand STPP, Stage-01	2016-17			54,218.00			54,218.00	2,08,20,304.00	-
37	STAR LINK COMMUNICATION PVT LTD	BIOMETRIC ACCESS SYSTEM	2016-17								-
38	Balwani & Co Ltd	Buy and supply of 200mm x 200mm	2016-17								2,15,18,412.00
39	INDORE COMMUNICATION AND NETWORK ENGINEERING	CONSTRUCTION OF WBM ROAD FROM BARALTI BASARU (SARAWADI) AND DEORA VILLAGE TO CONNECT UNAUTHORIZED LEVEL CROSSING WITH AUTHORIZED LEVEL CROSSING	2016-17								-

**परिमल पीयूष/PARIMAL PIYUSH**  
 अधर महाप्रबन्धक (परिमल) /  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड / NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)





## Statement of Liability Flow

Part-I  
Form-B

Name of the Company		NTPC Limited								
Name of the Power Station		Rohand Super Thermal Power Station Stage								
Sr. No	Name of the Party	Name of the work	Year of transfer of liability specified in Gross Stock	Undischarged liabilities relating to EO till 04.04.2022	Liability in additional capitalisation for 2022-23 as per annexure B-column 0	Connection EOI updated	Discharge during the year 2022-23	Discharge during the year 2022-23	Discharge during the year 2022-23	Amount in ₹
										by payment
10	11	12	13	14	15	16	17	18	19	20
<b>Discharge of Liabilities for Financial Year 2022-23</b>										
01	PTO COLLECTOR (2022-23)	Station	2022-17	8,33,300.00			8,33,300.00			-
02	S.MULES MEGASTRUCTU	Mechanical work items	2022-17							-
03	NATIONAL BUILDINGS C	Ceiling work	2022-17	14,75,000.00						14,75,000.00
04	RAM BICHAR	DOCUMENTATION OF ASH BRICK SHED 1 & 4 AND ITS SURROUNDING AREA	2018-17	1,40,355.00			1,40,355.00			-
04	Relay Enterprise	Strengthening of MCR road from village Goud to Gargol	2018-17	1,23,77,967.00						1,23,77,967.00
05	VJAY CONSTRUCTION	CIVIL WORKS FOR SEPARATION OF DRAINS FOR ZERO DISCHARGE AT NTPC ROHND	2018-17	3,84,807.00						3,84,807.00
06	VJAY CONSTRUCTION	STRENGTHENING OF LINK ROAD FROM SUPPLY DATE TO HIGH PATROLLING ROAD	2018-17	-						-
07	OSPL COMPUTERS PVT	Placement of Multimedia Projector	2010-17	1,78,394.34						1,78,394.34
08	A.K.VERMA	CONSTRUCTION OF ITI BUILDING AT ROHND	2010-17	12,957.00						12,957.00
09	A.K.VERMA	CONSTRUCTION OF NON RESIDENTIAL BUILDINGS PACKAGE 1	2010-17	32,01,081.00						32,01,081.00
10	A.K.VERMA	CONSTRUCTION OF NON RESIDENTIAL Bldg. Single PACKAGE 2	2010-17	32,08,518.00						32,08,518.00
11	CHULHAN BROTHERS CONSTRUCTION	ROUTING OF ANCHOR BOLTS FOR INSTALLATION OF BED PLATES IN FABRICATION SHOP 1 & 2, HEAVY MACHINE SHOP FLOOR IN PLANT AREA	2018-17	-						-
12	VB & RC ELECTRICALS	Laying of 132KV cable for 10T	2018-17	12,81,211.00						12,81,211.00
13	DK BISHI	CONSTRUCTION OF PEDESTALS FOR LAYING OF WOODEN PIPES UNDER	2018-17	-						-
14	PRANAY CONSTRUCTION	Coal Sheds B Type & Mess Etc.	2018-17	-						-
15	HITECH AUDIO SYSTEMS PVT LTD.	PA CONFERENCE SYSTEM	2018-17	-						-
16	JANAK HEALTH CARE PVT LTD	LABOUR TABLES/ BIRTHING BED.	2018-17	-						-
17	RITES LTD	POP FOR RAILWAY SIGNING AND S&T SYSTEM ALUMINATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR ROHND STPP. STAGE 0A-B	2018-17	80,08,128.78			2,68,249.00		2,68,249.00	81,47,080.10
18	RITES LTD	RAILWAY SIGNING AND S&T SYSTEM ALUMINATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR ROHND STPP. STAGE-1(1) (2 x 500 MW)	2018-17	4,83,73,864.44						4,83,73,864.44
19	RITES LTD	RAILWAY SIGNING AND S&T SYSTEM ALUMINATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR ROHND STPP. STAGE-0(1) (2 x 500 MW)	2018-17	6,34,572.00						6,34,572.00
20	USHA INTERNATIONAL LTD	PAN CEILING, TISSUE SINK	2016-17	9.00						9.00
21	STEAMLINE INDUSTRIES LTD	112MM HYDRAULIC MOTOR	2016-17	-						-
22	EDM ASSOCIATES	Construction of storage shed in central area	2016-17	2,48,504.00			2,48,504.00			2,48,504.00
23	EDM ASSOCIATES	Construction work for RCC water shed in plant area	2016-17	3,08,934.00						3,08,934.00
24	EDM ASSOCIATES	Construction work of concrete	2016-17	9,72,894.71						9,72,894.71
25	ARHANT INDUSTRIAL CORPORATION LTD.	Procurement of Mulberry Generator	2016-17	-						-
26	LEBLON INDUSTRIAL HL	Supply, installation & Commissioning of EDI Crane 500 kg/1.000	2016-17	4,40,438.00						4,40,438.00
27	INDORE COMMUNICATION AND	SWR SOFTWARE SERVICES FOR RAILWAY	2016-17	-						-
28	PARAG ENTERPRISES	CONSTRUCTION OF SOI, PANE	2016-17	-						-
29	PARAG ENTERPRISES	CONSTRUCTION OF 80MM ROAD NEAR KASHALI, SANGRITIAKAWADE AND DODRA VILLAGE TO CONNECT UNIMPAVED ROAD LINES, CROSSING WITH AUTHORIZED LEVEL CROSSING	2016-17	-						-
30	PARAG ENTERPRISES	CONSTRUCTION OF BALLASTLINE TRACKS & MISC. CIVIL WORKS IN PLANT AREA	2016-17	4,22,869.00						4,22,869.00
31	ROSTP EMPLOYEES COOP. ASSN.	GEYSER 20LTR	2016-17	-						-
32	ROSTP EMPLOYEES COOP. ASSN.	Hand Dry Drive 2 TB	2016-17	-						-
33	Shree Heavy Earth	RECONSTRUCTION of 80MM ROAD NEAR KASHALI, SANGRITIAKAWADE AND DODRA VILLAGE TO CONNECT UNIMPAVED ROAD LINES, CROSSING WITH AUTHORIZED LEVEL CROSSING	2016-17	2,00,29,384.00			40,80,000.00		40,80,000.00	1,60,49,384.00
34	STARLINK COMMUNICATION PVT LTD.	SECURITY M/C PROBER IPSEC ACCESS SYSTEM	2016-17	-						-
35	Swat Health & Co. Ltd	Wp and supply of MICRO-SMT Inkjet	2018-17	2,16,18,412.00						2,16,18,412.00
36	SHREE & SHOP COMAN	WATER ROHND STAGE-B	2018-17	-						-



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परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301

Statement of Liabilities Due

Part I  
Form-B

Name of the Company Name of the Power Station		NTPC Limited Dhawal Nagar Thermal Power Station, Gurgaon		Amount in Rs.						
A. No.	Name of the Party	Name of the work	Year of creation of liability/ Captivated in Green Book	Unsettled liabilities relating to 01.01.03.2023	Liability in additional verification for 2023-24 as per annexure to column 4	Contingent ERY provision	Discharge during the year 2023-24	Discharge during the year 2023-24	Discharge during the year 2023-24	Unsettled liabilities relating to 01.01.03.2024
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
For assets eligible for normal book value										
01	SHI BROAD BAND NETWORKS PVT	Work for	2016-17	-	-	-	-	-	-	-
02	NATIONAL BULL DOGS PVT	Installation of equipment	2016-17	-	-	-	-	-	-	-
03	RAM BICHAJ	Supply of material for construction of Agri BRICK SHED 2 & 4 AND ITS SUBSTRUCTURES	2016-17	14,75,000.00	-	-	-	-	-	14,75,000.00
04	Arjay Enterprises	Supplying of steel used from Village Sarda to Gurgaon	2016-17	1,23,77,987.00	-	-	-	-	-	1,23,77,987.00
05	KUMAR CONSTRUCTION	CIVIL WORKS FOR SEPARATION OF DRAINS FOR DRAIN DISCHARGE AT NTPC Gurgaon	2016-17	3,84,807.00	-	-	3,84,807.00	-	-	3,84,807.00
06	KUMAR CONSTRUCTION	PROVISIONING OF LINE ROAD FROM B.P. ROAD TO MDR PATROLLING ROAD	2016-17	-	-	-	-	-	-	-
07	OSPL COMPUTERS PVT	Procurement of Multiple Equipment	2016-17	1,70,304.34	-	-	-	-	-	1,70,304.34
08	A K VERMA	CONSTRUCTION OF IT BLDG. AT Gurgaon	2016-17	12,987.00	-	-	-	-	-	12,987.00
09	A K VERMA	CONSTRUCTION OF NEW RESIDENTIAL BUILDINGS PACKAGE 1	2016-17	32,91,880.00	-	-	-	-	-	32,91,880.00
10	A K VERMA	CONSTRUCTION OF NEW RESIDENTIAL BUILDINGS PACKAGE 1	2016-17	22,08,514.00	-	-	-	-	-	22,08,514.00
11	CHILKAW BROTHERS CONSTRUCTION	ROUTING OF ANCHOR BOLTS FOR INSTALLATION OF 800 PLATES IN FABRICATION SHOP - 1 & 2, HEAVY MACHINE SHOP FLOOR IN PLANT AREA	2016-17	-	-	-	-	-	-	-
12	RA & RE ELECTRICALS	Laying of 11KV cable for BT	2016-17	12,81,211.00	-	-	-	-	-	12,81,211.00
13	B K SINGH	CONSTRUCTION OF PIPESTACKS FOR LAYING OF AIRS (S) RES LINE	2016-17	-	-	-	-	-	-	-
14	PARVATI CONSTRUCTION	CONSTRUCTION OF 5 Type & 3 Meter	2016-17	-	-	-	-	-	-	-
15	HITECH AUDIO SYSTEMS PVT LTD.	PA CONFERENCE SYSTEM	2016-17	-	-	-	-	-	-	-
16	JANAK HEALTH CARE PVT LTD	LABOUR TABLES (BIRDS) BED	2016-17	-	-	-	-	-	-	-
17	WITES LTD	FEE FOR RAILWAY BIDDING AND BBT SYSTEM AUGMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR REHARD STPP. STAGE-1	2016-17	81,47,880.10	-	-	-	-	-	81,47,880.10
18	WITES LTD	RAILWAY BIDDING AND BBT SYSTEM AUGMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR REHARD STPP. STAGE-1 ( 2 x 800 BWP )	2016-17	4,03,73,884.44	-	-	-	-	-	4,03,73,884.44
19	WITES LTD	RAILWAY BIDDING AND BBT SYSTEM AUGMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR REHARD STPP. STAGE-1 ( 2 x 800 BWP )	2016-17	6,34,912.50	-	-	-	-	-	6,34,912.50
20	USHA INTERNATIONAL LTD	RAW CHILING 125MM	2016-17	0.00	-	-	-	-	-	0.00
21	STEAM AND INDUSTRIES LTD	TESTING HYDRAULIC	2016-17	-	-	-	-	-	-	-
22	IDEAL ASSOCIATES	Construction of Storage tanks in Central Shop	2016-17	-	-	-	-	-	-	-
23	IDEAL ASSOCIATES	Construction work for RCC work	2016-17	2,80,804.00	-	-	-	-	-	2,80,804.00
24	IDEAL ASSOCIATES	Construction work of	2016-17	8,72,914.71	-	-	-	-	-	8,72,914.71
25	ARVIND INDUSTRIAL COORDINATION LTD	Procurement of Multiple Equipment	2016-17	-	-	-	-	-	-	-
26	UNIQUE INDUSTRIAL HA	Supply Installation & Commissioning of SO2 Clones	2016-17	4,48,430.00	-	-	-	-	-	4,48,430.00
27	INDOOR COMMUNICATION AND	RFM SOFTWARE STAGE	2016-17	-	-	-	-	-	-	-
28	PARVATI ENTERPRISES	Construction of RCC Road	2016-17	-	-	-	-	-	-	-
29	PARVATI ENTERPRISES	CONSTRUCTION OF 10MM ROAD NEAR KARUN, KRISHN (LAKSHMI) AND DEORA VILLAGE TO CONNECT UNAUTHORIZED LEVEL CROSSING WITH AUTHORIZED LEVEL CROSSING	2016-17	-	-	-	-	-	-	-
30	PARVATI ENTERPRISES	CONSTRUCTION OF BALLASTLESS TRACK & MISC. CIVIL WORKS IN PLANT AREA	2016-17	4,22,080.00	-	-	-	-	-	4,22,080.00
31	POSTPAY EMPLOYEES ASSOCIATION	CEILING WORKS	2016-17	-	-	-	-	-	-	-
32	POSTPAY EMPLOYEES ASSOCIATION	Heat Exch. 2 TB	2016-17	-	-	-	-	-	-	-
33	Shree Heavy Glass	PROTECTIVE Sheetmetal	2016-17	1,88,48,462.00	-	-	3,40,151.00	-	-	1,88,48,462.00
34	STAR LINE COMMUNICATION PVT LTD	WIRELESS COMMUNICATION POINT ACCESS SYSTEM	2016-17	-	-	-	-	-	-	1,62,08,871.00
35	Starline & Co Ltd	HRD and supply of	2016-17	3,18,76,412.00	-	-	-	-	-	3,18,76,412.00
36	INDOOR & POWER CONTROL	POWER CONTROL STABLE	2016-17	-	-	-	-	-	-	2,15,18,412.00



परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement of Liabilities Due

Name of the Company Name of the Power Station		NTPC Limited Rihand Super Thermal Power Station Stage-II		Amount in Rs.						
Sl. No.	Name of the Party	Name of the work	Year of creation of liability (updated in Group Sheet)	Undischarged liabilities relating to 08.31.03.2019	Liability in additional explanation for 2019-20 as per annexure 6B-column 9	Computation IFRS updation	Discharge during the year 2019-20	Discharge during the year 2019-20	Discharge during the year 2019-20	Undischarged liabilities relating to 08.31.03.2020
							By payment	By transfer	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7A)	(7)	(8)	(9)	(10)=(5)-(7)-(8)
<b>For assets eligible for special tariff (A)</b>										
87	LANCO INFRA LTD	CIVIL WORKS FOR DRP NTPC RIBAND	2016-17	90,800	-	-	90,800.00	-	90,800.00	-
88	LANCO INFRA TECH LTD	CIVIL WORKS FOR DRP NTPC RIBAND	2016-17	1,16,44,264	-	-	-	-	-	1,16,44,264.04
89	HYDROTECH AND ENGINEERING WORKS	OPS System for tracking Locomotives (28 Der + 24B)	2016-17	2,43,900	-	-	2,43,900.00	-	2,43,900.00	-
90	OSOCO ELEVATORS	LIFT AND RIGGING	2016-17	1,43,388	-	-	1,43,388.00	9,288.00	1,52,676.00	-
91	SALA CONSTRUCTION DNS	REPAIRING WATER LEAKAGE FROM CONCRETE JAMB	2016-17	7,38,125	-	-	7,38,125.00	-	7,38,125.00	-
92	REACON ENGINEERS IND	CONSTRUCTION OF CI TYPE QUARTERS AT NTPC RIBAND	2016-17	74,82,200	-	-	-	-	-	74,82,200.01
93	REACON ENGINEERS IND	CONSTRUCTION OF G.E. D. BAND A-TYPE QUARTERS AT NTPC RIBAND	2016-17	1,12,38,804	-	-	-	-	-	1,12,38,804.44
94	G.V ENTERPRISE	Carry of Material For Gumbad Phase 1B	2016-17	75,283	-	-	-309.00	-309.00	-309.00	75,402.00
95	SVS TECHNOLOGY SERVICES PVT LTD	Procurement of IP DSLAM and ADL Modem	2016-17	83,298	-	-	-	-	-	83,298.00
96	R.T.S INDIA ELECTRONICS PVT LTD	DIGITAL SOUND SYSTEM PROCESSOR	2016-17	2,31,800	-	-	-	-	-	2,31,800.00
97	HITACHI SYSTEMS MICRO CLINIC	SERVER - INTEL XEON DUAL CPU WITH OS	2016-17	41,300	-	-	-	-	-	41,300.00
98	BOCHI VARMA CONSTRUCTION COMPANY	Construction of Sheds for Stock Plant	2016-17	6,60,768	-	-	-	-	-	6,60,768.00
99	SHRI VARMA ELECTRICALS & TOOLS	Tools & Components for 175 KVA Transformer	2016-17	86,628	-	-	86,628.00	-	86,628.00	-
100	SHRMA CONSTRUCTION	CONSTRUCTION OF NON RESIDENTIAL BUILDINGS	2016-17	1,02,87,854	-	-	-	-	-	1,02,87,854.00
101	OMNIPOLYMER PVT LTD	PCO SYSTEMS	2016-17	2,20,000	-	-	2,20,000.00	-	2,20,000.00	-
102	VOLKA ENERGY PVT LTD	AIR CONDITIONERS 1.5 TON SPL. TYPE (LUGGER)	2016-17	6,43,000	-	-	6,43,000.00	-	6,43,000.00	-
103	Shreeji Group	Procurement of Turbine HR, Drain valve for Rihand Stage II	2016-17	18,283	-	-	1,287.50	-	1,287.50	18,903.73
104	SHRI. NISHU CO. P	Oil Leakage	2017-18	20,00,000	-	-	-	-	-	20,00,000.00
105	SHRI. NISHU CO. P	Oil Leakage	2017-18	20,00,000	-	-	-	-	-	20,00,000.00
106	SHRI. NISHU CO. P	Oil Leakage	2017-18	20,00,000	-	-	-	-	-	20,00,000.00
107	OSPL COMPUTERS PVT	Procurement of Software License	2017-18	600	-	-	-	-	-	600.00
108	SHRI. NISHU CO. P	Oil Leakage	2017-18	12,98,881	-	-	-	-	-	12,98,881.00
109	A.K. VERMA	CONSTRUCTION OF NON RESIDENTIAL BUILDINGS PACKAGE 1	2017-18	13,58,881	-	-	-	-	-	13,58,881.00
110	A.K. VERMA	CONSTRUCTION OF NON RESIDENTIAL BUILDINGS PACKAGE 1	2017-18	8,35,358	-	-	-	-	-	8,35,358.00
111	RAM & CHAR	ALLOCATION OF JAMB BRICK SHED 3 & 4 AND ITS SURROUNDING AREA	2017-18	2,80,124	-	-	-	-	-	2,80,124.00
112	Shreeji Group	2017-18	6,00,480	-	-	-	-	-	-	6,00,480.00
113	PETHON ENGINEERING P	Plant Exp	2017-18	2,29,580	-	-	-	-	-	2,29,580.00
114	Shreeji Group	2017-18	6,00,480	-	-	-	-	-	-	6,00,480.00
115	LANCO INFRA TECH LTD	CIVIL WORKS FOR DRP NTPC RIBAND	2017-18	88,07,017	-	-	-	-	-	88,07,017.33
116	BOCHI VARMA CONSTRUCTION COMPANY	Construction of Sheds for Stock Plant	2017-18	3,58,824	-	-	-	-	-	3,58,824.00
117	INDIYA ENGINEERS IND WORKS	Plugging/Drilling/Finishing of holes in Structural Members of Trusses and TDs	2017-18	75,928	-	-	44,175.00	-	44,175.00	29,853.00
118	ROSENT ELECTRO-MECH PVT LTD	Supply & Erection of 10KV Cable Accessories for ST-3 (Stage II) at R	2017-18	18,70,128	-	-	7,20,975.00	-	7,20,975.00	11,49,153.00
119	BLU STAR LTD	Air ventilation	2017-19	3,39,428	-	-	-	-	-	3,39,428.00
120	INTED LTD	FEED PUMP RAILWAY SIGNAL AND SBT SYSTEM AUGMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR RIBAND STPP, STAGE-II (2 x 580 MW)	2018-19	6,00,00,000	-	-	-	-	-	6,00,00,000.00
121	INTED LTD	FEED PUMP RAILWAY SIGNAL AND SBT SYSTEM AUGMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR RIBAND STPP, STAGE-II (2 x 580 MW)	2018-19	2,00,00,000	-	-	-	-	-	2,00,00,000.00
122	IDEAL ASSOCIATES	Construction work of	2018-19	2,80,907	-	-	-	-	-	2,80,907.48
123	A.K. VERMA	CONSTRUCTION OF NON RESIDENTIAL BUILDINGS PACKAGE 1	2018-19	18,18,823	-	-	18,14,865.74	-	18,14,865.74	3,471.00
124	PETHON ENGINEERING P	Plant Exp	2018-19	80,720	-	-	-	-	-	80,720.00
125	INDIYA ENGINEERS IND WORKS	Plugging/Drilling/Finishing of holes in Structural Members of Trusses and TDs	2018-19	80,740	-	-	-	-	-	80,740.00
126	ROSENT ELECTRO-MECH PVT LTD	Supply & Erection of 10KV Cable Accessories for ST-3 (Stage II) at R	2018-19	6,00,000	-	-	-	-	-	6,00,000.00
127	Shreeji Group	2018-19	18,78,477	-	-	-	-	-	-	18,78,477.00
128	SHILWAN BROTHERS CONSTRUCTION	Installation of 50mm dia pipe at ST-3	2018-19	17,838	-	-	17,838.00	-	17,838.00	-
129	SHRI RO CARE ENGINEERING & SOLUTIONS	Design, supply, installation & Commissioning of Reverse Osmosis (RO) System, Stage-II	2018-19	1,40,300	-	-	1,40,300.00	-	1,40,300.00	-
130	HYDROTECH PARIYARAN INDIA PVT. LTD	Construction of Sewage Treatment Plant at R	2018-19	1,00,01,741	-	-	49,28,890.51	-	49,28,890.51	50,71,850.14

परिमल पीयूष / PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड / NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement of Liability Flow

Part-I  
Page-8

Name of the Company :		NTPC Limited								
Name of the Power Station :		Bikaner Super Thermal Power Station Bikaner								
Sl. No.	Name of the Party	Name of the work	Year of inception of liability highlighted in Green Block	Liability in additional depreciation for 2020-21 as per amended IS-circular 9	Contracted BYV up-to-date	Discharge during the year 2020-21	Discharge during the year 2021-21	Discharge during the year 2021-21	Amount in Rs	
									By payment	By reversal
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
For assets eligible for cost-plus (M)										
97	WAVY VISION	IT UPGRADE	2018-17	-	-	-	-	-	-	133,43,024.51
98	LANCO INFRA TECH LTD	CIVIL WORKS FOR CRP NTPC BIKANER	2016-17	-	-	21,20,171.00	-	21,20,171.00	66,11,083.04	87,31,254.04
99	ABANISH AND ENGINEERING SERVICES	GPS System for tracking Livestock (20 Day + Sub)	2016-17	-	-	-	-	-	-	-
100	OMEGA SOLUTIONS	UP in NCM Building	2018-17	-	-	-	-	-	-	-
101	GALA CONSTRUCTION	PRESTRESSING WATER LEAKAGE FROM CONCRETE JOINTS	2016-17	-	-	-	-	-	-	-
102	REACON ENGINEERS IND	CONSTRUCTION OF 5V TYPE QUARTERS AT NTPC BIKANER	2016-17	-	-	-	-	-	74,02,891.51	74,02,891.51
103	REACON ENGINEERS IND	CONSTRUCTION OF D.C. BRAND A-TYPE QUARTERS AT NTPC BIKANER	2016-17	-	-	-	-	-	1,12,36,193.44	1,12,36,193.44
104	EV ENTERPRISES	Const of 80 Tonne Air Splitting Plant TG	2016-17	-	-	-	-	-	75,402.00	75,402.00
105	EVG TECHNOLOGY SERVICES PVT LTD	Procurement of IP-DLAM System and ADSL Modem	2016-17	-	-	-	-	-	63,208.00	63,208.00
106	R & S INDA ELECTRONICS PVT LTD	DIGITAL SOUND SYSTEM PROCESSOR	2016-17	-	-	-	-	-	2,31,000.00	2,31,000.00
107	NTACH SYSTEMS MICRO CLUVC	SERVERS - 04/01, 02/02/03, CPU WITH OS	2016-17	-	-	-	-	-	41,308.00	41,308.00
108	BROOH VIKRAM CONSTRUCTION COMPANY	Construction of Sheds for Tools & Equipment for 01 Site, Tada	2016-17	-	-	-	-	-	8,08,754.08	8,08,754.08
109	SHY GANNA ELECTRICALS & TOLLS	CONSTRUCTION OF NON RESIDENTIAL BUILDINGS PACKAGE II	2016-17	-	-	24,98,813.98	-	24,98,813.98	1,37,98,045.00	1,37,98,045.00
110	DURGA CONSTRUCTION	NON RESIDENTIAL BUILDINGS PACKAGE I	2016-17	-	-	-	-	-	-	-
111	SHAMBERKANT PVT LTD	AIR CONDIT CONDENSERS 1.5 TON, 20/1 T, 20/10/10/10	2016-17	-	-	-	-	-	-	-
112	YOLAKI ENERGIE PVT LTD	Procurement of Turbine W/L Cost value for 01 Hand Splice	2016-17	-	-	-	-	-	-	-
113	Sangeet Ghosh	Procurement of Turbine W/L Cost value for 01 Hand Splice	2016-17	-	-	-	-	-	-	-
114	SHR. NEW DELHI	Procurement of Turbine W/L Cost value for 01 Hand Splice	2016-17	-	-	-	-	-	18,085.73	18,085.73
115	SHR. NEW DELHI	Procurement of Turbine W/L Cost value for 01 Hand Splice	2016-17	-	-	-	-	-	35,00,192.00	35,00,192.00
116	MOOVI SOLUTIONS PVT	Procurement of Turbine W/L Cost value for 01 Hand Splice	2016-17	-	-	-	-	-	37,30,158.00	37,30,158.00
117	COPL COMPUTERS PVT	Procurement of Turbine W/L Cost value for 01 Hand Splice	2016-17	-	-	4,98,738.00	-	4,98,738.00	-	-
118	EMPI EX INFRASTRUCTURE	Manufacture of Turbine W/L Cost value for 01 Hand Splice	2016-17	-	-	-	-	-	818.84	818.84
119	A K VERMA	CONSTRUCTION OF NON RESIDENTIAL BUILDINGS PACKAGE II	2017-18	-	-	-	-	-	12,58,080.83	12,58,080.83
120	A K VERMA	CONSTRUCTION OF NON RESIDENTIAL BUILDINGS PACKAGE I	2017-18	-	-	-	-	-	8,31,350.00	8,31,350.00
121	RAM SICHAR	ALUMINATION OF 400V BRICK SHED 3 & 4 AND ITS SUBSEQUENT WORKS	2017-18	-	-	-	-	-	2,68,123.84	2,68,123.84
122	Shree Hari Ghosh	ERECTOR Substrate Extension Package for 01 Hand Splice, Stage-II	2017-18	-	-	-	-	-	8,92,482.00	8,92,482.00
123	PETROM ENGINEERING CO	ERECTOR	2017-18	-	-	-	-	-	4,26,620.00	4,26,620.00
124	Bhatnagar & Co Ltd	Supply of Substation Wagon	2017-18	-	-	-	-	-	6,66,888.00	6,66,888.00
125	LANCO INFRA TECH LTD	CIVIL WORKS FOR CRP NTPC BIKANER	2017-18	-	-	-	-	-	88,87,817.33	88,87,817.33
126	BROOH VIKRAM CONSTRUCTION COMPANY	Construction of Sheds for Tools & Equipment for 01 Site, Tada	2017-18	-	-	-	-	-	2,88,824.00	2,88,824.00
127	NRISHMA ENGINEERING WORKS	Supply of Substation Wagon	2017-18	-	-	26,760.00	-	26,760.00	-	-
128	PRASANT ELECTRO-MECH PVT LTD	Supply & Erection of 132KV Cable Accessories for 01-2 Hand Splice-II	2017-18	-	-	11,44,158.00	-	11,44,158.00	-	-
129	BLUE STAR LTD	Substation	2018-19	-	-	-	-	-	-	-
130	WTESS LTD	FEE FOR RAILWAY SIDING AND SAT SYSTEM AUGMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR BIKANER STPP, STAGE-III (2 x 50 MW)	2016-18	-	-	3,75,04,000.00	-	3,75,04,000.00	1,25,00,000.00	1,25,00,000.00
131	WTESS LTD	FEE FOR RAILWAY SIDING AND SAT SYSTEM AUGMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR BIKANER STPP, STAGE-III (2 x 50 MW)	2016-18	-	-	2,00,00,000.00	-	2,00,00,000.00	-	-
132	TECAL ASSOCIATES	Construction work of Substation	2016-18	-	-	-	-	-	2,82,087.48	2,82,087.48
133	A K VERMA	CONSTRUCTION OF NON RESIDENTIAL BUILDINGS PACKAGE II	2016-18	-	-	-	-	-	3,471.00	3,471.00
134	PETROM ENGINEERING CO	ERECTOR	2018-19	-	-	-	-	-	66,818.00	66,818.00
135	NRISHMA ENGINEERING WORKS	Supply of Substation Wagon	2018-19	-	-	66,542.00	-	66,542.00	-	-
136	PRASANT ELECTRO-MECH PVT LTD	Supply & Erection of 132KV Cable Accessories for 01-3 Hand Splice-II	2018-19	-	-	8,02,008.00	-	8,02,008.00	-	-
137	Bhatnagar & Co Ltd	Supply of Substation Wagon	2018-19	-	-	-	-	-	70,73,477.00	70,73,477.00
138	CHOLAHY BROTHERS CONSTRUCTION	Installation of Substation Wagon	2018-19	-	-	-	-	-	-	-
139	EMVRO CARE ENGINEERING & SOLUTIONS	Design, Erection, Installation & Commissioning of Substation Wagon, Stage-II	2018-19	-	-	-	-	-	-	-
140	HYDROTECH POWERWARR BIKANER PVT LTD	Construction of Storage Substation Plant at Bikaner	2018-19	-	-	28,46,324.00	-	28,46,324.00	31,25,818.14	31,25,818.14

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परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement of Liabilities Page

Name of the Company		NTPC Limited		Amount in Rs.						
Name of the Power Station		Rohat Super Thermal Power Station Stage		Year of creation of liability (captioned in above table)	liability in additional capitalisation for the 2021-22 as per schedule 8A column 9	Conveyance GRV updation	Discharge during the year 2021-22	Discharge during the year 2021-22	Discharge during the year 2021-22	Un-discharged liabilities relating to 01st 31st 03rd 2022
Sr. No.	Name of the Party	Name of the work								
For assets eligible for normal 80% IIT										
87	RAMS WORKS	O.T. Work	2016-17							
88	LARGO INFRA TECH LTD	CIVIL WORKS FOR CRP NTPC BHAND	2016-17							55,11,000.04
89	ASHTON AND ENGINEERING SERVICES	GPS System for tracking Locomotives (26 Nos + 5 sub)	2016-17							
90	RAMS WORKS	ERTS AND SUPPLY	2016-17							
901	DALA CONSTRUCTIONS	WORKING IN WATER LEAKAGE FROM COALS FOR STAGE	2016-17							
902	MOODAN ENGINEERS IND	CONSTRUCTION OF CP TYPE QUARTERS AT NTPC BHAND	2016-17							74,02,281.61
903	KANCON ENGINEERS IND	CONSTRUCTION OF D-2, C, B AND A-TYPE QUARTERS AT NTPC BHAND	2016-17			1,11,00,337.00	40,828.44	1,12,30,365.44		
904	S V ENTERPRISES	Comm of Water Pan Cemented Pools TG	2016-17							75,402.00
905	SVS TECHNOLOGY SERVICES PVT LTD	Procurement of IP-DLMS System and ASES Modules	2016-17			63,286.00		63,286.00		
906	A S S WEA ELECTRONICS PVT LTD	DIGITAL SOUND SYSTEM PROGRESSOR	2016-17			2,31,808.00		2,31,808.00		
907	HYTACH SYSTEMS MICRO CLING	SERVER - INTEL, MICROCAL CPU WITH OS	2016-17			41,308.00		41,308.00		
908	SEDER VISHAY CONSTRUCTION COMPANY	Construction of Shed for Stock Stage	2016-17							8,08,794.88
909	SHY DANDA ELECTRICALS & TOOLS	Tools & Equipment for ITI Plant, Trade	2016-17							
910	OURDA CONSTRUCTION	CONSTRUCTION OF NON RESIDENTIAL BUILDINGS PACKAGE 1	2016-17			4,34,588.00		4,34,588.00		1,32,42,877.06
911	GAMBERLUST PVT LTD	WORK ITEMS (CABLES)	2016-17							
912	VOLAS ENERGE PVT LTD	MIN CONDUITORS 1.5 TO 35KV (7 TYPE) (L/1000)	2016-17							
913	Sempal Grids	Procurement of Terebra Wall Draw valve for Nitro Storage	2016-17							18,959.73
914	SHR. NEW DELHI	Staplers	2017-18							30,09,286.00
915	SHR. NEW DELHI	TD Pencilcase	2017-18							37,38,189.00
916	ALCO DISTRIBUTIONS	Consumables	2017-18							
917	CSPL COMPUTERS PVT	Procurement of Multimedia Projector	2017-18							970.84
918	SEMPAL INFRASTRUCTURE	Man power packages	2017-18			12,45,598.30		12,45,598.30		
919	A K VERMA	CONSTRUCTION OF NON RESIDENTIAL BUILDINGS PACKAGE 1	2017-18							12,58,860.00
920	A K VERMA	CONSTRUCTION OF NON RESIDENTIAL BUILDINGS PACKAGE 1	2017-18							8,36,300.00
921	RAM BICHAR	ALUMINATION OF 35KV BRICK SHED 3 & 4 AND ITS SURROUNDING AREA	2017-18							2,68,123.80
922	Shree Heavy Electro	ROTTARY Switchgear Extension Package for Shree STDP, Stage-I	2017-19							6,62,463.00
923	ETRON ENGINEERING C	Plant Site	2017-19							4,20,238.00
924	Shreevate & Co Ltd	Wg and supply of SCHEMATIC Package	2017-18							6,05,505.00
925	LARGO INFRA TECH LTD	CIVIL WORKS FOR CRP NTPC BHAND	2017-18							88,67,917.33
926	SEDER VISHAY CONSTRUCTION COMPANY	Construction of Shed for Stock Stage	2017-18							3,05,024.00
927	KRISHNA ENGINEERING WORKS	Preparation/Reviewing of Note in Structural Members of Trusses and TDs	2017-18							
928	REGENT ELECTRO-MECH PVT LTD	Supply & Erection of 132KV Cable Accessories for ST-5 (Brand Stage-II)	2017-19							
929	SHREEBTLTD	SC WORKS	2018-19			5,39,434.75		5,39,434.75		
930	WTEC LTD	FEE FOR RAN, RAY SCHEM AND SAT SYSTEM AUGMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR BHAND STDP, STAGE-II (2 x 500 MW)	2018-19							1,20,00,000.00
931	WTEC LTD	FEE FOR DALWARY SCHEM AND SAT SYSTEM AUGMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR BHAND STDP, STAGE-II (2 x 100 MW)	2018-19							
932	OCAL ASSOCIATES	Construction work of package	2018-19							2,00,987.48
933	A K VERMA	CONSTRUCTION OF NON RESIDENTIAL BUILDINGS PACKAGE 1	2018-19							3,47,100
934	ETRON ENGINEERING C	Plant Site	2018-19							60,016.30
935	KRISHNA ENGINEERING WORKS	Preparation/Reviewing of Note in Structural Members of Trusses and TDs	2018-19							
936	REGENT ELECTRO-MECH PVT LTD	Supply & Erection of 132KV Cable Accessories for ST-3 (Brand Stage-II)	2018-19							
937	Shreevate & Co Ltd	Wg and supply of SCHEMATIC Means	2018-19							18,79,871.80
938	CHAUHAN BROTHERS CONSTRUCTION	Installation of Automatic plant at STP	2018-19							
939	RAMS CANE ENGINEERING & SOLUTIONS	Design, Erection, Installation & Commissioning of Business Storage Disposal System, Stage-I	2018-19							
940	HYDROTECH PARIHARAN DASGU PVT. LTD	Construction of Sewage Treatment Plant at BHAND	2018-19							21,05,818.14



परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड /NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement of Liability Flow

Part-I  
Form-9

Name of the Company/ Name of the Power Station		NTPC Limited Bikaner Super Thermal Power Station Stage		Amount in Rs.						
Sl. No.	Name of the Party	Name of the work	Year of creation of liability (updated in Gross Book)	Uncharged liabilities relating to 30.09.2022	Liability in additional mobilisation for 2022-23 as per annexure II-column 3	Contractual ERF updates	Discharge during the year 2022-23	Discharge during the year 2022-23	Discharge during the year 2022-23	Uncharged liabilities relating to 30.09.2023
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<b>For assets eligible for initial deferral</b>										
87	WMAV WSPONG	D.T. LEAK	2015-17	-	-	-	-	-	-	-
88	LAKHO INFRA TECH LTD	CIVIL WORKS FOR CBF NTPC BHAND	2015-17	85,11,893.04	-	-	-	-	-	85,11,893.04
89	ASHTECH AND ENGINEERING SERVICES	GPS System for tracking Locomotives (20 Ton + Soft)	2016-17	-	-	-	-	-	-	-
92	RAMDA ELECTROWORKS	3.0 LVA Assembly	2016-17	-	-	-	-	-	-	-
97	DALIA CONSTRUCTION	APPOINTING WATER LEAKAGE ROOM CONSTRUCTION work	2016-17	-	-	-	-	-	-	-
102	REACON ENGINEERS IND	CONSTRUCTION OF D1 TYPE QUARTERS AT NTPC BHAND	2016-17	74,02,281.51	-	-	-	-	-	74,02,281.51
130	REACON ENGINEERS IND	CONSTRUCTION OF D.E. C. BRAND A TYPE QUARTERS AT NTPC BHAND	2016-17	-	-	-	-	-	-	-
134	S VENTURES PVT	Construction of Water Pans at Bikaner Park 1st	2016-17	75,822.00	-	-	-	-	-	75,822.00
135	WVS TECHNOLOGY SERVICES PVT LTD	Procurement of IP-COOLAM system and ADSL Modem	2016-17	-	-	-	-	-	-	-
140	R & S PEDIA ELECTRONICS PVT LTD	DIGITAL SOUND SYSTEM PROVISION	2016-17	-	-	-	-	-	-	-
167	HITACHI SYSTEMS MICRO CLMNC	SERVER - INTEL XEON/RAID CPU WITH OS	2016-17	-	-	-	-	-	-	-
168	SHREE VINAYAK CONSTRUCTION COMPANY	Construction of Sheds for Bulk Plant	2016-17	8,08,764.88	-	-	-	-	-	8,08,764.88
168	SHRI GANESH ELECT. TOOLS & TOOLS	Tools & Equipment for 20 Tons Plant	2016-17	-	-	-	-	-	-	-
118	DURGA CONSTRUCTION	CONSTRUCTION OF NON RESIDENTIAL BLDG. PACKAGE	2016-17	1,33,82,017.00	-	-	34,82,508.00	-	34,82,508.00	98,99,509.00
111	SARMAENRGET PVT LTD	10KV CABLE TO SUB	2016-17	-	-	-	-	-	-	-
112	VOLKS ENERGY PVT LTD	10KV R&L TYPE 3, 4 AND 7TS Provision of Turbine Ball Drain valve for Road Syage II	2016-17	-	-	-	-	-	-	-
113	Sampat Dash	10KV R&L TYPE 3, 4 AND 7TS Provision of Turbine Ball Drain valve for Road Syage II	2016-17	18,085.73	-	-	-	-	-	18,085.73
114	SHRI. HANU DASH	10KV R&L TYPE 3, 4 AND 7TS Provision of Turbine Ball Drain valve for Road Syage II	2017-18	66,66,798.90	-	-	-	-	-	66,66,798.90
115	SHRI. HANU DASH	10KV R&L TYPE 3, 4 AND 7TS Provision of Turbine Ball Drain valve for Road Syage II	2017-18	37,30,158.90	-	-	-	-	-	37,30,158.90
116	LLOYD INSULATIONS IN	10KV R&L TYPE 3, 4 AND 7TS Provision of Turbine Ball Drain valve for Road Syage II	2017-18	-	-	-	-	-	-	-
117	CARL COMPUTERS PVT	Procurement of Multimedia Projector	2017-18	919.84	-	-	-	-	-	919.84
118	RAM KR. INFRASTRUCTURE	CONSTRUCTION OF NON RESIDENTIAL BLDG. PACKAGE I	2017-18	-	-	-	-	-	-	-
118	A.K. NORMA	CONSTRUCTION OF NON RESIDENTIAL BLDG. PACKAGE I	2017-18	12,58,860.00	-	-	-	-	-	12,58,860.00
120	A.K. NORMA	CONSTRUCTION OF NON RESIDENTIAL BLDG. PACKAGE I	2017-18	8,36,360.00	-	-	-	-	-	8,36,360.00
121	RAM BOWAR	ALLOCATION OF 4000 BROWN SHED 3 & 4 AND 7TS BLDG. PACKAGE I	2017-18	2,88,123.84	-	-	2,88,123.84	-	2,88,123.84	-
122	Dinesh Heavy Deal	10KV R&L TYPE 3, 4 AND 7TS Provision of Turbine Ball Drain valve for Road Syage II	2017-18	8,92,492.00	-	-	-	-	-	8,92,492.00
124	PETROMENGS SERVICES PVT	Material	2017-18	4,20,430.00	-	-	4,20,430.00	-	4,20,430.00	-
124	Bhatnagar & Co Ltd	10KV and supply of SCHEMATIC Diagrams	2017-18	6,60,865.00	-	-	-	-	-	6,60,865.00
125	LAKHO INFRA TECH LTD	CIVIL WORKS FOR CBF NTPC BHAND	2017-18	88,87,817.30	-	-	-	-	-	88,87,817.30
126	SHREE VINAYAK CONSTRUCTION COMPANY	Construction of Sheds for Bulk Plant	2017-18	3,88,824.00	-	-	-	-	-	3,88,824.00
127	ADISHRA ENGINEERING WORKS	Flagging/aligning/leveling of holes in Structural Members of Turbine and 7TS	2017-18	-	-	-	-	-	-	-
130	REGENT ELECTRO MECH PVT LTD	Supply & erection of 10KV Cable Accessories for SET-3 Street Substation	2017-18	-	-	-	-	-	-	-
128	RUC STAR LTD	10KV R&L TYPE 3, 4 AND 7TS Provision of Turbine Ball Drain valve for Road Syage II	2018-19	-	-	-	-	-	-	-
128	RITES LTD	FEE FOR RAILWAY SCHEME AND SET OF SYSTEM AUTOMATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR BHAND STPP, STAGE 4 (1 x 800 MW)	2018-19	1,25,00,000.00	-	-	-	-	-	1,25,00,000.00
131	RITES LTD	FEE FOR RAILWAY SCHEME AND SET OF SYSTEM AUTOMATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR BHAND STPP, STAGE 4 (2 x 800 MW)	2018-19	-	-	-	-	-	-	-
132	IDEAL ASSOCIATES	Construction work of sewerage	2018-19	2,82,867.48	-	-	-	-	-	2,82,867.48
133	A.K. NORMA	CONSTRUCTION OF NON RESIDENTIAL BLDG. PACKAGE I	2018-19	3,471.00	-	-	-	-	-	3,471.00
134	PETRON INFRA SERVICES PVT	Shed Exp	2018-19	80,818.00	-	-	80,818.00	-	80,818.00	-
135	ADISHRA ENGINEERING WORKS	Flagging/aligning/leveling of holes in Structural Members of Turbine and 7TS	2018-19	-	-	-	-	-	-	-
135	REGENT ELECTRO MECH PVT LTD	Supply & erection of 10KV Cable Accessories for SET-3 Street Substation	2018-19	-	-	-	-	-	-	-
137	Bhatnagar & Co Ltd	10KV and supply of SCHEMATIC Diagrams	2018-19	18,79,417.00	-	-	1,21,827.00	-	1,21,827.00	18,57,590.00
138	CHALANAN BROTHERS CONSTRUCTION	Installation of Substation work at STP	2018-19	-	-	-	-	-	-	-
138	ENVIRO CARE ENGINEERING & SOLUTIONS	Design, Erection, Installation & Commissioning of Schemable Storage Deposit System, Stage-II	2018-19	-	-	-	-	-	-	-
140	HYDROTECH PARIYAKHAN INDRAN PVT. LTD	Construction of Sewage Treatment Plant at Bhand	2019-20	31,20,818.14	-	-	-	-	-	31,20,818.14

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (व्यापारिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Statement of Liability Flow

Part-I  
Form-2

Name of the Company Name of the Power Station :		NTPC Limited Rohat Basu Thermal Power Station Bapat		Amount in Rs.						
Sl. No.	Name of the Party	Name of the work	Year of creation of liability capitalised in Gross Block	Uncharged liability relating to GO D1, 04, 2023	Liability in additional capitalisation for 2023-24 as per annexure to column 5	Contractual EPC liability	Discharge during the year 2023-24	Discharge during the year 2023-24	Discharge during the year 2023-24	Uncharged liability relating to GO 31, 03, 2024
							By payment	By reversal	Total	
For assets eligible for normal RCF (A)										
97	MWEE VISDOM	O.T LIGHT	2016-17	-	-	-	-	-	-	-
98	LANCO INFRASTRUC LTD	CIVIL WORKS FOR CRP NTPC ROHAT	2016-17	96,11,000.00	-	-	-	-	-	96,11,000.00
99	ASANTECH AND ENGINEERING SERVICES	GPS System for tracking Locomotives (2 Car + 06)	2016-17	-	-	-	-	-	-	-
100	COMGA ELECTROCHEM	4-110 A201 System	2016-17	-	-	-	-	-	-	-
101	GALA CONSTRUCTIONS	APPROXIM WATER LEAKAGE FROM CONNECTION 2046	2016-17	-	-	-	-	-	-	-
102	REACOM ENGINEERS IND	CONSTRUCTION OF D1 TYPED QUARTERS AT NTPC-ROHAT	2016-17	74,02,281.51	-	-	74,02,281.51	-	74,02,281.51	-
103	REACOM ENGINEERS IND	CONSTRUCTION OF D-2, C, B AND A TYPE QUARTERS AT NTPC-ROHAT	2016-17	-	-	-	-	-	-	-
104	S V ENTERPRISES	Cost of Wires for Substation Power 35	2016-17	75,402.00	-	-	-	-	-	75,402.00
105	SVS TECHNOLOGY SERVICES PVT.LTD	Procurement of IP-DIGRAM system and ACS, Systems	2016-17	-	-	-	-	-	-	-
106	R & S INDIA ELECTRONICS PVT LTD	DIGITAL SOUND SYSTEM RECONSTRUCTION	2016-17	-	-	-	-	-	-	-
107	HITACHI SYSTEMS MICRO-LUND	SERVER - 1MTD, RESIDUAL CPU WITH OS	2016-17	-	-	-	-	-	-	-
108	SOORJI SHARMA CONSTRUCTION COMPANY	Construction of Sheds for Bulk Plant	2016-17	5,00,704.36	-	-	-	-	-	5,00,704.36
109	SHRI GANGA ELECTRICAL & TOOLS	Tools & Equipments for IT	2016-17	-	-	-	-	-	-	-
110	OURDA CONSTRUCTION	CONSTRUCTION OF NON RESIDENTIAL BLDG. PACKAGE 1	2016-17	96,69,508.00	-	-	-	-	-	96,69,508.00
111	SANMANSI ART PVT LTD	NON RESIDENTIAL BLDG. PACKAGE 1	2016-17	-	-	-	-	-	-	-
112	YOUS ENGINEE PVT LTD	NON RESIDENTIAL BLDG. PACKAGE 1	2016-17	-	-	-	-	-	-	-
113	Genoel Grest	Procurement of Outside MAL Drain valve for Retard Spillage Pit	2016-17	18,005.79	-	-	-	-	-	18,005.79
114	DEHL NEW DEAL	DC generator	2017-18	59,29,305.00	-	-	-	-	-	59,29,305.00
115	DEHL NEW DEAL	DC generator	2017-18	27,36,799.00	-	-	-	-	-	27,36,799.00
116	ALUQU ENGINEERING	Procurement of Substation	2017-18	-	-	-	-	-	-	-
117	CAPL COMPUTERS PVT	Procurement of Substation	2017-18	819.84	-	-	-	-	-	819.84
118	AMPAK INFRASTRUCTURE	DC generator	2017-18	-	-	-	-	-	-	-
119	A K VERMA	CONSTRUCTION OF NON RESIDENTIAL BLDG. PACKAGE 1	2017-18	12,59,980.00	-	-	-	-	-	12,59,980.00
120	A K VERMA	CONSTRUCTION OF NON RESIDENTIAL BLDG. PACKAGE 1	2017-18	9,35,350.00	-	-	-	-	-	9,35,350.00
121	RAMBHAR	ALUMINATION OF ASH BRICK SHED 3 & 4 AND ITS SUBSTATION AREA	2017-18	-	-	-	-	-	-	-
122	Shree Hare Dethi	2017-18: Substation Extension Package for Shaded CRP, Block-1	2017-18	6,00,482.80	-	-	74,343.00	-	74,343.00	6,74,825.80
123	PERSON ENGINEERING C	DC generator	2017-18	-	-	-	-	-	-	-
124	Shrinivasa & Co Ltd	MG and supply of SUBSTATION WORKS	2017-18	6,68,686.80	-	-	-	-	-	6,68,686.80
125	LANCO INFRASTRUC LTD	CIVIL WORKS FOR CRP NTPC ROHAT	2017-18	86,87,817.33	-	-	-	-	-	86,87,817.33
126	SOORJI SHARMA CONSTRUCTION COMPANY	Construction of Sheds for Bulk Plant	2017-18	3,85,624.00	-	-	-	-	-	3,85,624.00
127	KRISHNA ENGINEERING WORKS	Plugging/Drilling/Leveling of holes in Structural Members of Transformer 125	2017-18	-	-	-	-	-	-	-
128	REGENT ELECTRO-MECH PVT LTD	Supply & erection of 130KV Cable Accessories for 07-3 Shaded (Block-1)	2017-18	-	-	-	-	-	-	-
129	SHRI SHARMA LTD	DC generator	2018-19	-	-	-	-	-	-	-
130	SHRI SHARMA LTD	FEE FOR RAILWAY SCHEM AND SAT SYSTEM AUGMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR ROHAT STP, STAGE-1 (1 & 50 MW)	2018-19	1,26,90,000.00	-	-	-	-	-	1,26,90,000.00
131	SHRI SHARMA LTD	FEE FOR RAILWAY SCHEM AND SAT SYSTEM AUGMENTATION AND ASSOCIATED ELECTRICAL SYSTEM PACKAGE FOR ROHAT STP, STAGE-1 (2 & 50 MW)	2018-19	-	-	-	-	-	-	-
132	EDAL ASSOCIATES	Construction works of ROHAT	2018-19	2,99,087.48	-	-	-	-	-	2,99,087.48
133	A K VERMA	CONSTRUCTION OF NON RESIDENTIAL BLDG. PACKAGE 1	2018-19	3,471.00	-	-	-	-	-	3,471.00
134	PERSON ENGINEERING C	DC generator	2018-19	-	-	-	-	-	-	-
135	KRISHNA ENGINEERING WORKS	Plugging/Drilling/Leveling of holes in Structural Members of Transformer 125	2018-19	-	-	-	-	-	-	-
136	REGENT ELECTRO-MECH PVT LTD	Supply & erection of 130KV Cable Accessories for 07-3 Shaded (Block-1)	2018-19	-	-	-	-	-	-	-
137	Shrinivasa & Co Ltd	MG and supply of SUBSTATION WORKS	2018-19	16,57,850.00	-	-	-	-	-	16,57,850.00
138	SHRI SHARMA LTD	Construction of Substation	2018-19	-	-	-	-	-	-	-
139	SHRI SHARMA LTD	Design, Erect, installation & Commissioning of Substation, Storage Diesel System, Stage-1	2018-19	-	-	-	-	-	-	-
140	HYDROTECH INTERNATIONAL PVT. LTD.	Construction of Sewage Treatment Plant at Rohat	2018-19	31,25,035.14	-	-	-	-	-	31,25,035.14



परिमल पीयूष/PARIMAL PIYUSH  
अवर महाप्रबन्धक (सहायित्वक)  
Addl. General Manager (Commercial)  
सून टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement of Liability Flow

Part B  
Form-B

Name of the Company		NTPC Limited								
Name of the Power Station		Rewari Super Thermal Power Station Stage-II								
Sr. No.	Name of the Party	Name of the work	Year of initiation of liability established in Gross Book	Uncharged liability relating to 31.03.2019	liability in additional exploitation for 2019-20 as per annexure B-column 2	Contractor ERP addition	Discharge during the year 2019-20	Discharge during the year 2019-20	Discharge during the year 2019-20	Uncharged liability relating to 31.03.2020
For assets eligible for annual flow (A)				(B)	(B)	(B)	(A)	(B)	Total (A+B)	(C)+(D)+(E)+(F)
141	Mateon T&O India Ltd	Supply Civil & masonry, CT +H&M CAT for Substation (S-1)	2018-18	1,01,935	-	-	1,01,935.00	-	1,01,935.00	-
142	VJAY CONSTRUCTION	CONSTRUCTION OF NEW PCC ROAD FROM AGE S&D TO 220KV/33KV	2018-18	12,06,635	-	-	2,03,216.95	-	2,03,216.95	9,43,618.15
143	M&F CONSTRUCTION	Construction of Bituminous Road (Outside plant boundary wall from Watch Tower # 3 to 26&L yard shed 26&L, part in CCPL, Age	2018-18	18,77,708	-	-	5,42,387.75	-	5,42,387.75	13,35,320.25
144	PARMAT ENTERPRISES	CONSTRUCTION OF NEW ROAD NEAR VARAULI (S&M/TUMHAMME) AND DOORA VILLAGE TO CONNECT UNAUTHORISED LEVEL CROSSING WITH AUTHORIZED LEVEL CROSSING	2018-18	3,43,981	-	-	-	-	-	2,42,980.00
145	BHEL, NEW DELHI	SO Package	2018-19	2,000	-	-	-	-	-	2,000.00
146	BHEL, NEW DELHI	SO Package	2018-19	3,43,628	-	-	-	-	-	3,43,628.00
147	PARWAN CONSTRUCTION	CONSTRUCTION OF CHEMICAL STORE SHED AND MISCELLANEOUS CIVIL WORKS IN PLANT AREA	2018-19	1,53,218	-	-	-	-	-	1,53,218.00
148	OF INDIA INDUSTRIES	CT Substation	2018-20	-	30,56,517.28	-	-	-	-	30,56,517.28
149	HYDROTECH PARIWASHAN (INDIA) PVT. LTD.	Construction of Sewage Treatment Plant at Rewari	2018-20	-	5,11,817.18	-	-	-	-	5,11,817.18
150	AGE LTD MV substation	MV Substation Package	2018-20	-	11,284.08	-	-	-	-	11,284.08
151	Invesys India Pvt L	OM	2018-20	-	69,000.00	-	-	-	-	69,000.00
152	SHREE S. ROOF CONCRETE	AGRA SECOND STAGE OF CONSTRUCTION OF NON RESIDENTIAL BUILDINGS	2018-20	-	48,64,843.00	-	-	-	-	48,64,843.00
153	DARSA CONSTRUCTION	CONSTRUCTION OF NON RESIDENTIAL BUILDINGS	2018-20	-	14,68,784.00	-	-	-	-	14,68,784.00
154	BHEL, NEW DELHI	TO Package	2019-20	-	13,32,655.54	-	-	-	-	13,32,655.54
155	BHEL, NEW DELHI	SO Package	2019-20	-	38,802.00	-	-	-	-	38,802.00
156	LLOYD BHEL LTD/DELHI	Fire detection	2019-20	-	28,534.35	-	-	-	-	28,534.35
157	BHEL/SHRIHARI CONSTRUCTU	Main plant package	2019-20	-	21,54,917.34	-	-	-	-	21,54,917.34
158	PARWAN CONSTRUCTION	CONSTRUCTION OF CHEMICAL STORE SHED AND MISCELLANEOUS CIVIL WORKS IN PLANT AREA	2019-20	-	70,814.30	-	-	-	-	70,814.30
159	PETROCH ENGINEERING & C	Steel Erection	2019-20	-	48,439.00	-	-	-	-	48,439.00
160	ADARSH AUTO SALES	Supply Spare Parts under M&S&S to 2019	2019-20	-	8,84,054.75	-	-	-	-	8,84,054.75
161	SUNAMI TECHNOLOGIES PVT LTD	Procurement of Strategic Face cam finger reader and TV for CUBS	2019-20	-	80,000.00	-	-	-	-	80,000.00
162	BAK SPORTS	Procurement of sports table tennis	2019-20	-	24,999.00	-	-	-	-	24,999.00
163	LARSEN ANALYTICAL INSTRUMENTS	Procurement of Portable XRF Alloy Analyser	2019-20	-	17,11,000.00	-	-	-	-	17,11,000.00
164	KUNAL ENTERPRISES	Supply, Erection & (H&M) Commissioning of of Electrode Surface Mounted	2019-20	-	2,51,500.00	-	-	-	-	2,51,500.00
165	HYDROTECH PARIWASHAN (INDIA) PVT. LTD.	Construction of Sewage Treatment Plant at Rewari	2020-21	-	-	-	-	-	-	-
166	REARON ENGINEERING AND	CONSTRUCTION OF D-2, C, E AND A-TYPE QUARTERS AT NTPC REWARI	2020-21	-	-	-	-	-	-	-
167	SIMPLEX INFRASTRUCTURE	Main plant package	2020-21	-	-	-	-	-	-	-
168	Shree Heavy Elect	Additional Substation	2020-21	-	-	-	-	-	-	-
169	LARSEN INFRASTRUCTURE LTD	CIVIL WORKS FOR CMP NTPC, REWARI	2020-21	-	-	-	-	-	-	-
170	DELHI ENGINEERING & C	Steel Erection	2020-21	-	-	-	-	-	-	-
171	ORCAUTION SERVICES LTD	Procurement of Viper	2020-21	-	-	-	-	-	-	-
172	GLOBAL INFRASTRUCTURE LTD	Procurement of Equipments at NTPC Rewari	2020-21	-	-	-	-	-	-	-
173	National Heritage Construction Co	3rd ring of central ash shed (stage II)	2020-21	-	-	-	-	-	-	-
174	H&L POWER SYSTEMS, LTD	Procurement for 220V Safety Barrels for Unit-5	2020-21	-	-	-	-	-	-	-
175	LJM TORQUE INDIA LTD	PROCUREMENT OF LACTORQUE MAKE VALVE OPERATOR AND MOTORISED ACTUATOR AT	2020-21	-	-	-	-	-	-	-
176	OMRON ENERGY SOLUTIONS PVT LTD	Procurement of CT Test Kit for NTPC Rewari	2020-21	-	-	-	-	-	-	-
177	International Electronics &	Procurement of Display Module for Protection System in Substation	2020-21	-	-	-	-	-	-	-
178	TRAMCO RAIL & ENGINEERING LTD	Procurement of STAP Hoses for A&S (Stage II)	2020-21	-	-	-	-	-	-	-
179	SLAB TECH PVT LTD	Procurement of Cement PCC (H&M) Repairs for 600 (22&C, 22&D, 22&E)	2020-21	-	-	-	-	-	-	-
180	DELHI S&C SALES PVT LTD	Procurement of Various Tools for NTPC Rewari	2020-21	-	-	-	-	-	-	-
181	DELHI S&C SALES PVT LTD	Procurement of Network Racks for NTPC Rewari	2020-21	-	-	-	-	-	-	-
182	GALTECH INFOSOLUTIONS PRIVATE LTD	Procurement of Full FROG DER 101 (One) UCD Number. This UCD is made	2020-21	-	-	-	-	-	-	-

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
-BCC, A-5A, Sector-24, Noida-201301 (U.P.)



Statement of Liability Flow

Page 5  
Form-5

Name of the Company Name of the Power Station		NTPC Limited Noida Sector 24 Thermal Power Station Stage		Amount in Rs.						
Sr. No.	Name of the Party	Name of the work	Year of creation of liability reclassified in Gross Block	Liability in additional capitalization by 2020-21 as per annexure B-Category II	Contracted GTV updated	Discharge during the year 2020-21	Discharge during the year 2020-21	Discharge during the year 2020-21	Undischarged liabilities relating to Q3 21 01 2021	Undischarged liabilities relating to Q3 21 03 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	Total	(9)	(10)
<b>For assets eligible for normal NCF (A)</b>										
141	Alkon T&D Infra Ltd	RDW Circuit Breakers, CT 10-440- CAT for Sakshiyat ST-1	2018-18							
142	VIARY CONSTRUCTION	CONSTRUCTION OF NEW ROAD FROM Adh S/O TO BHADRA DATE	2016-16					9,43,678.18	9,43,678.18	
143	VIARY CONSTRUCTION	Constructive of Stonehouse Road (Outside plant boundary wall from Wash Trough # 3 to 8-9L, used and BHEL yard for COOL. Air	2015-15					13,35,810.00	13,35,810.00	
144	PARMANI CONSTRUCTION	CONSTRUCTION OF WBM ROAD NEAR KANAUJI, SAGAR (RUMAHAND) AND DODRA VILLAGE TO CONNECT UNAUTHORIZED LEVEL CROSSING WITH AUTHORIZED LEVEL CROSSING	2014-14					2,42,985.00	2,42,985.00	
145	BHEL, NEW DELHI	DG Package	2018-18					2,688.14	2,688.14	
146	BHEL, NEW DELHI	DG Package	2018-18					9,35,029.08	9,35,029.08	
147	PARMANI CONSTRUCTION	CONSTRUCTION OF CHEMICAL STORE SHED AND MISCELLANEOUS CIVIL WORKS IN PLANT AREA	2016-16					1,83,218.80	1,83,218.80	
148	DE ENCA INDUSTIAL	IT Package	2018-20					1,00,000.00	1,00,000.00	
149	HYDROTECH PARVATHANAN SPECIALIST LTD	Construction of Storage Treatment Plant at Bhandra	2016-16		4,81,017.99		4,81,017.99	50,000.00	50,000.00	
150	ABE LTD INDIA	IT Software Package	2016-16					11,294.00	11,294.00	
151	Energy Infra Pvt L	CM	2016-16					89,990.89	89,990.89	
152	BRIDGE & ROOF CONCRETE	ARCHITECTURE STAFF CONSTRUCTION OF ROOM REPAIRS, SUB-ENGINEER	2019-20		26,84,842.00		4,50,000.00	-	-	
153	OURMA CONSTRUCTION	CONSTRUCTION OF ROOM REPAIRS, SUB-ENGINEER	2019-20					-	-	
154	BHEL, NEW DELHI	IT Package	2018-20					14,00,704.00	14,00,704.00	
155	BHEL, NEW DELHI	DG Package	2018-20					13,30,695.04	13,30,695.04	
156	HYDROTECH PARVATHANAN SPECIALIST LTD	IT Package	2018-20					39,992.80	39,992.80	
157	PARMANI CONSTRUCTION	CONSTRUCTION OF CHEMICAL STORE SHED AND MISCELLANEOUS CIVIL WORKS IN PLANT AREA	2016-16		13,014.20			16,874.38	-	
158	PETRON ENGINEERING CO	IT Package	2018-20					48,428.20	48,428.20	
159	ASARWAAL AUTO SALES	Invoice Items For NTPC Saghar (Grand under MMS 2018 in 2018)	2019-20					9,84,054.75	9,84,054.75	
160	SUNAR TECHNOLOGIES PVT LTD	Procurement of Biometric Face cut finger reader and TV for CEMS	2019-20					49,000.00	49,000.00	
161	MAX SPORTS	Procurement of excess spare parts	2019-20		24,999.00		24,999.00	-	-	
162	LANNES POLYESTER METALMENTS	Procurement of Particle XRF X-ray Analyzer	2019-20		17,11,000.00		17,11,000.00	-	-	
163	KUNAL ENTERPRISES	Supply, Erection & Commissioning of Collection of of Electronic Surface Mounted	2019-20		1,27,000.00		1,27,000.00	1,24,000.00	1,24,000.00	
164	HYDROTECH PARVATHANAN SPECIALIST PVT LTD	Construction of Storage Treatment Plant at Bhandra	2020-21	14,14,366.95				-	-	14,14,366.95
165	REACHON ENGINEERS INDIA	CONSTRUCTION OF D-2, C- 4 AND A-TYPE QUARTERS AT NTPC-BHANDRA	2020-21	21,84,000.00				-	-	21,84,000.00
166	SHREYAS ENTERPRISES LTD	Material supply 400 TONN Sakshiyat Extension Package for Bhandra STP, Saghar	2020-21	81,14,041.00				-	-	81,14,041.00
167	Shree Heavy Gears	Material supply 400 TONN Sakshiyat Extension Package for Bhandra STP, Saghar	2020-21	3,12,348.00				-	-	3,12,348.00
170	LANCO INFRA TECH LTD	CIVIL WORKS FOR CIVIL STP, BHANDRA	2020-21	34,13,818.54				-	-	34,13,818.54
171	PC TECH SOLUTIONS PVT LTD	IT Package	2020-21	1,98,200.00				-	-	1,98,200.00
172	ORIONTECH SOLUTIONS LTD	IT Package	2020-21	18,31,000.00				-	-	18,31,000.00
173	GLOBUS INFOSYS LTD	Procurement of Video Conferencing Equipments at NTPC Bhandra	2020-21	18,75,500.00				-	-	18,75,500.00
174	INDIA POWER SYSTEMS LTD	Procurement of 250V Battery Bank for UPS	2020-21	30,24,000.00				-	-	30,24,000.00
175	UNITORQUE INDIA LTD	PROCUREMENT OF UNITORQUE MOTOR VALVE GEARBOX AND MOTORIZED ACTUATOR AT	2020-21	5,003.47				-	-	5,003.47
176	OMRON ENERGY SOLUTIONS PVT LTD	Procurement of CT (11 kV) for NTPC Bhandra	2020-21	1,85,000.00				-	-	1,85,000.00
177	International Electronics & Engineering	Procurement of Display Monitor for Projection Station in Village	2020-21	2,15,150.00				-	-	2,15,150.00
178	TERAMCO R&E ENGINEERING LTD	Procurement of STAP Kites for STP Bhandra	2020-21	4,38,16,219.00				-	-	4,38,16,219.00
179	HESS TECH PVT LTD	Procurement of Desktop PCs 104-Inch Monitors for EDC, CSC and other units	2020-21	14,95,500.00				-	-	14,95,500.00
180	DELVAGSCO SALES PVT LTD	Procurement of Motor Batteries for NTPC Bhandra	2020-21	62,000.00				-	-	62,000.00
181	DELVAGSCO SALES PVT LTD	Procurement of Battery Batteries for NTPC Bhandra	2020-21	62,000.00				-	-	62,000.00
182	DELVAGSCO SOLUTIONS PRIVATE LTD	Procurement of P&ID SOFTWARE FOR Process Simulation	2020-21	30,380.00				-	-	30,380.00

**परिमल पीयूष/PARIMAL PIYUSH**  
अपर महाप्रबंधक (कार्गिनियम)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED-152  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Statement of Liability Flow**

Name of the Company / Name of the Power Station		NTPC Limited / Rihand Super Thermal Power Station Stage		Amount in Rs.						
Sl. No.	Name of the Party	Name of the work	Year of creation of liability registered in Gross Book	Liability is additional expenditure for 2021-22 as per schedule 25 column 2 B	Contractors ERV updated	Discharge during	Discharge	Discharge	Uncharged liability relating to-31.03.2022	
						the year 2021-22	during the year 2021-22	during the year 2021-22		
(1)	(2)	(3)	(4)			By payment	By reversal	Total		
<b>For assets eligible for normal B&amp;B only</b>										
141	Ashok TSD India Ltd	40KV Circuit Breaker, CT & CB-1- CVT for Substation ST	2018-19						-	
142	MURY CONSTRUCTION	CONSTRUCTION OF NEW RCC ROAD FROM ASH SILE TO BRIDGE GATE	2018-19			1,18,842.00		1,18,842.00	9,28,176.18	
143	MURY CONSTRUCTION	Construction of Reinforced Paved Road side plant boundary wall Park Wash Tower # 1 to BHEL yard and BHEL yards COCP, A&S	2018-19			5,33,037.00		5,33,037.00	6,07,476.80	
144	PANMAN ENTERPRISES	CONSTRUCTION OF ASPHALT ROAD NEAR KAPALTI, SAGAR(TUSKAR) AND COOKIA VILLAGE TO CONNECT UNAUTHORISED LEVEL CROSSING WITH AUTHORIZED LEVEL CROSSING	2018-19			2,42,969.00		2,42,969.00	-	
145	BHEL, NEW DELHI	SG Packages	2018-20						2,88,114	
146	BHEL, NEW DELHI	TG Packages	2018-20						6,28,629.00	
147	PRAMAN CONSTRUCTION	CONSTRUCTION OF CHEMICAL STORE SHED AND MISCELLANEOUS CIVIL WORKS IN PLANT AREA	2018-20						1,53,216.80	
148	DEEPCO INDUSTRIAL CORPORATION/RAJAWADY JEWELRY LTD.	IT System/Construction of Sewage Treatment Plant at Rihand	2018-20						10,82,017.88	
149	ANIL LTD. M.V. Andheri	SG Packages	2018-20						54,000.00	
150	Shreeya India Pvt. L.	CG	2018-20						82,000.00	
151	SHREE A & S/O.P. GOMAN	WASH SHEDS/STORAGE	2018-20						-	
154	DURGIA CONSTRUCTION	CONSTRUCTION OF NON RESIDENTIAL BUILDINGS	2018-20						14,00,704.00	
155	BHEL, NEW DELHI	TG Packages	2018-20						13,30,898.04	
156	BHEL, NEW DELHI	SG Packages	2018-20						36,800.00	
157	UJDA INSULATIONS IN RAMP AT RIHAND STATION	Insulation	2018-20						-	
158	PRAMAN CONSTRUCTION	CONSTRUCTION OF CHEMICAL STORE SHED AND MISCELLANEOUS CIVIL WORKS IN PLANT AREA	2018-20			21,34,813.34		21,34,813.34	-	
159	PETROL PUMP/SHREEDIP	SG Packages	2018-20						88,039.00	
161	AGARWAL AUTO SALES	Supply Buses for NTPC Rihand. Rihand under B&B 2018 to 2019	2018-20			4,80,293.81	28,125.24	4,78,558.75	4,87,488.00	
162	SHANKAR TECHNOLOGIES PVT LTD	Procurement of Inverter Free run Inverter and TV for G&S	2018-20			60,000.00		60,000.00	-	
163	SMR SPORTS	Procurement of exercise equipment	2018-20						-	
164	LAMBDA ANALYTICAL INSTRUMENTS	Procurement of Portable Air Alpha Analyser	2018-20						-	
165	KUNAL ENTERPRISES	Supply, Erection & Commissioning of Electronic Surface Mounted	2018-20			1,24,038.00		1,24,038.00	-	
166	HYDROTECH PARYNARWAN SACMI PVT. LTD.	Construction of Sewage Treatment Plant at Rihand	2020-21						14,14,386.85	
167	REACON ENGINEERS IND	CONSTRUCTION OF D-2, C, B AND A-TYPE CONVERTER AT NTPC Rihand.	2020-21			18,81,061.60		18,81,061.60	3,43,080.00	
168	EMPLES INFRASTRUCTURE	Manufacture of Inverter 30/150KV Switchgear Cabinet Package for Rihand STP, Stage II	2020-21			88,14,041.82		88,14,041.82	-	
169	Shree Heavy Dieci	CIVIL WORKS FOR CRP AT NTPC Rihand.	2020-21						8,12,148.00	
170	LAMCO INFRASTRUCTURE LTD	CG	2020-21						34,13,818.54	
171	PETROBRAS/INDIAN OIL	SG Packages	2020-21						1,80,000.00	
172	CONCRETE ORGANCE LTD	Steel Reinforcement	2020-21						18,21,000.00	
173	GLOBUS INFODOM LTD	Procurement of Video Conferencing Equipments at NTPC Rihand	2020-21			1,87,532.00	17,77,788.00	19,79,320.00	-	
	National Freight Construction Co	Procurement of 200V Battery Banks for Use-6	2020-21			19,00,000		19,00,000.00	19,78,807.00	
174	HBL POWER SYSTEMS LTD	Procurement of 200V Battery Banks for Use-6	2020-21			26,24,900.00		26,24,900.00	-	
175	UMTORGUS HIGH LTD	PROCUREMENT OF REINFORCED CONCRETE VALVE GEARBOX AND MOTORISED ACTUATOR AT	2020-21			6,869.47		6,869.47	-	
176	OMERON ENERGY SOLUTIONS PVT LTD	Procurement of CT Test Kit for NTPC Rihand	2020-21			1,66,080.00		1,66,080.00	-	
177	Innovative Electronics S	Procurement of Display Terminals for Projection Displays at Rihand	2020-21			2,15,156.00		2,15,156.00	-	
178	TRAMCO RAIL & ENGINEERING LTD	Procurement of STAP Pallet for Ash Utilization	2020-21						4,38,18,298.00	
179	HLAS TSDV PVT LTD	Procurement of Develop PCB & PCB Assembly for SCG, CRP and other I&E	2020-21			14,95,048.00		14,95,048.00	-	
180	DELTA/INCO SALES PVT LTD	Procurement of Network SADA for NTPC Rihand	2020-21			62,000.00		62,000.00	-	
181	DELVEGSDO SALES PVT LTD	Procurement of Network SADA for NTPC Rihand	2020-21			35,250.00		35,250.00	-	
182	GALTECH INFOSOLUTIONS PRIVATE LTD	Procurement of Full RICH DEMITRISHER LCD Display, TRAEQUANOR	2020-21						30,380.00	



**परिमल पीयूष/PARIMAL PIYUSH**  
 अपर महाप्रबन्धक (वर्ग-निर्देशक)  
 Addl. General Manager (Commercial)  
 एच.डी.सी. ली लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Statement of Liability Flow

Part  
Form-B

Name of the Company Name of the Power Station		NTPC Limited Rajind Export Thermal Power Station Stage		Amount in Rs.						
Sr. No.	Name of the Party	Name of the work	Year of creation of liability Completion/In Closing/Break	Uncharged liabilities relating to CB 01/04/2022	Liability is additional capitalization for 2022-23 as per section 49 of Income Tax Act	Contractor EOP/valuation	Discharge during the year 2022-23	Discharge during the year 2022-23	Discharge during the year 2022-23	Uncharged liabilities relating to CB 31/03/2023
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Particulars eligible for Section 80C (A)							- by payment	- by receipt	Total	
141	Adwin TCO India Ltd	450KV Circuit Breaker, CT (45kV) - CVT for Substation B1-1	2018-18	-	-	-	-	-	-	-
142	MAVY CONSTRUCTION	CONSTRUCTION OF NEW RCC ROAD FROM MAIN BLVD TO BARRAGE GATE	2018-19	8,25,775.18	-	-	8,458.00	-	8,458.00	8,14,287.18
143	MAVY CONSTRUCTION	Construction of Drainage, Road/Out side street Boundary wall from Main Tower # 3 to 5465, year end 3-6-2018, paid to COOP, A/c	2018-19	8,01,475.80	-	-	-	-	-	8,01,475.80
144	PAWANI ENTERPRISES	CONSTRUCTION OF 1666 ROAD NEAR KARAULTI, SASAR (TUMARHADI) AND DEORA VILLAGE TO CONNECT UNAUTHORIZED LEVEL CROSSING WITH AUTHORIZED LEVEL CROSSING	2018-19	-	-	-	-	-	-	-
145	DELTA MECH SOL. IN	EG Package	2018-18	-	2,085.18	-	-	-	-	2,085.18
146	DELTA MECH SOL. IN	EG Package	2018-18	-	3,33,625.30	-	-	-	-	3,33,625.30
147	PAWANI CONSTRUCTION	CONSTRUCTION OF CHEMICAL STORE SHED AND MISCELLANEOUS CIVIL WORKS IN PLANT AREA	2018-19	1,53,218.00	-	-	-	-	-	1,53,218.00
148	DELTA MECH SOLUTIONS	EG Package	2018-20	-	30,64,207.30	-	-	-	-	30,64,207.30
149	HYDROTECH PARYAWAN INDIA PVT. LTD.	Cable wire of Storage Transformer at Plant	2018-20	-	50,000.00	-	-	-	-	50,000.00
151	DELTA MECH SOLUTIONS	EG Package, Package	2018-20	-	11,284.00	-	-	-	-	11,284.00
152	Shreeji Infra Pvt L	CM	2019-20	-	50,860.88	-	-	-	-	50,860.88
153	DELTA & ROOF COMPANY	EGS Package STAGE 3	2019-20	-	-	-	-	-	-	69,000.85
154	DURGA CONSTRUCTION	CONSTRUCTION OF NON ESSENTIAL BUILDINGS	2019-20	14,60,704.00	-	-	-	-	-	14,60,704.00
155	DELTA, NEW DELHI	TU Package	2018-20	-	18,30,955.04	-	-	-	-	18,30,955.04
156	DELTA, NEW DELHI	EG Package	2018-20	-	38,802.00	-	-	-	-	38,802.00
157	DELTA MECH SOLUTIONS	EG Package	2019-20	-	-	-	-	-	-	38,802.00
158	DELTA MECH SOLUTIONS	CONSTRUCTION OF CHEMICAL STORE SHED AND MISCELLANEOUS CIVIL WORKS IN PLANT AREA	2019-20	-	-	-	-	-	-	-
159	PAWANI CONSTRUCTION	CONSTRUCTION OF CHEMICAL STORE SHED AND MISCELLANEOUS CIVIL WORKS IN PLANT AREA	2019-20	-	-	-	-	-	-	-
160	DELTA MECH SOLUTIONS	EG Package	2019-20	-	48,490.00	-	48,490.00	-	-	48,490.00
161	ADARSH AUTO SALES	Supply Items for NTPC Single Unit under BIDD 2018 to 2019	2019-20	4,81,498.00	-	-	-	-	-	4,81,498.00
162	DELTA MECH SOLUTIONS	Procurement of Various Items for NTPC	2019-20	-	-	-	-	-	-	4,81,498.00
163	MAK SERVICES	Procurement of various Items for NTPC	2019-20	-	-	-	-	-	-	-
164	LAMBDA ANALYTICAL INSTRUMENTS	Procurement of Portable XRF Analyser	2019-20	-	-	-	-	-	-	-
166	KUNAL ENTERPRISES	Supply, Installation & Commissioning of Electronic Surface Mounted	2019-20	-	-	-	-	-	-	-
168	HYDROTECH PARYAWAN INDIA PVT. LTD.	Construction of Storage Transformer at Plant	2020-21	14,14,305.58	-	-	-	-	-	14,14,305.58
167	REASON ENGINEERS IND	CONSTRUCTION OF D.C. C. R AND A TYPE QUARTERS AT NTPC RAJIND	2020-21	3,43,000.00	-	-	-	-	-	3,43,000.00
169	DELTA MECH SOLUTIONS	Procurement of Various Items for NTPC	2020-21	-	-	-	-	-	-	-
165	Shreeji Heavy Equip	Supply of Various Items for NTPC	2020-21	3,12,345.00	-	-	-	-	-	3,12,345.00
170	LAVO INFRA TECH LTD	CONSTRUCTION OF D.C. C. R AND A TYPE QUARTERS AT NTPC RAJIND	2020-21	34,13,016.54	-	-	-	-	-	34,13,016.54
171	DELTA MECH SOLUTIONS	Procurement of Various Items for NTPC	2020-21	-	1,80,300.00	-	-	-	-	1,80,300.00
172	ORAMPTON SERVICES LTD	Procurement of Various Items for NTPC	2020-21	-	92,21,808.00	-	1,60,200.00	-	1,60,200.00	93,82,008.00
173	GLOBUS INFOCOM LTD	Procurement of Various Items for NTPC	2020-21	-	-	-	-	-	-	1,60,200.00
	National Freight Constructors Co	Procurement of various Items for NTPC	2020-21	15,75,807.00	-	-	-	-	-	15,75,807.00
174	DELTA POWER SYSTEMS LTD	Procurement of 2000 Battery Banks for Unit-5	2020-21	-	-	-	-	-	-	15,75,807.00
175	LAMTORQUE IEM LTD	PROCUREMENT OF LAMTORQUE SOLE VALVE GASKET AND MOTORISED ACTUATOR AT	2020-21	-	-	-	-	-	-	-
176	OMICRON ENERGY SOLUTIONS PVT LTD	Procurement of CT Test Kit for NTPC Rajind	2020-21	-	-	-	-	-	-	-
177	International Electronics & Engineering	Procurement of Display Monitors for Protection Systems in Various	2020-21	-	-	-	-	-	-	-
178	TERMACO INFRA & ENGINEERING LTD	Procurement of STAP Poles for NTPC Rajind	2020-21	4,38,14,219.00	-	-	-	-	-	4,38,14,219.00
179	DELTA MECH SOLUTIONS	Procurement of Various Items for NTPC	2020-21	-	-	-	-	-	-	-
180	DELTA MECH SOLUTIONS	Procurement of Various Items for NTPC	2020-21	-	-	-	-	-	-	-
181	DELTA MECH SOLUTIONS	Procurement of Various Items for NTPC	2020-21	-	-	-	-	-	-	-
182	DELTA MECH SOLUTIONS PRIVATE LTD	Procurement of Various Items for NTPC	2020-21	30,300.00	-	-	-	-	-	30,300.00



परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement of Liability Flow

Part  
Form-B

Name of the Company / Name of the Power Station		NTPC Limited Rihand Super Thermal Power Station Stage		Amount in INR						
Sl. No.	Name of the Party	Name of the work	Year of liability established in Gross Book	Undischarged liability relating to 08.31.2023	Liability in additional capitalisation for 2023-24 as per annotated schedule B	Contractors ODF creation	Discharge during the year 2023-24	Discharge during the year 2023-24	Discharge during the year 2023-24	Undischarged liability relating to 08.31.2024
							By payment	By reversal	TOTAL	
			IN	IN	IN		0.81,25,000.00			
<b>For assets eligible for normal book (A)</b>										
141	Asahi T&E India Ltd	400KV Circuit Breaker, CT & 400KV CVT for Substation CT-3	2016-18	-	-					-
142	VJAY CONSTRUCTION	CONSTRUCTION OF NEW RCC ROAD FROM ASH S&D TO B&S&D O&B	2016-18	4,18,287.10	-					4,18,287.10
143	VJAY CONSTRUCTION	Construction of Grounds Road (Off side) from Watch Tower # 3 to B&S, yard and B&S, yards O&B/A	2016-18	8,01,475.00	-					8,01,475.00
144	PANWAR ENTERPRISES	CONSTRUCTION OF NEW ROAD (FROM KANALI) SAGAR TUSMAMAND AND DEORA VILLAGE TO CONNECT UNAUTHORIZED LEVEL CROSSING WITH AUTHORIZED LEVEL CROSSING.	2016-18	-	-					-
145	BHEL, NEW DELHI	SG Package	2016-19	2,986.34	-					2,986.34
146	BHEL, NEW DELHI	TG Package	2016-19	5,15,020.90	-					5,15,020.90
147	PANWAR CONSTRUCTION	CONSTRUCTION OF CHEMICAL STORE SHED AND MISCELLANEOUS CIVIL WORKS IN PLANT AREA	2016-19	1,53,276.80	-					1,53,276.80
148	DL MEDIA SOLUTIONS HYDROTECH PARTNARW (INDIA) PVT. LTD	IT Software	2016-20	9,74,077.85	-					9,74,077.85
149	DL MEDIA SOLUTIONS HYDROTECH PARTNARW (INDIA) PVT. LTD	Construction of Sewage Treatment Plant at B&S&D	2016-20	50,000.00	-					50,000.00
150	DL MEDIA SOLUTIONS HYDROTECH PARTNARW (INDIA) PVT. LTD	MTI Software Package	2016-20	11,264.00	-					11,264.00
151	Trenerg India PCL	CM	2016-20	89,960.88	-					89,960.88
152	WRODE & WOOD COMPANY	AGREEMENT STAGE II	2016-20	-	-					-
153	QUNDA CONSTRUCTION	CONSTRUCTION OF HOPA PRODUCTION, B&S O&B	2016-20	14,90,704.00	-					14,90,704.00
154	BHEL, NEW DELHI	TG Package	2016-20	13,30,855.04	-					13,30,855.04
155	BHEL, NEW DELHI	SG Package	2016-20	30,602.00	-					30,602.00
156	DL MEDIA SOLUTIONS HYDROTECH PARTNARW (INDIA) PVT. LTD	IT Software	2016-20	-	-					-
157	BHEL, NEW DELHI	IT Software	2016-20	-	-					-
158	BHEL, NEW DELHI	IT Software	2016-20	-	-					-
159	PANWAR CONSTRUCTION	CONSTRUCTION OF CHEMICAL STORE SHED AND MISCELLANEOUS CIVIL WORKS IN PLANT AREA	2016-20	-	-					-
160	PETRON ENGINEERING C	Rest Job	2016-20	-	-					-
161	ADARSH AUTO SALES	Delivery Bank For NTPC Sagrath Rihand side March 2016 to 2017	2016-20	4,97,484.80	-		3,67,440.00		3,67,440.00	1,30,044.80
162	QUNDA TECHNOCORP PVT LTD	Procurement of Electronic Firm core from leader and 12 No CLMS	2016-20	-	-					-
163	MAX SPORTS	Procurement of exercise table table	2016-20	-	-					-
164	LIFE USA ANALYTICAL INSTRUMENTS	Procurement of Perkin Elmer 200 Plus Analyser	2016-20	-	-					-
165	QUNDA ENTERPRISES	Supply, Erector 400KV Commissioning of 400KV Substation	2016-20	-	-					-
166	HYDROTECH PARTNARW (INDIA) PVT. LTD	Construction of Sewage Treatment Plant at B&S&D	2016-21	14,74,300.00	-					14,74,300.00
167	AGADON ENGINEERS PVT	CONSTRUCTION OF D.I. C. 4 AND A-TYPE QUARTERS AT NTPC RIHAND	2016-21	3,40,000.00	-			3,40,000.00	3,40,000.00	-
168	SAMYAN ENGINEERING CO.	Manufacture of 400KV 400KV/20KV Transformer Extension Package for Rihand O&B, B&S&D	2016-21	3,12,346.90	-		3,12,346.90		3,12,346.90	-
169	LARCO INFRA TECH LTD	CIVIL WORKS FOR O&B NTPC RIHAND	2016-21	30,13,678.54	-					30,13,678.54
170	PERCON ENGINEERING CO	Erect Job	2016-21	-	-					-
171	OSCOMTEL DEVICES LTD	Erect transformer	2016-21	16,31,080.80	-					16,31,080.80
172	GLOBAL INFOCOM LTD	Procurement of Video Conferencing Equipments at NTPC Rihand	2016-21	-	-					-
173	Federal Prestige Construction Co	Procurement of central air conditioning	2016-21	14,78,807.00	-					14,78,807.00
174	HEL POWER SYSTEMS LTD	Procurement for 22KV Battery Bank for Unit-5	2016-21	-	-					-
175	LIMTORQUE INDIA LTD	PROCUREMENT OF LIMTORQUE MAKE WAVE BREAKERS AND MOTORIZED ACTUATOR AT	2016-21	-	-					-
176	OMERON ENERGY SOLUTIONS PVT LTD	Procurement of CT Test Kit for NTPC Rihand	2016-21	-	-					-
177	International Electronics	Procurement of Display Monitor for Projector System in Village	2016-21	-	-					-
178	TECHNOCO SALES & SERVICE LTD	Procurement of 200KV Bank for Air Lubrication	2016-21	4,38,15,210.00	-					4,38,15,210.00
179	HUBB 3024 PVT LTD	Procurement of Desktop PC's & 400KV Penetration for EOC, O&B	2016-21	-	-					-
180	GO, VERGEO SALES PVT LTD	Procurement of Network Switches, NTPC Rihand	2016-21	-	-					-
181	DE, VERGEO SALES PVT LTD	Procurement of Network Switches for NTPC Rihand	2016-21	-	-					-
182	SALTECH PRODUCTIONS PRIVATE LTD	Procurement of P&ID FROM O&B FOR NTPC Rihand	2016-21	36,308.04	-					36,308.04

**परिमल पीयूष/PARIMAL PIYUSH**  
 अपर महाप्रबंधक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
**एन टी पी सी लिमिटेड/NTPC LIMITED**  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement of Liability Flow

Part Form 5

Name of the Company / Name of the Power Station :		NTPC Limited / Rihand Super Thermal Power Station Stage-II								
Sl. No	Name of the Party	Name of the work	Year of creation of liability updated in Gross Book	Undischarged liabilities relating to till 31.03.2019	liability in additional cash/letter for 29.04.20 on per amount (Rs crore)	Contractor's GOV position	Discharge during the year 2018-20	Discharge during the year 2019-20	Discharge during the year 2020-21	Undischarged liability relating to 31.03.2020
							By payment	By reversal	Total (sum of 8)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
For details refer to column (6) & (11)										
181	SHARAT HEAVY ELECTRICALS LTD	Procurement of blades for PA Fan stage II for NTPC Rihand	2020-21							
184	FLUORO INTERNATIONAL LLP	PROCUREMENT OF CONDENSER CONCENTRATORS FOR RHHMD (A&B)	2020-21							
186	DURGA CONSTRUCTION	CONSTRUCTION OF NON RESIDENTIAL BLDG CHQS	2021-22							
188	Shard Heavy Elect	ASUTOSHY SHARAD Defective Package for Rihand STDP, Stage-II	2021-22							
187	Fluoride Private Lim	PROCUREMENT OF SPARES FOR STACKER RECLAIMER IN CHP Stage II (NTPC Rihand)	2021-22							
188	AGG India Limited	Implementation of Automatic Generation Control AGC at NTPC Rihand Superthermal Power Station	2021-22							
189	SEETHA VEENAK CONSTRUCTION COMPANY	Construction of Batching plant in Tower Curb in Tapsana	2021-22							
190	A 2 2 SUPPLIER	Misc - Domestic Identification, Face 4-4-4-4 Data Reception Time FULL HD VIDEO COMPROMISE GOSIMNF-SREP	2021-22							
191	Pogoby Technologies Pvt Ltd	SCAN BOX PREMIUM ETLK030 14.1, COMP ASSY ST-0	2021-22							
192	PREMIUM TRANSMISSION PRIVATE LTD	SCAN BOX PREMIUM ETLK030 14.1, COMP ASSY ST-0	2021-22							
193	PREMIUM TRANSMISSION PRIVATE LTD	FLUID COUPLER 12.75 PCU ST-3	2021-22							
194	TRIMACO AN L & SHOWSIPRIMO LTD	RODE ALUMINA WAGON TYPE STAF	2021-22							
195	ENERGY EFFICIENCY SERVICES LTD	ENERGY EFFICIENT DEMONSTRATION - 50 KW(T) ENERGY EFFICIENT CEILING FAN - 50 WATT @ 2	2021-22							
196	ENERGY EFFICIENCY SERVICES LTD	ENERGY EFFICIENT CEILING FAN - 50 WATT @ 2	2021-22							
197	HIRAL TECHRONIX PVT LTD	ROBOTS CMC FRCO CUM FMSR FBWV ACS	2021-22							
198	DINESH SCIENTIFIC	CURING TANK STD	2021-22							
198	DINESH SCIENTIFIC	MOULDING FORM CURVE MOLD 150MM	2021-22							
201	BHEL, NEW DELHI	TD Breaker	2021-22							
201	BHEL, NEW DELHI	32 Protection	2021-22							
202	Smeel GmbH	Procurement of Twelve MFL Drain valve for Rihand Synga-II	2021-22							
203	REACON ENGINEERS IND	CONSTRUCTION OF D1 TYPE QUARTERS AT NTPC RHHMD	2020-21							
204	LANCO INFRATECH LTD	CIVIL WORKS FOR DSE NTPC RHHMD	2020-21							
208	DURGA CONSTRUCTION	CONSTRUCTION OF NON RESIDENTIAL BLDG CHQS	2020-21							
	SHARAT HEAVY ELECTRICALS LIMITED	Co-Works Supply of Misc Equipment price for Combustion Modification Package for Rihand STDP, Stage-II (2x50 MW) and Stage-II (2x80 MW)	2020-21							
206	SHARAT HEAVY ELECTRICALS LTD	PROCUREMENT OF 7900/1200/2000 AND 80 SAFETY VALVES OF 180 MM ISO-CO LUBS	2020-22							
207	TRABASA BIO-MEDICALS LTD	Supply of Automatic Hematology Analyser for NTPC Rihand by go Sell	2020-21							
208	ACE MARKETING PVT LTD SAW TURBO INDUSTRY PVT LTD	PROCUREMENT OF COMPLETE PUMP ASSEMBLY OF WATER WASHING SPAL WATER PUMP OF	2020-21							
200	ACE MARKETING PVT LTD SAW TURBO INDUSTRY PVT LTD	PROCUREMENT OF COMPLETE ASSEMBLY OF SERVICE WATER PUMP FOR STG-II OF RHHMD	2020-21							
210	TRIDENT EQUIPMENTS PVT LTD	Procurement of Contactor (A&B) for NTPC RHHMD	2020-21							
211	HONEYWELL AUTOMATION INDIA LTD	Procurement of QUALITY GAS DETECTOR ANALYSER FOR NON-TURBID OF TONG CHQS	2020-21							
212	JOY MARKETING CO PVT LTD/ KILBOLGAR PNEUMATIC CO LTD	Procurement of Compressor for A&B SHARAT and COACH SPARES FOR A&B	2020-21							
213	AAM DCC SOLUTIONS PRIVATE LIMITED	Procurement of AVG P&G for NTPC Rihand	2020-21							
214	AAM DCC SOLUTIONS PRIVATE LIMITED	Procurement of Detester P&G for NTPC Rihand	2020-21							
	TECHNO SYSTEMS LTD (Dry Ash System)	Spk handling	2023-24							
	BHEL, NEW DELHI	SC Package	2023-24							
	BHEL, NEW DELHI	TG Package	2023-24							
	Shard Heavy Elect	Compressor Package for Rihand STDP, Stage-II	2023-24							
	MAGWARR BROWAY PVT LTD (Dry Ash System)	Balance work for Dry Ash Detection System, Stage-II NTPC Rihand	2023-24							



परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (रजि. सिविल)  
 Add. General Manager (Construction)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (UJ)

Statement of Liability Due

Name of the Company :		NTPC Ltd. Ltd.		Amount in ₹						
Name of the Power Station :		Bharat Heavy Thermal Power Station, Rana								
Sl. No.	Name of the Party	Name of the work	Year of creation of liability captured in Gross Book	Liability in additional capitalisation for 2020-21 as per annexure B (column 8)	Contractor ERV updated	Discharge during	Discharge during	Discharge during	Undischarged liabilities relating to Q3 31.03.2021	Undischarged liabilities relating to Q3 31.03.2021
						the year 2020-21	the year 2020-21	the year 2020-21		
						by payment	by mutual	Total		
(i)		(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
<b>For assets eligible for normal R&amp;M</b>										
93	SHARAT HEAVY ELECTRICALS LTD	Procurement of blades for PA for stage-8 for NTPC Rana	2019-21	1,65,705.71					1,65,705.71	1,65,705.71
194	FAHRO INTERNATIONAL LLP	PROCUREMENT OF COYCOND CONDENSATORS FOR STAGE-10(M)	2019-21	2,38,910.00					2,38,910.00	2,38,910.00
182	DURGA CONSTRUCTION	CONSTRUCTION OF NON RESIDENTIAL BLDG(S) 400120CA Bunkerya-4	2021-22							
186	Sharat Heavy Elect	Extension Package for Stage-8 STP, Stage-9	2021-22							
187	Fluorin Private Ltd	PROCUREMENT OF SPARES FOR STACKER RECLAIMER IN Q-7 Stage-8, NTPC BHANAG	2021-22							
168	ABB India Limited	Implementation of Automatic Generation Control AGC at NTPC Rana Superthermal Power Station	2021-22							
109	MOGH VIVYAK CONSTRUCTION COMPANY	Construction of bedstone hall in Thiver Club in Thiveria	2021-22							
106	A 2 Z SUPPLIER	Anti-Rusting Identification, Paint & Anti-Rust Disposition Time	2021-22							
121	Proflite Technologies Pvt Ltd	PULL HO VIBRO CONFERENCE EQUIPMENT-3887	2021-22							
182	PREMIUM TRANSMISSION PRIVATE LTD	GDAR FOR PREMIUM 67L 6000 14.1 COMP ARBY 57-8	2021-22							
183	PREMIUM TRANSMISSION PRIVATE LTD	ELSD COUPLING 12.75 FCU 57-3	2021-22							
154	TERAVIZI VALV & ENGINEERING LTD	GOODS ALUMINA WAGON TYPE 8040	2021-22							
198	ENERGY EFFICIENCY SERVICES LTD	ENERGY EFFICIENT CEILING FAN - 30 WATT	2021-22							
198	ENERGY EFFICIENCY SERVICES LTD	ENERGY EFFICIENT CEILING FAN - 30 WATT	2021-22							
187	HIMAL ELECTRONIX PVT LTD.	BIOMETRIC SEC FACE GUM H8888887 AGG	2021-22							
185	QWESH SCIENTIFIC	CURING TANK STD	2021-22							
186	QWESH SCIENTIFIC	MOLDS THERMOUSE MOLD 208MM	2021-22							
201	SHRI NEW ORLS	30-DRUMS	2021-22							
201	SHRI NEW ORLS	30-DRUMS	2021-22							
302	Sarath Insh	Procurement of Teflon NPL Ovan valve for Ranao Syge-8	2021-22							
303	SHAGUN ENGINEERS IND	CONSTRUCTION OF DT TYPE QUARTERS AT NTPC BHANAG	2022-23							
304	JUNCO INFOTECH LTD	civil works for DRP NTPC BHANAG	2022-23							
305	DURGA CONSTRUCTION	CONSTRUCTION OF NON RESIDENTIAL BLDG(S) 400120CA Supply of Man Equipment price for Candidate Modification Package for Ranao STPS Stage-8 (2x50 MW) and Stage-9 (1x200 MW)	2022-23							
306	SHARAT HEAVY ELECTRICALS LTD	PROCUREMENT OF HIGH CHROMIUM AND SH WASTY VALVES OF 500 MM DIAMETER	2022-23							
307	TRIMASKA BIO-MEDICALS LTD	Supply of Autoclave Sterilization Analyser for NTPC Ranao (A) and (B)	2022-23							
308	ACE MARKETING PVT LTD SAM TURBO INDUSTRY PVT LTD	PROCUREMENT OF COMPLETE PUMP Assy OF 4x4x 4x4x 4x4x MP SEAL WATER PUMP OF	2022-23							
309	ACE MARKETING PVT LTD SAM TURBO INDUSTRY PVT LTD	PROCUREMENT OF COMPLETE ASSEMBLY OF SERVICE WITH PUMP FOR 800-3 OF BHANAG	2022-23							
210	TRENDT EQUIPMENTS PVT LTD	Procurement of Consistency Meter for NTPC BHANAG	2022-23							
211	HONEYWELL AUTOMATION INDIA LTD	Procurement of MELTRON DETECTOR ANALYSER FOR MOUNTING OF TOXIC GASES	2022-23							
212	JOY MARKETING CO PVT LTD HRL DAKAR PNEUMATIC CO LTD	Procurement of Compress for AND 2-FACTOR and COMPRESSOR CO2 ASH	2022-23							
213	ANV ONE SOLUTIONS PRIVATE LIMITED	Procurement of 800 PCS for NTPC BHANAG	2022-23							
214	ANV ONE SOLUTIONS PRIVATE LIMITED	Procurement of 20000 PCS for NTPC BHANAG	2022-23							
	TECPRO SYSTEMS LTD (Dr. Anv System)	40-DRUMS	2022-24							
	SHRI NEW ORLS	30-DRUMS	2022-24							
	SHRI NEW ORLS	30-DRUMS	2022-24							
	Sharat Heavy Elect	400120CA Bunkerya Extension Package for Stage-8 STP, Stage-9	2022-24							
	MACAWBER ENERGY PVT LTD (Dr. Anv System)	Stationwork for Dry Air Substation System, Stage-8, NTPC Ranao	2022-24							

*Signature*

**परिमल पीयूष/PARIMAL PIYUSH**  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement of Liability Flow

Name of the Company / Name of the Power Station		NTPC Limited / Bikaner Super Thermal Power Station Stage		Amount in Rs.					
Sr. No	Name of the Party	Name of the work	Year of creation of liability captured in Change Book	Liability in addition to capitalisation for 2021-22 as per disclosure ID-column 2	Contractors ERV updation	Discharge during the year 2021-22 by payment	Discharge during the year 2021-22 by reversal	Discharge during the year 2021-22 Total	Unsettled liabilities relating to 30.03.2022
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>For assets eligible for asset Ref. Cr.</b>									
183	BHARAT HEAVY ELECTRICALS LTD	Procurement of Motor for PA fan stage-II for NTPC Bikaner	2020-21			3,85,705.71		3,85,705.71	-
184	TURBO INTERNATIONAL LLP	PROCUREMENT OF OXYGEN CONDENSATORS FOR BIKANER STAGE	2020-21				2,38,000.00	2,38,000.00	-
185	DURGA CONSTRUCTION	CONSTRUCTION OF ROOM FOR CONDENSATE BUILDINGS	2021-22	13,86,438.26					13,86,438.26
186	BHARAT HEAVY ELECTRS	Delivery Package for Stage II STPP, Stage II	2021-22	6,80,998.90					6,80,998.90
187	Florida Private Ltd	PROCUREMENT OF SPARES FOR STACKS RECLAIMER in CHP Stage II NTPC BIKANER	2021-22	36,28,500.00					36,28,500.00
188	ABB India Limited	Implementation of Automatic Generation Control AGC at NTPC Bikaner Superthermal Power Station	2021-22	42,71,070.00					42,71,070.00
189	BCHH VIMARU CONSTRUCTION COMPANY	Construction of Mainframe Hall in Turbine Cabin Touring	2021-22	2,54,400.00					2,54,400.00
190	A 2 Z SUPPLIER	MSR - Spare Parts Identification, Spare Parts Procurement, Full Inventory	2021-22	20,108.90					20,108.90
191	Plogly Technologies Pvt Ltd	CONFERENCE EQUIPMENT-12000	2021-22	2,19,262.00					2,19,262.00
192	PREMIUM TRANSMISSION PRIVATE LTD	DRY BOX PREMIUM ET,0033 14_1_COMP ASSY WT 81	2021-22	1,22,72,000.00					1,22,72,000.00
193	PREMIUM TRANSMISSION PRIVATE LTD	FLUID COUPLING 12.75 FCU 51-3	2021-22	1,32,982.00					1,32,982.00
194	TECHNOHILL & ENGINEERING LTD	ROBE ALUMINA WASKO, TYDC STAP	2021-22	2,89,15,508.00					2,89,15,508.00
195	ENERGY EFFICIENCY SERVICES LTD	ENERGY EFFICIENCY CEILING FAN - 50 WATT ENERGY EFFICIENT	2021-22	18,11,153.17					18,11,153.17
196	ENERGY EFFICIENCY SERVICES LTD	CEILING FAN - 50 WATT 4	2021-22	32,81,708.56					32,81,708.56
197	HIRAL TEKTRONIX PVT LTD	SYNCHRONOUS MOTOR CUM DRIFT MOTOR ACB	2021-22	43,628.00					43,628.00
198	DIVESH SCIENTIFIC	CURING TABLETS	2021-22	1,98,119.37					1,98,119.37
199	DIVESH SCIENTIFIC	MOLEDS 1000S CURING TABLETS	2021-22	24,119.00					24,119.00
200	NEEL NEW DELHI	TD Pressure	2021-22	1,08,000.00	2,88,178.28				1,08,000.00
201	NEEL NEW DELHI	TD Pressure	2021-22	4,13,360.00	7,48,179.43				4,13,360.00
202	Sampal GmbH	Procurement of Turbine Hall Door valve for Bikaner Stage II	2021-22	1,267.00					1,267.00
203	REACH SHOWERS IND	CONSTRUCTION OF 01 TYPE QUARTERS AT NTPC BIKANER	2020-21						-
204	LANCO INFRA TECH LTD	CIVIL WORKS FOR CRP NTPC BIKANER	2020-21						-
205	DURGA CONSTRUCTION	CONSTRUCTION OF ROOM FOR CONDENSATE, AIR CONDENSER TO ROOM STAGE II BIKANER	2020-21						-
206	BHARAT HEAVY ELECTRICALS LIMITED	Procurement price for Construction Modification Package for Bikaner STPP, Stage II (2x50 MW and Stage-II CONDENSER)	2020-21						-
207	BHARAT HEAVY ELECTRICALS LTD	PROCUREMENT OF HIGH PRESSURE AND SH SAFETY VALVES OF 50 MW BOILER UNITS	2020-21						-
208	TRANSBIO MEDICALS LTD	Supply of Automatic Hematology Analyzer for NTPC Bikaner per QM	2020-21						-
209	ACE MARKETING PVT LTD SAM TURBO INDUSTRY PVT LTD	PROCUREMENT OF COMPLETE PUMP ASSY OF DAP 4x4x4 HP SEAL WATER PUMP OF 1000 PRESSURE	2020-21						-
210	ACE MARKETING PVT LTD SAM TURBO INDUSTRY PVT LTD	COMPLETE ASSEMBLY OF SERVICE WITH PUMP FOR STG-2 OF BIKANER	2020-21						-
211	TROENT EQUIPMENTS PVT LTD	Procurement of Cooling water for NTPC Bikaner	2020-21						-
212	HONEYWELL AUTOMATION INDIA LTD	Procurement of ANALYSES DETECTOR ANALYSER FOR MONITORING OF TOXIC GASES	2020-21						-
213	JOY MARKETING CO PVT LTD KPODHAR PHARMACEUTICALS CO LTD	Procurement of Component for AHD CHARTER and CONDENSER FOR AHD	2020-21						-
214	RAY DDI SOLUTIONS PRIVATE LIMITED	Procurement of A/D PCs for NTPC Bikaner	2020-21						-
215	RAY DDI SOLUTIONS PRIVATE LIMITED	Procurement of Desktop PCs for NTPC Bikaner	2020-21						-
216	TECHNO SYSTEMS LTD (Dry Ash System)	Air handling	2021-24						-
217	NEEL NEW DELHI	TD Pressure	2021-24						-
218	NEEL NEW DELHI	TD Pressure	2021-24						-
219	Bharat Heavy Electrs	DRY ASH SYSTEMS/Condensate Collection Package for Bikaner STPP, Stage II	2021-24						-
220	WACKER BICOMER PVT LTD (Dry Ash System)	Deliverables for Dry Ash Extractor System, Stage-II, NTPC Bikaner	2021-24						-



परिमल पीयूष / PARIMAL PIYUSH  
 अपर महाप्रबन्धक (व्यवसायिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड / NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Statement of Liability Due

Part  
Form-5

Name of the Company Name of the Power Station		NTPC Limited Rihand Super Thermal Power Station Stage		Amount in Rs.						
Sr. No.	Name of the Party	Name of the work	Year of creation of liability captured in Class Sheet	Uncharged liabilities relating to CB 01.04.2022	Liability in additional capitalisation for 2022-23 as per annexure B-column 9	Contractors ERM system	Discharge during the year 2022-23 -by payment	Discharge during the year 2022-23 -by receipt	Discharge during the year 2022-23 Total	Uncharged liabilities relating to CB 31.03.2023
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
For assets eligible for normal ROP (A)										
163	BHARAT HEAVY ELECTRICALS LTD	Procurement of bolts for PA fan stage-II for NTPC Rihand	2020-21	-	-	-	-	-	-	-
164	RAVIND INTERNATIONAL LLP	PROCUREMENT OF CONCRETE CONCRETE FOR RIVAND (GMB)	2020-21	-	-	-	-	-	-	-
165	DURGIA CONSTRUCTION	CONSTRUCTION OF 10KV MIB DEMONSTR. BUS DEVICE	2021-22	12,08,438.26	-	-	-	-	-	12,08,438.26
166	Bharat Heavy Elect	140/10KV Switchgear Complete Package for Signal STPS, Stage-I	2021-22	8,98,888.00	-	-	-	-	-	8,98,888.00
167	Fluoride Private Lim	PROCUREMENT OF SPARES FOR STACKER RECLAIMER @ COP Stage II (NTPC Rihand)	2021-22	35,25,580.90	-	-	-	-	-	35,25,580.90
168	AME India Limited	Implementation of Automatic Generation Control AGC at NTPC Rihand Superthermal Power Station	2021-22	42,71,075.90	-	-	37,42,490.00	-	37,42,490.00	5,28,585.90
169	SIDDH VINAYAK CONSTRUCTION COMPANY	Construction of Battered led in Trench Club in Township	2021-22	2,54,438.33	-	-	-	-	-	2,54,438.33
170	A Z Z SUPPLIER	Mail - Materials Identification, Pans and/or-Pan Identification File	2021-22	30,138.30	-	-	-	-	-	30,138.30
171	Frugality Technologies PVT LTD	PLI - HD VIDEO CONFERENCE EQUIPMENT-10000	2021-22	2,16,262.08	-	-	36,547.00	-	36,547.00	1,82,715.08
172	PREMIER TRANSMISSION PRIVATE LTD	GEAR BOX PREMIUM STL 800 18.1, COMP ASST ST-II	2021-22	1,22,72,008.00	-	-	1,22,72,008.00	-	1,22,72,008.00	-
173	PREMIER TRANSMISSION PRIVATE LTD	FLUID COUPLING 12.75 PSI ST-II	2021-22	1,32,962.00	-	-	1,32,969.00	309.00	1,32,962.00	-
174	TECHACORAL & ENGINEERING LTD	SCHEMATIC DRAWING FOR TYPE BOND	2021-22	2,09,15,800.00	-	-	-	-	-	2,09,15,800.00
175	ENERGY EFFICIENCY SERVICES LTD	ENERGY EFFICIENT CFL 800 P.W. - 10 WATT	2021-22	18,11,163.17	-	-	17,35,184.80	-	17,35,184.80	74,978.37
176	ENERGY EFFICIENCY SERVICES LTD	ENERGY EFFICIENT CFL 800 P.W. - 10 WATT w. 1	2021-22	32,81,798.98	-	-	32,81,798.98	-	32,81,798.98	-
177	HWAL TECHNOLOGY PVT LTD	BONNET-MC-FAZE CLM EHER PRESS ACE	2021-22	43,028.80	-	-	-	-	-	43,028.80
178	DINSH SCIENTIFIC	CURING TANK-STD	2021-22	1,36,110.37	-	-	1,36,110.37	-	1,36,110.37	-
179	DINSH SCIENTIFIC	MOLDS 1000/CLM MOLD 30MM	2021-22	24,119.88	-	-	24,119.88	-	24,119.88	-
180	SHRI NEW COLI	TC Packages	2021-22	6,80,029.84	-	-	-	-	-	6,80,029.84
181	SHRI NEW COLI	SD Packages	2021-22	11,78,619.02	-	-	-	-	-	11,78,619.02
182	Bangal Group	Procurement of Tables M/L, Chair value for Rihand Stage-II	2021-22	1,287.50	-	-	-	-	-	1,287.50
183	REASON ENGINEERS IND	CONSTRUCTION OF STI TYPE QUANTERS AT NTPC-RIHAND	2020-21	-	38,22,698.88	-	-	-	-	38,22,698.88
184	LARGO INFRASTRUC LTD	CIVIL WORKS FOR CMP NTPC Rihand	2020-21	-	35,88,903.00	-	-	-	-	35,88,903.00
185	DURGIA CONSTRUCTION	CONSTRUCTION OF 10KV RECLAIMER, BUS DEVICE	2022-23	-	13,60,797.00	-	-	-	-	13,60,797.00
186	BHARAT HEAVY ELECTRICALS LIMITED	Equipment price for Construction Modification Package for Rihand STPS Stage-I (2x50 MW) and Stage-II (2x30 MW)	2022-23	-	15,85,778.32	-	-	-	-	15,85,778.32
187	BHARAT HEAVY ELECTRICALS LTD	PROCUREMENT OF 10KV CONDUIT AND ST SAFETY VALVES OF 100 MM DIAMETER LIMITS	2022-23	-	22,402.00	-	-	-	-	22,402.00
188	TRANSARA BIO-MEDICALS LTD	Supply of Automatic Hematology Analyser for NTPC Rihand Ltd per O&M	2022-23	-	8,94,800.00	-	-	-	-	8,94,800.00
189	ACE MARKETING PVT LTD SMI TURBO INDUSTRY PVT LTD	PROCUREMENT OF COMPLETE PUMP ASSEMBLY OF 100HP 1400RPM HP SEAL WATER PUMP OF	2022-23	-	88,349.00	-	-	-	-	88,349.00
190	ACE MARKETING PVT LTD SMI TURBO INDUSTRY PVT LTD	PROCUREMENT OF COMPLETE ASSEMBLY OF SERVICE WITH PUMP FOR STD-3 OF RIHAND	2022-23	-	9,91,519.00	-	-	-	-	9,91,519.00
191	TRIDENT EQUIPMENTS PVT LTD	Procurement of Conductivity meter for NTPC Rihand	2022-23	-	5,53,210.80	-	-	-	-	5,53,210.80
192	HONEYWELL AUTOMATION INDIA LTD	Procurement of MCL 1500G DETECTOR ANALYSER FOR MONITORING OF TUBES/SAMPLES	2022-23	-	5,28,390.80	-	-	-	-	5,28,390.80
193	JOY MARKETING CO PVT LTD HERLOSHAR PHARMATECO LTD	Procurement of Compressor for A/D 25025RT and COMP-25025RT for 6000	2022-23	-	1,729.82	-	-	-	-	1,729.82
194	SHI DTD SOLUTIONS PRIVATE LIMITED	Procurement of 80 PCs for NTPC Rihand	2022-23	-	8,84,898.00	-	-	-	-	8,84,898.00
195	ANV D&E SOLUTIONS PRIVATE LIM LTD	Procurement of 1000kg PCs for NTPC Rihand	2022-23	-	7,80,398.00	-	-	-	-	7,80,398.00
196	TECRO SYSTEMS LTD (By Air System)	Air handling	2022-24	-	-	-	-	-	-	-
197	SHRI NEW COLI	SD Packages	2022-24	-	-	-	-	-	-	-
198	SHRI NEW COLI	TC Packages	2022-24	-	-	-	-	-	-	-
199	Bharat Heavy Elect	600T 10KV Switchgear Accessory Package for Rihand STPS Stage-I	2023-24	-	-	-	-	-	-	-
200	MACAWBER BEEHAY PVT LTD (By Air System)	Balance work for Dry Air Intake System, Stage-I, NTPC Rihand	2023-24	-	-	-	-	-	-	-



**परिमल पीयूष/PARIMAL PIYUSH**  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)



Statement of Liability Flow

Part  
Form-D

Name of the Company: Name of the Power Station:		NTPC Limited Bhandari Super Thermal Power Station Bhandari		Amount in ₹						
Sr. No.	Name of the Party	Name of the work	Year of creation of liability (as per Contract)	Undischarged liability relating to 31.03.2023	Settlement in 2023-24 as per schedule 1B column 8	Contractors CRV updates	Discharge during the year 2023-24	Discharge during the year 2023-24	Discharge during the year 2023-24	Undischarged liability relating to 31.03.2023
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)
Car Assets eligible for normal Dep. Wd										
183	BHARAT HEAVY ELECTRICALS LTD	Procurement of blades for PA fan stage-II for NTPC Bhandari	2020-21							
184	RAMAD INTERNATIONAL LLP	PROCUREMENT OF CONCRETE PUMPERS FOR SHANDI (GMA)	2020-21							
185	BUNGA CONSTRUCTION	CONSTRUCTION OF NON RESIDENTIAL BUNGALOWS	2011-22	12,08,428.26						
186	Bharat Heavy Elects	400 Tons/ Batchyard Extension Package for Stage II STG	2021-22	6,80,088.80			5,41,884.28		5,41,789.20	6,80,088.80
187	Flanesh Private Ltd	PROCUREMENT OF SPARE PARTS FOR RECLAIMER IN CRP Stage II BTPC Bhandari	2021-22	36,28,590.80						36,28,590.80
188	ABB India Limited	Modernization of Automatic Generation Control AGC at NTPC Bhandari Superthermal Power Station	2021-22	5,28,589.00						5,28,589.00
189	ROCK WINDYAK CONSTRUCTION COMPANY	Construction of Bedroom Hall in Tennis Club in Jalandhar	2021-22	2,94,430.00						2,94,430.00
190	A 2 Z SUPPLIES	MVA - Domestic Identification, Face 11MVA+ Data Processing Term	2021-22	30,138.80						30,138.80
191	Pugity Technologies Pvt Ltd	PLANT WAREHOUSE EQUIPMENT	2021-22	1,82,731.80			20,138.80		20,138.80	1,82,731.80
192	PRISMUM TRANSMISSION PRIVATE LTD	CGAR BOX PROVIDED WITH 8000 MVA COMPASSY ST-2	2021-22							
193	PRISMUM TRANSMISSION PRIVATE LTD	FLUID COUPLING 12 TB FCU ST-3	2021-22							
194	TECHNOFLEX & ENGINEERING LTD	BOILER ALUMINA WASHAL EQUIPMENT	2021-22	2,89,18,800.00						2,89,18,800.00
195	ENERGY EFFICIENCY SERVICES LTD	ENERGY EFFICIENT COOLING FAN - 30 WATT	2021-22	74,868.37						74,868.37
196	ENERGY EFFICIENCY SERVICES LTD	ENERGY EFFICIENT COOLING FAN - 30 WATT M-3	2021-22							
197	HRLM, TEXTRONIX PVT LTD	GEOMETRIC FAC-FACE GRINDING EQUIPMENT	2021-22	40,839.00			40,828.00		40,828.00	
198	DINESH SCIENTIFIC	CURING TANKS	2021-22							
199	DINESH SCIENTIFIC	INDUCTION OVEN/CLAVE	2021-22							
200	SHRI NEW DELHI	10 Drawings	2021-22	6,68,234.84						6,68,234.84
201	SHRI NEW DELHI	30 Drawings	2021-22	11,78,218.50						11,78,218.50
202	Sankar Ghosh	Procurement of Turbine MFL Drawings for Mixed Stage II	2021-22	1,287.55						1,287.55
203	RENOON ENGINEERS IND	CONSTRUCTION OF ST TYPE QUANTONS AT NTPC-BHANDARI	2022-23	36,32,458.55						36,32,458.55
204	LAWOO INFRATECH LTD	CHILL WORKSHOP FOR NTPC Bhandari	2022-23	35,89,888.80						35,89,888.80
205	BUNGA CONSTRUCTION	CONSTRUCTION OF NON RESIDENTIAL BUNGALOWS FOR STAGE II STG for Equipment House for Extension/Modification Package for Mixed STG Stage II (2400 MW) and Stage III (2400 MW)	2022-23	15,86,787.63			13,82,787.62		13,82,787.62	15,86,787.63
206	BHARAT HEAVY ELECTRICALS LIMITED	Procurement of HPI CRH ORIM AND SH SAFETY VALVES OF 503 SIZE FOR STG II	2022-23	29,462.80			22,462.80		22,462.80	29,462.80
207	TRANSKOR BID-MODERN LTD	Supply of Automatic Headstage Analysis for NTPC Bhandari per GEM PROCEEDURES	2022-23	8,94,880.88			8,94,880.88		8,94,880.88	
208	ACE MARKETING PVT LTD/SAM TURBO INDUSTRY PVT LTD	COMPLETE PUMP ASSEMBLY OF PUMP AND IMR SEAL	2022-23	88,349.00						88,349.00
209	ACE MARKETING PVT LTD/SAM TURBO INDUSTRY PVT LTD	COMPLETE ASSEMBLY OF SERVICE WATER PUMP FOR STG-2 OF BHANDARI	2022-23	8,91,518.00			8,91,518.00		8,91,518.00	
210	TRIDENT EQUIPMENTS PVT LTD	Procurement of Conductivity Probe for NTPC Bhandari	2022-23	5,50,216.00			5,50,216.00		5,50,216.00	
211	HONEYWELL AUTOMATION INDIA LTD	Procurement of MULTISCOPE DETECTOR, AVAL 1800 FOR MONITORING OF TOXIC GASES	2022-23	6,26,358.80			6,28,380.80		6,28,380.80	
212	JOY MARKETING CO PVT LTD/ FRODOKAR PNEUMATIC CO LTD	Procurement of Compressor for AIO 2400T and COMPRESSORS FOR AIO1	2022-23	1,738.82						1,738.82
213	ANV GAS SOLUTIONS PRIVATE LIMITED	Procurement of AIO PCs for NTPC Bhandari	2022-23	8,94,880.00						8,94,880.00
214	ANV GAS SOLUTIONS PRIVATE LIMITED	Procurement of Damaged PCs for NTPC Bhandari	2022-23	7,60,288.80						7,60,288.80
	SHRI NEW DELHI	Art/Handing	2023-24							90,51,702.08
	SHRI NEW DELHI	80 Package	2023-24							90,51,702.08
	SHRI NEW DELHI	10 Package	2023-24							90,51,702.08
	Bharat Heavy Elects	400 Tons/ Batchyard Extension Package for Mixed STG Stage II	2023-24							4,24,657.80
	MECHAVERT ENGINEERING PVT LTD (By Ash System)	Supply of Dry Ash Collector System, Stage II, NTPC Bhandari	2023-24							4,24,657.80
										12,58,683.80

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परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Statement of Liability Flow

Page 6

Name of the Company:		NTPC Limited								
Name of the Power Station:		Bharat Super Thermal Power Station Stage-II								
Sl. No.	Name of the Party	Name of the work	Year of creation of liability mentioned in Draw Book	Undischarged liability relating to 01.01.2019	liability in additional capitalisation for 2019-20 as per annexure B-c column 2	Contractors ERI updates	Discharge during the year 2019-20	Discharge during the year 2019-20	Discharge during the year 2019-20	Undischarged liability relating to 01.01.2020
										Amount in Rs.
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)
<b>For assets eligible for special PDS 1A</b>										
	CLARK ENTERPRISES (Dry Ash System)	Structural Work for Reinstallation of Superstructure for ASPH 02042	2019-20	-	-	-	-	-	-	-
	EARTH ENGINEERING SOLUTIONS	Procurement and Installation of Effluent Treatment Plant (ETP) at	2019-20	-	-	-	-	-	-	-
	SCANDER ELECTRIC SYSTEMS INDIA (Dry Ash System)	Supply, Erection and Commissioning of ECR System for Stage II Dry Ash System	2019-20	-	-	-	-	-	-	-
	G V ENTERPRISES (Dry Ash System)	Removal of Scrap/Civil Debris From Ash Sheds Pump House Area Stage-II	2019-20	-	-	-	-	-	-	-
	Shree Heavy Electricals Ltd	Supply of 690L make 500 MW Generator Rotor for NTPC Stage-II	2019-20	-	-	-	-	-	-	-
	Shree Heavy Electricals Ltd	SUPPLY OF TIAE-2100FN THRUST BEARING CAP GUID ROLLER BEARING	2019-20	-	-	-	-	-	-	-
	Shree Heavy Electricals Ltd	SUPPLY OF COMPLETE 87P CARTRIDGE ASSEMBLY FOR STAGE-3 AT NTPC	2019-20	-	-	-	-	-	-	-
	THIRMAV LTD	PROCUREMENT OF PCC PANEL FOR STAGE-3 VAM MACHINES FOR NTPC 02042	2019-20	-	-	-	-	-	-	-
	SARTON INTL	Procurement of Online Opacity Analyser for 6900 MW Boiler	2019-20	-	-	-	-	-	-	-
	FORDES MARSHALL PVT LTD	Supply of 6900 MW system for Main turbine, GPP AND CONDENSER COOLING SYSTEM AND INSTALLATION OF EDT Crane for ASPH 02042	2019-20	-	-	-	-	-	-	-
	RDVA INDUSTRIES INDIA PRIVATE LTD (Dry Ash System)	Supply of IP Shell Sealing Ring Assembly for 690L 500 MW Units at NTPC	2019-20	-	-	-	-	-	-	-
	Shree Heavy Electricals Ltd	Procurement of 690L Coiler Spools For NTPC 02042	2019-20	-	-	-	-	-	-	-
	WRL LTD	Procurement of 1 nos of TQDOW pump 808088 from Stage II. TQD	2019-20	-	-	-	-	-	-	-
	PATH CONNECT PVT LTD	PROCUREMENT OF 1.5 TON WINDOWN A/C	2019-20	-	-	-	-	-	-	-
			Total (A)	1,51,48,43,211	1,43,27,142	-75,08,190	4,91,81,215	1,43,74,082	6,38,58,100	1,48,97,94,071
<b>For assets eligible for PDS as Regulated Assets with a special provision 2B</b>										
	Wash Security Pvt Ltd	Augmentation of CCTV Network for security of 4-8-19 Surveillance of NTPC	2019-20	-	-	-	-	-	-	-
			Total (B)							
				1,51,48,43,211	1,43,27,142	-75,08,190	4,91,81,215	1,43,74,082	6,38,58,100	1,48,97,94,071

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 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement of Liability Book

Part I  
Form-2

Name of the Company		NTPC Location		Amount in INR							
Name of the Power Station		Rajind Super Thermal Power Station Stage		Year of creation of liability capitalised in Gross Capex	Liability in addition capitalisation for 2020-21 as per structure Structure 2	Contracted EPC completion	Discharge during the year 2020-21	Discharge during the year 2020-21	Discharge during the year 2020-21	Un-discharged liability relating to 01.01.2021	Un-discharged liability relating to 31.03.2021
(I)	(II)	(III)	(IV)								
<b>For assets eligible for special rate (A)</b>											
	CLASSIC ENTERPRISES (Dry Ash System)	Subsidiary Work for Reconstruction of Superheaters for ACPH, Rajind	2023-24								
	SATHI GEARTECH SYSTEMS	Procurement and installation of 25000 Tracked Plant (TCP) at	2023-24								
	BC-REIDER ELECTRIC SYSTEMS INDIA (Dry Ash System)	Supply, Erection and Commissioning of 25000 Tracked Plant (TCP) for STG II (Dry Ash)	2023-24								
	S V ENTERPRISES (Dry Ash System)	Removal of Sump/Catch Basin From Ash Slurry Pump House Area Stage-II	2023-24								
	Bharat Heavy Electricals Ltd	Supply of 25000 kW Generator Motor for NTPC-Rajind	2023-24								
	Bharat Heavy Electricals Ltd	SUPPLY OF 25000-KVA GEN-SET MOTOR, CAP 500 KW 2023-24 - 25000 KW	2023-24								
	Bharat Heavy Electricals Ltd	SUPPLY OF COMPLETE RFP CARTRIDGE ASSEMBLY FOR STAGE-4 AT NTPC	2023-24								
	TRASKOVA LTD	PROCUREMENT OF PLC PANEL FOR STAGE-3 VMM MACHINES FOR MTRC RAMP	2023-24								
	SARTON INTL	Procurement of Online Capacity Analyser for 5000 MW RAMP	2023-24								
	FORBES MARSHALL PVT LTD	Supply of VMS system for 25000 MW RAMP AND 25000 MW RAMP	2023-24								
	RIVA INDUSTRIES-INDIA PRIVATE LTD (Dry Ash System)	Supply and installation of EDT Crane for ACPH Building, Rajind Stage	2023-24								
	Bharat Heavy Electricals Ltd	Supply of 25000 kW Generator Motor for NTPC-Rajind	2023-24								
	Bharat Heavy Electricals Ltd	Procurement of 25000 kW Generator Motor for NTPC-Rajind	2023-24								
	WPL LTD	Procurement of Impeller of TGOW pump, 25000 kW capacity, Stage II, 25000	2023-24								
	BATH CONSULT PVT LTD	PROCUREMENT OF 1.5 TON WINCH A.C	2023-24								
			Total (A)	7,21,81,813	-32,42,081	17,18,81,885	5,58,11,582	23,94,91,809	1,20,31,86,074	1,20,31,86,074	
<b>For assets eligible for EOL at Weighted Average Rate of Interest as per (B)</b>											
	Room Security Pvt Ltd	Augmentation of CCTV Network for Security -1 & 2- Substation at NTPC	2023-24								
			Total (B)								
				7,21,81,813	-32,42,081	17,18,81,885	5,58,11,582	23,94,91,809	1,20,31,86,074	1,20,31,86,074	

**परिमल पीयूष / PARIMAL PIYUSH**  
 अपर महाप्रबन्धक (सांनिहितिक)  
 Addl. General Manager (Commercial)  
 एन टी सी लिमिटेड / NTPC LIMITED  
 EOC, A-5A, Sector-24, Noida-201301 (U.P.)

Statement of Liabilities Flow

Name of the Company / Name of the Power Station		NTPC Limited / Noida Super Thermal Power Station Stage		Amount in INR					
Sl. No.	Name of the Party	Name of the work	Year of creation of liability captured in Gross Block	liability in additional capitalisation for 2021-22 as per Annexure B-column B	Contractor CRV updated	Discharge during the year 2021-22	Discharge during the year 2021-22	Discharge during the year 2021-22	Uncharged liability as relating to 31.03.2022
(1)	(2)	(3)	(4)	(5)	(6)	(7) Discharge	(8) by reversal	(9) Total	(10)
<b>For assets eligible for normal Book (A)</b>									
	CLASSIC ENTERPRISES (Dry Ash System)	Structural Work for Reconstruction of Superstructure for AMPM, Phase-I	2023-24						
	EARTH ENVIROTECH SYSTEMS	Procurement and installation of Effluent Treatment Plant (ETP) at Site, Erection and Commissioning of DCR, Boiler for CDS II (Dry Ash System)	2023-24						
	S V ENTERPRISES (Dry Ash System)	Removal of 5000Cwt Debris From Ash Slurry Pump House Area Stage-II	2023-24						
	Shakti Heavy Electricals Ltd	Supply of GHCL make 500 KVA Generator Motor for NTPC-Rohat	2023-24						
	Shakti Heavy Electricals Ltd	SUPPLY OF 81401-3/200HP, 3-Wheel BEARING, CAP GUD RE 200/32, 36 DIO DR	2023-24						
	Shakti Heavy Electricals Ltd	DELIVERY OF COMPLETE AMP CARTRIDGE ASSEMBLY FOR STAGE-4 AT NTPC	2023-24						
	THERMAX LTD	PROCUREMENT OF PDC PANEL FOR STAGE-3 VAM MACHINES FOR NTPC ROHAT	2023-24						
	SARGOL INTL	Procurement of Online Quality Analyser for 6000 MW IN-ETDP	2023-24						
	FORBES MARSHALL PVT LTD	Supply of VIB system for Main turbine,HPF AND D/D/PA PAN of Stage-I	2023-24						
	REVA INDUSTRIES INDIA PRIVATE LTD (Dry Ash System)	Supply and installation of SCOT Case for AMPM Building Rohat stage-	2023-24						
	Shakti Heavy Electricals Ltd	Supply of IP Shaft Sealing Ring Assembly for GHCL 500 MW Units at NTPC	2023-24						
	Shakti Heavy Electricals Ltd	Procurement of GHCL Capax Spares For 500Ct. Boiler	2023-24						
	WFL LTD	Procurement of Impeller of TOSCH pump 50000W shaft at Stage II, TRO	2023-24						
	PATH CONNECT PVT LTD	PROCUREMENT OF T.S TORRENS/COVA S.C	2023-24						
			Total (A)	4,08,70,311	50,94,488	8,85,45,172	92,65,108	8,78,34,280	1,24,61,99,239
<b>For assets eligible for Book of Weighted Average Rate of Interest on Book (B)</b>									
	Moran Security Pvt Ltd	Augmentation of CCTV Network for Security 414-cp-312280068 at NTPC	2023-24						
			Total (B)						
				4,08,70,311	50,94,488	8,85,45,172	92,65,108	8,78,34,280	1,24,61,99,239

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (व्यापारिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Statement of Liability Flow

Part  
Form-B

Name of the Company Name of the Power Station		NTPC Limited Nehru Nagar Thermal Power Station Stage		Amount in ₹						
Sr. No.	Name of the Party	Name of the work	Year of creation of liability captured in Gross Book	Undischarged liabilities relating to 08/01/04 2022	Liability in additional requirements for 2022-23 as per structure till end June 23	Carried over ERY up to date	Discharge during the year 2022-23	Discharge during the year 2022-23	Discharge during the year 2022-23	Undischarged liabilities relating to 08/31/23 2023
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
For assets eligible for normal RoF (A)							-By payment	-By reversal	Total	
	CLASSIC ENTERPRISES (Dry Ash System)	Structure Work for Reconstruction of Superstructure for ASPH Stage	2023-24	-	-	-	-	-	-	-
	EARTH ENVIROTECH SYSTEMS	Procurement and installation of Effluent Treatment Plant (ETPL)	2023-24	-	-	-	-	-	-	-
	SCHNEIDER ELECTRIC SYSTEMS INDIA (Dry Ash System)	Supply, installation and Commissioning of DCS SYSTEM FOR STAGE-3	2023-24	-	-	-	-	-	-	-
	S V ENTERPRISES (Dry Ash System)	Reversal of Scrap/Cold Oil from Ash Silo to Pump House Area Stage-3	2023-24	-	-	-	-	-	-	-
	Shree Heavy Electricals Ltd	Supply of BHEL make 500 MW Generator Rotor for NTPC Bikaner	2023-24	-	-	-	-	-	-	-
	Shree Heavy Electricals Ltd	SUPPLY OF KW21-21 TORQUE THRUST MACHINING : CAP END RE DESIG-30 MO 130	2023-24	-	-	-	-	-	-	-
	Shree Heavy Electricals Ltd	SUPPLY OF COMPLETE MCP CARTRIDGE ASSEMBLY FOR STAGE-3 AT NTPC	2023-24	-	-	-	-	-	-	-
	THORANA LTD	PROCUREMENT OF ROLL PAVIL FOR STAGE-3 WMS MACHINES FOR NTPC BIKANER	2023-24	-	-	-	-	-	-	-
	SMTECH PVT	Procurement of Delta Capacity Analyzer for DCSO Area Bikaner	2023-24	-	-	-	-	-	-	-
	FORBES MARSHALL PVT LTD	Supply of WMS system for Main substation AND TORQUE PAVIL at Stage	2023-24	-	-	-	-	-	-	-
	NEW INDUSTRIES INDIA PRIVATE LTD (Dry Ash System)	Supply and installation of EOT Crane for ASPH Building Stage-3	2023-24	-	-	-	-	-	-	-
	Shree Heavy Electricals Ltd	Supply of IP Shell Sealing Ring Assembly for BHEL 500 MW Unit at NTPC	2023-24	-	-	-	-	-	-	-
	Shree Heavy Electricals Ltd	Procurement of BHEL Capite Spindle For MCP Bikaner	2023-24	-	-	-	-	-	-	-
	WRL LTD	Procurement of impeller of TORCH pump, GOSOW pump of Stage-3, TMO	2023-24	-	-	-	-	-	-	-
	PASH CONNECT PVT LTD	PROCUREMENT OF I.S. TON WINDOW & c	2023-24	-	-	-	-	-	-	-
<b>Total (A)</b>				<b>1,24,00,98,238</b>	<b>1,31,36,378</b>	<b>81,52,638</b>	<b>8,48,17,388</b>	<b>33,28,128</b>	<b>8,76,87,887</b>	<b>1,17,38,25,197</b>
For assets eligible for RoF of Wharfedale Average Rate of Interest on loan (B)										
	Vicon Security Pvt Ltd	Augmentation of CCTV Network for Security (4-8-C) Surveillance at NTPC	2023-24	-	-	-	-	-	-	-
<b>Total (B)</b>										
<b>Total</b>				<b>1,24,00,98,238</b>	<b>1,31,36,378</b>	<b>81,52,638</b>	<b>8,48,17,388</b>	<b>33,28,128</b>	<b>8,76,87,887</b>	<b>1,17,38,25,197</b>



परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC-A-8A, Sector-24, Noida-201301 (U.P.)

Statement of Liability Flow

Part/  
Form-B

Name of the Company Name of the Power Station		NTPC Limited Bharat Super Thermal Power Station Stage		Amount in Rs.							
Sr. No.	Name of the Party	Name of the work	Year of incurrence of liability as per the Gross Book	Undisbursed liabilities relating to DD 01.04.2023	Liability in additional mobilisation for 2023-24 as per schedule 02 column 0	Contractors B/BY 00/00/00	Discharge during the year 2023-24	Discharge during the year 2023-24	Discharge during the year 2023-24	Undisbursed liabilities relating to DD 31.03.2024	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
<b>For assets eligible for revised DCR (A)</b>											
	CLASSIC ENGINEERING (Dry Ash System)	Electrical Work for Reconstruction of Superstructure for AOPM, Bharat	2023-24		5,36,424.00			5,36,424.00		5,36,424.00	
	SOUTH ENGINEERING SYSTEMS	Procurement and installation of Off-gas Treatment Plant (OTP) at	2023-24		76,302.00			76,302.00		76,302.00	
	SCHREIBER ELECTRIC SYSTEMS INDIA (Dry Ash System)	Supply, erection and Commissioning of DCR System for STG B, Dry Ash System	2023-24		3,52,000.00			3,52,000.00		3,52,000.00	
	S V ENTERPRISES (Dry Ash System)	Removal of Sulphuric Acids from Ash Slurry Pump House Area Stage-II	2023-24		1,75,007.00			1,75,007.00		1,75,007.00	
	Bharat Heavy Electricals Ltd	Supply of IPHEL make 500 MW Generator Rotor for NTPC Bharat	2023-24		1,87,900.00			1,87,900.00		1,87,900.00	
	Bharat Heavy Electricals Ltd	SUPPLY OF R1001-212MMPS THRUST BEARING : CAP END FOR 2021-02-30, W/L 135	2023-24		33,099.00			33,099.00		33,099.00	
	Bharat Heavy Electricals Ltd	SUPPLY OF COMPLETE I/P CARTRIDGE ASSEMBLY FOR STAGE-3 AT NTPC	2023-24		10,39,423.70			10,39,423.70		10,39,423.70	
	THEBMA LTD	PROCUREMENT OF P/C PANEL FOR STAGE-3 VAM MACHINES FOR NTPC Bharat	2023-24		24,000.00			24,000.00		24,000.00	
	SARTECH INTL	Procurement of Online Safety Analyser for 60000 MW STG-3A	2023-24		86,712.00			86,712.00		86,712.00	
	FORDE MARSHALL PVT LTD	Supply of HMC system for Main Online DCF AND OFF-DISA CAN of Bharat	2023-24		26,26,812.00			26,26,812.00		26,26,812.00	
	ROWA INDUSTRIES INDIA PRIVATE LTD. (Dry Ash System)	Supply and installation of DDT Choke for AOPM Building Bharat stage.	2023-24		99,071.00			99,071.00		99,071.00	
	Bharat Heavy Electricals Ltd	Supply of IP Shaft Sealing Ring Assembly for IPHEL 500 MW Units at NTPC	2023-24		49,000.00			49,000.00		49,000.00	
	Bharat Heavy Electricals Ltd	Procurement of IPHEL Capita Spindle for NTPC Bharat	2023-24		17,00,290.00			17,00,290.00		17,00,290.00	
	RPL LTD	Procurement of Inverter of TOCCV pump, SGCAN side of Stage B, VAM	2023-24		2,44,045.00			2,44,045.00		2,44,045.00	
	PASHY CONNECT PVT LTD	PROCUREMENT OF 1.5 TORQUE MOTOR A.C	2023-24		9,259.00			9,259.00		9,259.00	
				<b>Total (A)</b>	<b>1,17,96,31,107</b>	<b>1,88,64,014</b>	<b>2,35,52,031</b>	<b>6,51,23,628</b>	<b>2,42,009</b>	<b>6,66,65,290</b>	<b>1,18,53,08,299</b>
<b>For assets eligible for DCR at Weighted Average Rate of Interest on June 30</b>											
	Green Security Pvt Ltd	Augmentation of CCTV Network for Security of Bharat Super Thermal at NTPC	2023-24		1,16,28,495.00					1,16,28,495.00	
				<b>Total (B)</b>	<b>1,16,28,495</b>						<b>1,16,28,495</b>
				<b>Total</b>	<b>1,19,12,59,602</b>	<b>1,88,64,014</b>	<b>2,35,52,031</b>	<b>6,51,23,628</b>	<b>1,42,009</b>	<b>6,66,65,290</b>	<b>1,19,69,36,794</b>

**परिमल पीयूष/PARIMAL PIYUSH**  
 अपर महाप्रबन्धक (व्यावसायिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-BA, Sector-24, Noida-201301 (U.P.)

Summary of Gross Block reconciliation (2019-20)

Amount in Rs

Sr. No.	Particular	Rihand-I	Rihand-II	Rihand-III	Total
1	Closing Gross Block as per Audited Balance Sheet 31.03.2020 (Ind-AS)	8,47,30,31,973	16,68,32,16,186	55,52,33,45,571	80,67,95,93,729
2	Opening Gross Block as per Audited Balance Sheet 01.04.2019 (Ind-AS)	7,62,35,89,943	16,41,85,05,564	54,49,73,21,325	78,53,94,16,832
3	Addition During the Year (1-2) (Ind-AS)	84,94,42,030	26,47,10,622	1,02,60,24,246	2,14,01,76,898
4	Ind-AS Adjustment	-32,92,82,886	-22,67,35,283	-7,30,49,003	-62,90,67,173
5	Addition During the Year (3+4) (IGAAP)	52,01,59,144	3,79,75,339	95,29,75,243	1,51,11,09,725



(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Year wise Statement of Additional Capitalisation**

**PART-I  
Annex- IA (Additional Form)**

Name of the Petitioner		NTPC Limited							Amount in Rs.
Name of the Generating Station		Rihand Super Thermal Power Station Stage-III							
Date of Commercial Operation		27-03-2014							
For Financial Year		2019-20							
Sl. No.	Head of Work /Equipment	Party Name	ACE (Actual)						
			Accrual basis as per Note 2	Ind AS Adj.	Accrual Basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3	
1	2	3	4	5	6	7	8	9	
<b>A</b>	<b>Claims</b>								
<b>A.1</b>	<b>Claimed/ Allowed Items</b>								
<b>A.1.1</b>	<b>Works Under original scope in main plant packages</b>								
<b>A.1.1a</b>	<b>SG+TG</b>								
A.1.1a.i	SG Island and ESP	BHEL	78,88,219	-	78,88,219	-	78,88,219	-	
A.1.1a.ii	TG Island	BHEL	97,82,483	-	97,82,483	6,26,777	91,55,706	-	
	<b>Subtotal (A.1.1a)</b>		<b>1,76,70,702</b>	<b>-</b>	<b>1,76,70,702</b>	<b>6,26,777</b>	<b>1,70,43,925</b>	<b>-</b>	
A.1.1b	Coal Handling System	Larsen & Toubro Ltd	2,63,637	-	2,63,637	-	2,63,637	-	
A.1.1c	Switch gear Package	ABB India Ltd/ GE India Industrial Pvt Ltd	10,15,302	-	10,15,302	10,15,302	-	-	
A.1.1e	Road & Drainage		40,68,481	-	40,68,481	-	40,68,481	-	
A.1.1f	Fire Protection Package	Lloyd Insulations India Ltd	56,534	-	56,534	56,534	-	-	
A.1.1g	Transformers Package: Power Transformers	CG Power And Industrial Solutions/ Regent Electro-Mech Pvt Ltd	1,54,750	-	1,54,750	-	1,54,750	-	
A.1.1h	Main plant/Chimney/CW Systems/Offsite Civil works	Simplex Infrastructures Ltd	15,27,236	-	15,27,236	15,27,236	-	-	
A.1.1i	Tools & Plants	Various Parties	34,43,789	-	34,43,789	19,62,500	14,81,289	-	
A.1.1j	STATION C&I Package	Schneider Electric	2,098	-	2,098	-	2,098	-	
A.1.1k	Temp. construction & enabling works	Logicladder Technologies Pvt Ltd	26,165	-	26,165	-	26,165	-	
A.1.1m	ELECTRICAL EQUIPMENTS (Cables, Cable facilities & Grounding)	Petron Engineering	-1,07,898	-	-1,07,898	48,439	-1,56,337	-	
A.1.1o	Central Repair Facility (CRF) Building - Civil Works	Lanco Infratech Ltd	2,57,307	-	2,57,307	-	2,57,307	-	
	<b>Subtotal (A.1.1)</b>		<b>2,83,78,103</b>	<b>-</b>	<b>2,83,78,103</b>	<b>52,36,789</b>	<b>2,31,41,314</b>	<b>-</b>	
A.1.2	Township: Quarters and other facilities	Various Parties	68,91,479	-	68,91,479	15,37,318	53,54,161	-	
A.1.3	Ash Water Recirculation	Bridge & Roof Company India Ltd	55,80,400	-	55,80,400	45,64,649	10,15,751	-	

**परिमल पीयूष/PARIMAL PIYUSH**  
अपर-महोपबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)



A.1.5	Sewage Treatment Plant	Hydrotech Paryavaran (India) Pvt. Ltd/ Enviro Care Engg/ Chauhan Brothers	1,40,95,176	-	1,40,95,176	5,11,017	1,35,84,159	-
A.1.6	Package ERV		-75,88,192	-	-75,88,192	-75,88,192	-	-
	<b>Subtotal (A.1)</b>		<b>4,73,56,965</b>	<b>-</b>	<b>4,73,56,965</b>	<b>42,61,581</b>	<b>4,30,95,385</b>	<b>-</b>
A.2	Capitalization of MBOAs		1,26,41,217	-	1,26,41,217	10,48,054	1,15,92,164	-
A.3	Decap of Spares (Part of Capital Cost)		-46,25,052	-10,53,472	-56,78,524	-	-56,78,524	-
A.4	Decap of MBOA: Part of Capital Cost		-1,23,87,973	-	-1,23,87,973	-	-1,23,87,973	-
	<b>TOTAL Claim (A)</b>		<b>4,29,85,158</b>	<b>-10,53,472</b>	<b>4,19,31,686</b>	<b>53,10,634</b>	<b>3,66,21,051</b>	<b>-</b>
<b>B</b>	<b>Exclusions</b>							
B.1	Capitalization of Spares	Various Parties	6,47,89,751.30	-	6,47,89,751	-	6,47,89,751	-
B.2	Decap of MBOA- Not Part of Capital Cost		-2,91,063	-	-2,91,063	-	-2,91,063	-
B.3	IndAS Adjustment							
1	Unit Overhauling		7,18,52,635	-7,18,52,635	-	-	-	-
	<b>Subtotal(B.3)</b>		<b>7,18,52,635</b>	<b>-7,18,52,635</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
B.4	Loan ERV		85,79,24,550	-	85,79,24,550	14,38,318	85,64,86,232	-
B.5	Inter Unit Transfer		<b>31,38,097</b>	<b>-1,42,896</b>	<b>29,95,201</b>	<b>-</b>	<b>29,95,201</b>	<b>-</b>
B.5.1	EDP, WP machines & SATCOM equipment	To CC-EOC	-4,71,999.00	-1,21,008.00	-5,93,007.00	-	-5,93,007.00	-
		To Vindhyachal	-11,18,728.00	-21,888.00	-11,40,616.00	-	-11,40,616.00	-
		From Rihand (Interunit transfer)	60,000.00	-	60,000.00	-	60,000.00	-
		From Unchahar	53,425.00	-	53,425.00	-	53,425.00	-
		From Farakka	50,754.00	-	50,754.00	-	50,754.00	-
		From Koldam	64,990.00	-	64,990.00	-	64,990.00	-
B.5.2	Plant and machinery	From Tapovan Vishnugad	61,895.00	-	61,895.00	-	61,895.00	-
		From Vindhyachal	44,37,760.00	-	44,37,760.00	-	44,37,760.00	-
B.6	Reversal of Liability		-1,43,74,882	-	-1,43,74,882	-1,43,74,882	-	-
	<b>Total Exclusion (B)</b>		<b>98,30,39,088</b>	<b>-7,19,95,531</b>	<b>91,10,43,557</b>	<b>-1,29,36,564</b>	<b>92,39,80,121</b>	<b>-</b>
	<b>Grand Total (A+B)</b>		<b>1,02,60,24,246</b>	<b>-7,30,49,003</b>	<b>95,29,75,243</b>	<b>-76,25,930</b>	<b>96,06,01,173</b>	<b>-</b>

(Petitioner)

Summary of Gross Block reconciliation (2020-21)

Amount in Rs

Sr. No.	Particular	Rihand-I	Rihand-II	Rihand-III	TOTAL GROSS BLOCK (Rs)
1	Closing Gross Block as per Audited Balance Sheet 31.03.2021 (Ind-AS)	8,89,78,85,445.95	16,97,51,52,367.09	56,17,18,17,079.44	82,04,48,54,892.48
2	Opening Gross Block as per Audited Balance Sheet 01.04.2020 (Ind-AS)	8,47,61,16,703.15	16,68,01,31,454.48	55,52,33,45,570.75	80,67,95,93,728.38
3	Addition During the Year (1-2) (Ind-AS)	42,17,68,743	29,50,20,913	64,84,71,509	1,36,52,61,164.10
4	Ind-AS Adjustment	-28,60,12,968	-19,85,11,841	-6,04,98,238	- 54,50,23,047.08
5	Addition During the Year (3+4) (IGAAP)	13,57,55,774.93	9,65,09,071.55	58,79,73,270.54	82,02,38,117.02

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Year wise Statement of Additional Capitalisation**

PART-I  
Annex- IIIA (Additional form)

Name of the Postitioner			Amount in Rs.					
Name of the Generating Station			RIIhand Super Thermal Power Station Stage-II					
Date of Commercial Operation			27-03-2014					
For Financial Year			2020-21					
Sl. No.	Head of Work /Equipment	Party Name	ACE Claimed					
			Accrual basis as per Note 2	Ind AS Adj.	Accrual Basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3
1	2	3	4	5	6	7	8	9
A	Claims							
A.1	Claimed/ Allowed Items							
A.1.1	Works Under original scope in main plant packages							
A.1.1a	Road & Drainage	Various Parties	1,70,063	-	1,70,063	-	1,70,063	-
A.1.1b	SWITCHYARD Package	Bharat Heavy Electricals Ltd	40,30,748	-	40,30,748	3,12,366	37,18,400	-
A.1.1c	Fire Protection Package	Lloyd Insulations India Ltd	32,82,521	-	32,82,521	-	32,82,521	-
A.1.1d	Transformers Package	CG Power And Industrial Solutions	16,52,000	-	16,52,000	16,31,000	21,000	-
A.1.1e	Main plant/Chimney/CW System/Offsite Civil works	Simplex Infrastructures Ltd	1,12,54,147	-	1,12,54,147	93,14,041	19,40,106	-
A.1.1f	Temp. construction & enabling works	Various Parties	7,629	-	7,629	-	7,629	-
A.1.1g	ELECTRICAL EQUIPMENTS (Cables, Cable facilities & Grounding)	Petron Engineering	1,60,202.53	-	1,60,203	1,60,202.53	-	-
A.1.1h	PT Plant Package	Monally Bharat Engg. Company	3,19,672	-	3,19,672	-	3,19,672	-
A.1.1i	Central Repair Facility (CRF) Building - Civil Works	Lanco InfraTech Ltd	34,13,618.54	-	34,13,619	34,13,619	-	-
<b>Subtotal (A.1.1)</b>			<b>2,42,90,600</b>	<b>-</b>	<b>2,42,90,600</b>	<b>1,48,31,298</b>	<b>94,59,392</b>	<b>-</b>
A.1.2	Township: Quarters and other facilities	Various Parties	1,20,02,468	-	1,20,02,468	21,94,001	98,08,467	-
A.1.3	Ash Water Recirculation System	Brige & Roof Company India Ltd	1,62,48,703.62	-	1,62,48,704	-	1,62,48,704	-
A.1.4	MGR		2,00,00,000	-	2,00,00,000	-	2,00,00,000	-
A.1.5	Sewage Treatment Plant	Hydrotech Paryavaran (India) Pvt. Ltd	19,04,106.77	-	19,04,109	14,14,366.96	4,89,742	-
A.1.6	Ash Related Works							
A.1.6a	Wagon/ Bogie for transportation of Ash through Rail							
A.1.6a.i	Bogey Task For Alumina Powder (BTAP) Wagon for Ash	Teamaco Rail & Engineering Ltd	50,61,70,414.69	135	50,61,70,550	4,38,16,218	46,23,54,332	-
A.1.6a.ii	Bogie Brake Van Type-BCVM	Teamaco Rail & Engineering Ltd	78,94,651.00	-	78,94,651	-	78,94,651	-
A.1.6b	Ash Bricks Plant	Ram Bihar	3,31,408.89	-	3,31,410	-	3,31,410	-
A.1.6c	3rd Raising of Central Ash Dyke Lagoon-II	National Prestige Construction Co.	10,53,32,816	1,40,753	10,51,62,063	32,77,739	10,19,14,324	-
<b>Subtotal (A.1.6)</b>			<b>61,97,29,291</b>	<b>1,40,618</b>	<b>61,95,88,674</b>	<b>4,70,83,957</b>	<b>57,24,94,717</b>	<b>-</b>
A.1.7	Package FRV		-32,42,061	-	-32,42,061	-32,42,061	-	-
A.1.8	Online-Analyser for CEMS for CO, CO2, Sox, Nox	Forbes Marshall Pvt. Ltd.	79,20,160.00	-	79,20,160	-	79,20,160	-
<b>Subtotal(A.1)</b>			<b>69,68,53,271</b>	<b>-1,40,618</b>	<b>69,67,12,653</b>	<b>6,22,91,472</b>	<b>63,64,21,181</b>	<b>-</b>
A.2	Capitalization of MBOAs		2,15,96,416.69	-	2,15,96,417	40,76,520	1,75,17,896	-
A.3	Decap of Spares (Part of Capital Cost)		-8,26,33,407	-2,96,35,180	-11,24,68,587	-	-11,24,68,587	-

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**श्री अशोक कुमार / PARIMAL PIYUSH**  
 Addl. General Manager (निर्वाहिक)  
 ईय अी श्री ईय अशोक / NTPC LIMITED  
 EOC, A-6A, Sector-24, Noida-201301 (U.P.)

A.4	Decap of MBOA (Part of Capital Cost)		-13,10,858	-21,888	-13,32,746	-	-13,32,745	-
	<b>Total Claim (A)</b>		<b>63,63,05,423</b>	<b>-2,97,97,685</b>	<b>60,65,07,738</b>	<b>6,63,69,993</b>	<b>54,01,37,745</b>	-
<b>B</b>	<b>Exclusions</b>							
B.1	Capitalization of Spares	Various Parties	32,81,59,920.04	16,045.23	32,81,75,965	25,79,759.10	32,35,96,206	-
B.2	Decap of Spares: Not-Part of Capital Cost		-2,96,16,266.47	-	-2,96,16,266	-	-2,96,16,266	-
B.3	IndAS Adjustment							
1	Unit Overhauling		7,77,69,375	-7,77,69,375	-	-	-	-
2	De-Cap of Overhauling Assets		-4,70,52,777	4,70,52,777	-	-	-	-
	<b>Subtotal (B.3)</b>		<b>3,07,16,598</b>	<b>-3,07,16,598</b>	-	-	-	-
B.4	Loan ERV		-26,56,44,335	-	-26,56,44,335	-	-26,56,44,335	-
B.5	Inter Unit Transfer		1,43,62,093	-	1,43,62,093	-	1,43,62,093	-
B.5.1	EDP, WIP machines & SATCOM equipment	To Vindhyachal	-50,805.00	-	-50,805.00	-	-50,805.00	-
B.5.2	Plant and machinery	From Badampur	1,44,12,897.67	-	1,44,12,897.67	-	1,44,12,897.67	-
B.6	Reversal of Liability		-6,38,11,923	-	-6,38,11,923	-6,38,11,923	-	-
	<b>Total Exclusion (B)</b>		<b>1,21,65,086</b>	<b>-3,07,00,553</b>	<b>-1,85,34,467</b>	<b>-8,12,32,164</b>	<b>4,26,97,698</b>	-
	<b>Grand Total A-B)</b>		<b>64,84,71,510</b>	<b>-6,04,98,238</b>	<b>58,79,73,272</b>	<b>51,37,829</b>	<b>58,28,35,443</b>	-

  
(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Summary of Gross Block reconciliation (2021-22)**

Sr. No.	Particular	ST-I	ST-II	ST-III	TOTAL GROSS BLOCK (Rs)
1	Closing Gross Block as per Audited Balance Sheet 31.03.2022 (Ind-AS)	6,87,05,42,295	40,46,95,42,664	1,68,00,60,208	49,02,01,45,167
2	Opening Gross Block as per Audited Balance Sheet 01.04.2021 (Ind-AS)	6,62,49,52,683	40,54,66,76,059	1,12,57,37,246	48,29,73,65,988
3	Addition During the Year (1-2) (Ind-AS)	24,55,89,612	7,71,33,395	55,43,22,962	72,27,79,179
4	Ind-AS Adjustment	2,65,97,002	31,67,53,445	48,78,69,765	83,12,20,212
5	Addition During the Year (3+4) (IGAAP)	27,21,86,615	23,96,20,050	1,04,21,92,727	1,55,39,99,391



(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (व. नि.वि.क.)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Year wise Statement of Additional Capitalisation after COD								
Name of the Petitioner								Amount in Rs.
NTPC Limited								
Name of the Generating Station								
Rihand Super Thermal Power Station Stage-II								
Station COD								
27-03-2014								
For Financial Year								
2021-22								
Sl. No.	Head of Work /Equipment	Party Name	ACE Claimed					
			Accrual basis as per Note-2 of BS	IND AS Adj	Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3
1	2	3	4	5	6	7	8	9
A	Claims							
A.1	Claimed Items							
A.1.1	Works Under original scope in main plant packages							
A.1.1a	SG+TG							
A.1.1.i	SG Island and ESP	BHEL New Delhi	14,04,858.68	-	14,04,859	4,13,340.09	9,91,318	
A.1.1.ii	TG Island	BHEL New Delhi	2,36,09,324.38	-	2,36,09,324	3,80,408.59	2,32,28,916	
	Subtotal (A.1.1a)		2,50,13,983.04	-	2,50,13,983.04	7,93,748.68	2,42,20,234.38	
A.1.1b	Coal Handling Plant		91,68,416.31	-	91,68,416	-	91,68,416	
A.1.1c	SWITCHYARD Package	BHEL New Delhi	32,09,691.00	-	32,09,691	8,88,988.00	23,22,703	
A.1.1d	Road & Drainage		3,69,117.82	-	3,69,118	-	3,69,118	
A.1.1e	Transformers Package	CG Power And Industrial Solutions	20,48,177.00	-	20,48,177	-	20,48,177	
A.1.1f	Temp. construction & enabling works		2,83,137.27	-	2,83,137	-	2,83,137	
A.1.1g	Air Condition & Ventilation System		6,16,037	-	6,16,037	-	6,16,037	
	Subtotal (A.1.1)		2,23,71,727	-	2,23,71,727	16,80,737	2,06,90,990	
A.1.2	Township: Quarters and other facilities	Various Parties	1,27,07,260.59	-	1,27,07,261	14,60,858.29	1,12,46,402	
A.1.3	Ash Related works							
A.1.3a	Transportation of Ash through Rail							
A.1.3a.i	Bogey Tank For Alumina Powder (BTAP) Wagon for Ash	Texmaco Rail & Engineering Ltd	26,29,99,248	-	26,29,99,248	2,09,15,500	24,20,83,746	
A.1.3a.ii	BOGIE BRAKE VAN TYPE-BVCM		41,58,471	-	41,58,471	-	41,58,471	
A.1.3b	Ash Bricks Plant		1,518.40	-	1,518	-	1,518	
A.1.3c	3rd Raising of Central Ash Dyke Lagoon-II	National Prestige Construction Co	20,50,363	-	20,50,363	-	20,50,363	
	Subtotal (A.1.3)		28,92,09,598	-	28,92,09,598	2,09,15,500	24,82,94,090	
A.1.4	Package ERV		10,54,282.68	-	10,54,283	10,54,283	-	
A.1.5	AGC Implementation	ABB India Limited	62,37,466.00	37,885.41	61,99,781	42,71,079.00	19,28,702	
	Subtotal (A.1)		31,15,80,344.32	37,885.41	31,15,42,658.91	2,93,82,466.65	28,21,60,192.26	
A.2	Capitalization of MBOAs	Various Parties	1,68,89,441.17	42,927.08	1,69,32,368	54,91,984.54	1,14,40,384	
A.3	Decap of MBOAs: Part of Capital Cost		25,17,833.23	4,32,912.27	29,50,746	-	29,50,746	
A.4	Decap of Spares: Part of Capital		(1,25,00,515.01)	(42,64,916.37)	1,67,65,431	-	1,67,65,431	
	Total claim (A)		31,34,51,437	46,92,587	30,87,58,850	3,48,74,451	27,38,84,399	
B	Exclusions							
B.1	Items not claimed							

परिमल प्रियुष / PARIMAL PIYUSH  
 अधी. प्रबन्धक (वित्त/आय) / Adul. General Manager (Commercial)  
 एन टी पी सी लिमिटेड / NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

1	Combustion Modification Package							
1.1	Combustion Modification Package-Unit#5	Bharat Heavy Electricals Limited	7,59,49,419.39		7,59,49,419		7,59,49,419	
1.2	Combustion Modification Package-Unit#6	Bharat Heavy Electricals Limited	7,59,49,416.19		7,59,49,416		7,59,49,416	
	<b>Subtotal (B.1)</b>		<b>15,18,98,836</b>	-	<b>15,18,98,836</b>	-	<b>15,18,98,836</b>	-
B.2	Loan ERV		16,04,72,812.72		16,04,72,813		16,04,72,813	
B.3	Ind AS Adjustment							
1	Overhauling		15,46,62,289.30	- 15,46,62,289.30				
2	Decap of Overhauling Assets		- 9,35,77,347.88	9,35,77,347.88				
	<b>Subtotal (B.3)</b>		<b>6,10,84,941.42</b>	- <b>6,10,84,941.42</b>				
B.4	Capitalization of Capital Spares	Various Parties	8,22,18,834	17,617	8,22,36,751	1,60,32,830	6,62,03,921	
B.5	Decap of MBOAs (Not Part of Capital Cost)		- 6,66,097.00		6,66,097		6,66,097	
B.6	Decap of Spares: Not Part of Capital Cost		- 1,32,76,224.04		1,32,76,224		1,32,76,224	
B.7	Inter Unit Transfer		- 19,21,70,785.15	- 28,666.95	- 19,21,99,452.10		- 19,21,99,452.10	
B.7.1	Plant & Machinery	To Unchaer	-3,71,626.26	-19,736.74	- 3,91,363.00		- 3,91,363.00	
		TO Ramagundam	-14,38,91,097.73		- 14,38,91,097.73		- 14,38,91,097.73	
		To Vindhyaçahal	-3,49,118.44		- 3,49,118.44		- 3,49,118.44	
		To Jhajjar	-4,66,01,115.87		- 4,66,01,115.87		- 4,66,01,115.87	
B.7.2	Other Office Equipments	TO Singrauli	-9,06,029.60		- 9,06,029.60		- 9,06,029.60	
B.7.3	EDP, WP machines & SATCOM equipment	To Auraiya	-51,797.25	-8,930.21	- 60,727.46		- 60,727.46	
B.8	Reversal of Liabilities	Various Parties	(86,90,792.66)	6,84,919	93,55,712	93,55,712		
	<b>Total Exclusion Claimed (B)</b>		<b>24,08,71,525</b>	- <b>6,17,60,610</b>	<b>17,91,10,914</b>	<b>66,77,118</b>	<b>17,24,33,797</b>	
	<b>Grand Total (A+B)</b>		<b>56,43,22,962</b>	- <b>6,64,53,197</b>	<b>48,78,69,765</b>	<b>4,15,51,569</b>	<b>44,63,18,196</b>	

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अवर महाप्रबन्धक (व. शाखागत)  
 Addl. General Manager (Contra-credit)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Summary of Gross Block reconciliation (2022-23)

Sr. No.	Particular	ST-I	ST-II	ST-III	TOTAL GROSS BLOCK (Rs)
1	Closing Gross Block as per Audited Balance Sheet 31.03.2022 (Ind-AS)	9,27,49,01,585	40,74,70,40,617	2,24,22,68,048	52,26,42,10,250
2	Opening Gross Block as per Audited Balance Sheet 01.04.2021 (Ind-AS)	6,87,28,57,941	40,46,94,54,164	1,67,78,33,062	49,02,01,45,167
3	Addition During the Year (1-2) (Ind-AS)	2,40,20,43,644	27,75,86,453	56,44,34,986	3,24,40,65,083
4	Ind-AS Adjustment	- 11,20,58,291	9,25,55,750	- 16,28,96,642	- 18,23,99,183
5	Addition During the Year (3+4) (IGAAP)	2,28,99,85,354	37,01,42,203	40,15,38,344	3,06,16,65,900

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)



		Year wise Statement of Additional Capitalisation after COD						Amount in Rs.	
Name of the Petitioner		NTPC Ltd							
Name of the Generating Station		Rihand Super Thermal Power Station Stage-III							
Station COD		27.03.2014							
For Financial Year		2022-23							
Sl. No.	Head of Work /Equipment	Party Name	ACE Claimed						
			Accrual basis as per Note-2 of BS	IND AS Adj	Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3	
1	2	3	4	5	6	7	8	9	
<b>A</b>	<b>Claims</b>								
A.1	Claimed Items								
A.1.1	Works Under original scope in main plant packages								
A.1.1a	Station C&I Package	Schneider Electric Systems	13,13,057.00	-	13,13,057	9,476.88	13,22,534		
A.1.1b	Central Repair Facility (CRF) Building		36,05,974.22	-	36,05,974.22	35,88,853.00	17,121.22		
A.1.1c	Temp. construction & enabling works		4,89,426.00	-	4,89,426.00	-	4,89,426.00		
A.1.1d	Switchyard Package	Bharat Heavy Electricals Ltd	7,62,942.00	-	7,62,942.00	-	7,62,942.00		
A.1.1e	Electrical Equipments (Cables, Cable facilities & Grounding)	K&E Industries Ltd	6,62,110.47	-	6,62,110.47	-	6,62,110.47		
	Subtotal (A.1.1)		68,13,509.69	-	68,13,509.69	35,78,376.14	32,34,133.55		
A.1.2	Township: Quarters and other facilities		91,01,336.17	-	91,01,336.17	52,08,244.17	38,93,094.00		
A.1.4	Ash Related works		6,96,921.68	-	6,96,922	-	6,96,922		
A.1.5	Package ERV		61,72,638	-	61,72,638	61,72,638	-		
	Subtotal (A.1)		2,27,84,407.77	-	2,27,84,407.77	1,49,60,258.54	78,24,149.21		
A.2	Capitalization of MBOAs	Various Parties	6,48,05,685.86	2,91,935.81	6,50,37,821.67	37,28,448.08	6,13,09,373.59		
A.3	Decap of MBOAs: Part of Capital Cost		83,71,417.50	-1,35,187.50	85,06,605	-	85,06,605		
A.4	Decap of Spares: Part of Capital Cost		-3,65,49,227.15	-2,84,42,071.70	6,49,91,298.85	-	6,49,91,298.85		
	Total claim (A)		4,28,89,649	2,83,45,323	1,43,24,326	1,86,88,707	43,64,361		
<b>B</b>	<b>Exclusions</b>								
B.1	Items not claimed								
1	Combustion Modification Package								
1.1	Combustion Modification Package-Unit5	Bharat Heavy Electricals Limited	7,52,885.31	-	7,52,885	7,52,885	-		
1.2	Combustion Modification Package-Unit6	Bharat Heavy Electricals Limited	7,52,885.01	-	7,52,885	7,52,885	-		
	Subtotal (B.1)		15,05,770	-	15,05,770	15,05,770	-		
B.2	Capitalization of Capital Spares	Various Parties	12,35,44,380.30	-	12,30,44,380	10,85,043	12,25,59,318		
B.3	Loan ERV		28,82,41,496	-	28,82,41,496	-	28,82,41,496		
B.4	Decap of MBOAs: Not Part of Capital Cost		-	28,47,505	-	-	28,47,505		
B.5	Ind AS Adjustment								
1	Overhauling		17,49,05,290.73	-17,40,05,290.73	-	-	-		
2	Decap. of Overhauling Assets		-	4,12,71,349.62	-	-	4,12,71,349.62		
	Subtotal (B.5)		17,49,05,290.73	-17,40,05,290.73	-	-	4,12,71,349.62		
	Subtotal (B.5)		13,27,33,911.11	-13,27,33,911.11	-	-	-		
B.6	Inter Unit Transfer								
B.6.1	EDP, WP machines & SATCOM equipment	WR-II Repair	-	149.27	-	149.27	-	149.27	
B.7	Reversal of Liability		-15,12,686.45	-18,17,666.74	-33,30,243.19	-33,30,243.19	0.00		
	Total Exclusion Claimed (B)		82,17,85,336	-13,45,51,319	38,72,14,018	7,39,410	38,79,53,428		
	Grand Total (A+B)		66,44,34,985	16,20,96,642	40,15,38,343	1,79,49,297	38,35,89,047		

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Summary of Gross Block reconciliation (2023-24)

Sr. No.	Particular	ST-I	ST-II	ST-III	TOTAL GROSS BLOCK (Rs)
1	Closing Gross Block as per Audited Balance Sheet 31.03.2024 (Ind-AS)	10,89,59,97,939	41,31,46,99,861	3,55,59,62,788	55,76,66,60,609
2	Opening Gross Block as per Audited Balance Sheet 01.04.2023 (Ind-AS)	9,27,49,01,585	40,74,70,40,617	2,24,22,68,048	52,26,42,10,250
3	Addition During the Year (1-2) (Ind-AS)	1,62,10,96,354	56,76,59,264	1,31,36,94,740	3,50,24,50,359
4	Ind-AS Adjustment	- 9,89,08,046	- 37,08,74,154	- 6,46,73,679	- 53,44,56,879
5	Addition During the Year (3+4) (IGAAP)	1,52,21,87,309	19,67,85,110	1,24,90,21,061	2,96,79,93,479




(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

		Year wise Statement of Additional Capitalisation after COD						Amount in Rs.	
Name of the Petitioner		NTPC Ltd							
Name of the Generating Station		Rihand Super Thermal Power Station Stage-II							
Station COD		27.03.2014							
For Financial Year		2023-24							
Sl. No.	Head of Work /Equipment	Party Name	ACE Claimed						
			Accrual basis as per Note-2 of BS	IND AS Adj	Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3	
1	2	3	4	5	6	7	8	9	
<b>A</b>	<b>Claims</b>								
<b>A.1</b>	<b>Claimed Items</b>								
<b>A.1.1</b>	<b>Works Under original scope in main plant packages</b>								
A.1.1a	Switchyard Package	Bharat Heavy Electricals Ltd	25,86,637.65	-	25,86,637.65	4,24,857.00	21,61,880.65	-	
A.1.1b	Road & Drainage	Vijay Construction	9,13,998.44	-	9,13,998.44	-	9,13,998.44	-	
A.1.1c	Tamp. construction & enabling works	Ideal Associates	12,221.11	-	12,221.11	-	12,221.11	-	
	<b>Subtotal (A.1.1)</b>		<b>35,12,427.10</b>	<b>-</b>	<b>35,12,427.10</b>	<b>4,24,857.00</b>	<b>30,87,570.10</b>	<b>-</b>	
A.1.2	Township & Colony		13,15,475.90	-	13,15,475.90	-	13,15,475.90	-	
<b>A.1.3</b>	<b>Ash Related Works</b>								
A.1.3a	Dry Ash Extraction System, Stage-II	Micamber Bookay Pvt Ltd	67,09,20,529.00	-	67,09,20,529.00	83,72,407.87	86,25,48,121.13	-	
A.1.3b	3rd Raising of Central Ash Dyke Lagoon-II	Nakul Prestige Construction Co	44,573.49	-	44,573.49	-	44,573.49	-	
	<b>Subtotal (A.1.3)</b>		<b>67,09,65,104.49</b>	<b>-</b>	<b>67,09,65,104.49</b>	<b>83,72,407.87</b>	<b>86,25,92,694.62</b>	<b>-</b>	
<b>A.1.5</b>	<b>Upgradation of HMI Package</b>								
A.1.5	Upgradation Of HMI System	Bharat Heavy Electricals Limited	3,55,94,334.20	3,87,012.53	3,59,81,346.73	-	3,59,81,346.73	-	
A.1.5a	Decap on Upgradation of HMI		(82,13,859.98)	(1,22,46,279.52)	2,04,63,139.50	-	2,04,63,139.50	-	
	<b>Subtotal (A.1.5)</b>		<b>2,73,80,474.22</b>	<b>(1,18,62,266.99)</b>	<b>1,56,18,267.23</b>	<b>-</b>	<b>1,56,18,267.23</b>	<b>-</b>	
A.1.6	Safety & Security of Plant	Vicom Security Pvt Ltd	4,21,43,848.00	-	4,21,43,848.00	1,16,29,455.00	3,05,14,393.00	-	
A.1.7	Package ERV		2,38,59,851.46	-	2,38,59,851.46	2,38,09,851.46	-	-	
	<b>Subtotal (A.1)</b>		<b>72,14,57,478.25</b>	<b>- 1,18,62,266.99</b>	<b>70,95,95,211.26</b>	<b>- 34,33,131.59</b>	<b>71,30,26,342.65</b>	<b>-</b>	
A.2	Capitalization of MBOAs	Various Parties	1,30,90,895.98	5,183.31	1,30,96,079.29	87,671.00	1,30,08,508.29	-	
A.3	Decap of MBOAs: Part of Capital Cost		(32,09,305.27)	(11,81,943.46)	43,91,248.73	-	43,91,248.73	-	
A.4	Decap of Spares: Part of Capital Cost		(5,59,90,634.61)	(3,62,85,016.36)	9,22,85,650.97	-	6,22,85,650.97	-	
	<b>Total claim (A)</b>		<b>67,53,48,434</b>	<b>- 4,93,34,044</b>	<b>62,60,14,391</b>	<b>- 33,45,561</b>	<b>62,93,58,951</b>	<b>-</b>	
<b>B</b>	<b>Exclusions</b>								
B.1	Capitalization of Capital Spares	Various Parties	63,86,27,167.88	-	63,86,27,167.88	58,79,777.70	63,28,47,390.18	-	
B.2	Decap of MBOAs: Not Part of Capital Cost		(15,00,726.28)	-	15,00,726.28	-	15,00,726.28	-	
B.3	Decap of Spares: Not Part of Capital Cost		(1,37,76,771.41)	-	1,37,76,771.41	-	1,37,76,771.41	-	
<b>B.4</b>	<b>Ind AS Adjustment</b>								
1	Overhauling		23,72,27,128.30	(23,72,27,128.30)	-	-	-	-	
2	Decap of Overhauling Assets		(22,18,87,492.53)	22,18,87,492.53	-	-	-	-	
	<b>Subtotal (B.4)</b>		<b>1,53,38,635.77</b>	<b>(1,53,38,635.77)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	
B.5	Reversal of Liability		-3,43,000.00	0	3,43,000.00	-3,43,000.00	-	0	

परिमल पीयूष / PARIMAL PIYUSH  
 अध्यक्ष, महाप्रबंधक (व्यावसायिक)  
 Addl. General Manager (Commercial)  
 एन टी सी सी लिमिटेड / NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Total Exclusion Claimed (B)		63,83,46,336	-	1,53,39,636	62,30,06,670	56,36,779	61,73,69,892	-
Grand Total (A+B)		1,31,36,94,740	-	6,46,73,679	1,24,96,21,091	22,91,217	1,24,67,29,844	-



(Petitioner)

परिमल पीयूष / PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड / NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Summary of issue involved in the petition**

**PART 1  
FORM-T**

<b>Name of the Company :</b>		NTPC Limited
<b>Name of the Power Station :</b>		Rihand Super Thermal Power Station Stage-III
<b>1</b>	<b>Petitioner:</b>	NTPC Limited
<b>2</b>	<b>Subject</b>	Truing-up of Tariff for 2019-24 period

<b>3</b>	<p><b>Prayer:</b></p> <p>i) Approve revised tariff of Rihand-III for the tariff period 2019-24 as per provision of Regulation 13 of Tariff Regulations 2019.</p> <p>ii) Approve supplementary tariff for Rihand Super Thermal Power Station Stage-III (2x500MW) on Installation of Emission Control System for controlling Nox emissions.</p> <p>iii) Allow the Petitioner to recover the additional O&amp;M cost for ash transportation.</p> <p>iv) Allow the reimbursement of water charges, capital spares and security expenses for the instant station, as claimed by the Petitioner.</p> <p>v) Pass any other order as it may deem fit in the circumstances mentioned above.</p>
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<b>4</b>	<b>Respondents</b>
	<b>Name of Respondents</b>
	1. Uttar Pradesh Power Corp. Ltd. (UPPCL)
	2. Rajasthan Urja Vikas Nigam Limited (RUVNL)
	3. Tata Power Delhi Distribution Limited
	4. BSES Rajdhani Power Limited.
	5. BSES Yamuna Power Limited.
	6. Haryana Power Purchase Centre
	7. Haryana Power Purchase Centre
	8. Himachal Pradesh State Electricity Board Limited.
	9. Power Development Department
	10. Electricity Department of Chandigarh
	11. Uttarakhand Power Corporation Limited.

<b>5</b>	<b>Project Scope</b>					
	<b>Capital Cost as on 01.04.2024 (Rs. Lakh)</b>	570571.38				
	<b>Date of Station COD</b>	27-03-2014				
	<b>Claim (Rs Lakh)</b>	2019-20	2020-21	2021-22	2022-23	2023-24
	<b>AFC</b>	107950.57	107712.29	107145.81	109171.99	116822.56
	<b>Capital Cost</b>	551814.37	555802.04	561159.94	563297.94	567104.03
	<b>Initial spare</b>	N/A				
	<b>NAPAF (Gen)</b>	85%				
	<b>Any Specific</b>					

  
(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (व्यापारिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**SUPPLEMENTARY TARIFF FILING FORMS  
(THERMAL)**

**FOR DETERMINATION OF SUPPLEMENTARY TARIFF  
OF**

**Rihand Super Thermal Power Station Stage-III**

**(For ECS- DeNOx System for 2019-24 Period)**

**PART-I**

**APPENDIX-IA**



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

Form No.	Title of Tariff Filing Forms (Thermal)	Tick
FORM- 1	Summary of Supplementary Tariff	0
FORM -1 (I)	Statement showing claimed capital cost	0
FORM -1 (II)	Statement showing Return on Equity	0
FORM-2	Plant Characteristics	0
FORM-3	Normative parameters considered for tariff computations	0
FORM-3A	Statement showing O&M Expenses	0
FORM-3B**	Statement of Special Allowance	NA
FORM- 4	Details of Foreign loans	NA
FORM- 4A	Details of Foreign Equity	NA
FORM-5	Abstract of Admitted Capital Cost for the existing Projects	NA
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	NA
FORM-9A	Summary of Statement of Additional Capitalisation claimed during the period	0
FORM-9	Statement of Additional Capitalisation after COD	0
FORM- 10	Financing of Additional Capitalisation	NA
FORM- 11	Calculation of Depreciation on original project cost	0
FORM- 12	Statement of Depreciation	0
FORM- 13	Calculation of Weighted Average Rate of Interest on Actual Loans	0
FORM- 14	Draw Down Schedule for Calculation of IDC & Financing Charges	NA
FORM- 15	Details of Fuel for Computation of Energy Charges	NA
FORM- Oi	Computation of Supplementary Energy Charges	NA
FORM- 16	Details of Reagent for Computation of Energy Charge Rate	NA
FORM-17	Details of Capital Spares	NA
FORM- 18	Non-Tariff Income	NA
FORM-19	Details of Water Charges	NA
FORM-20	Details of Statutory Charges	NA

PART-I

**List of Supporting Forms / documents for supplementary 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	0
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	NA
FORM -I	Details of Assets De-capitalised during the period	NA
FORM -J	Reconciliation of Capitalisation claimed vis-à-vis books of accounts	NA
FORM -K	Statement showing details of items/assets/works claimed under Exclusions	NA
FORM-L	Statement of Capital cost	0
FORM-M	Statement of Capital Works in Progress	0
FORM-N	Calculation of Interest on Normative Loan	0
FORM-O	Calculation of Interest on Working Capital	0
FORM-Oi	Additional Form	NA
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	0
FORM-T	Summary of issues involved in the petition	0

**परिमल पीयूष/PARIMAL PIYUSH**

अध्यक्ष, संशोधन/परामर्शदाता (एन.टी.पी.सी.)

Addl. General Manager (Consultant)

एन टी पी सी लिमिटेड / NTPC LIMITED

EOC, A-8A, Sector-24, Noida-201301 (U.P.)

  
(Petitioner)

## Summary of Supplementary Tariff (for DeNOx System)

Name of the Petitioner:	NTPC Ltd.
Name of the Generating Station:	Rihand Super Thermal Power Station Stage-III

Amount in Rs. Lakhs


S. No.	Particulars	Unit	2021-22 (01.03.2022 to 31.3.2022)	2022-23	2023-24
1	2	3	4	5	6
1.1	Depreciation	Rs Lakh	80.20	80.20	80.20
1.2	Interest on Loan	Rs Lakh	72.92	73.89	71.38
1.3	Return on Equity	Rs Lakh	57.98	57.98	57.98
1.4	Interest on Working Capital	Rs Lakh	4.08	4.14	4.75
1.5	O&M Expenses	Rs Lakh	30.38	31.44	32.54
	<b>Total</b>	Rs Lakh	<b>245.56</b>	<b>247.65</b>	<b>246.86</b>




(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

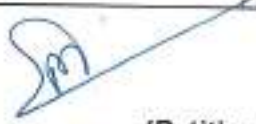


PART-I FORM-1(I)				
Name of the Petitioner:		NTPC Ltd.		
Name of the Generating Station:		Rihand Super Thermal Power Station Sta		
Amount in Rs. Lakhs				
Statement showing claimed capital cost				
S. No.	Particulars	2021-22 (01.03.2022 to 31.3.2022)	2022-23	2023-24
1	2	3	4	5
1	Opening Capital Cost	1518.99	1518.99	1518.99
2	Add: Addition during the year/period	-	-	-
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	1518.99	1518.99	1518.99
7	<b>Average Capital Cost</b>	<b>1518.99</b>	<b>1518.99</b>	<b>1518.99</b>
Statement showing claimed capital cost eligible for RoE at SBI MCLR+350 basis points (A)				
S. No.	Particulars	2021-22 (01.03.2022 to 31.3.2022)	2022-23	2023-24
1	2	3	4	5
	Capital Cost as on ODe of DeNOx system	1,518.99		
	Notional IDC	-		
	IEDC	-		
1	Opening Capital Cost	1,518.99	1,518.99	1,518.99
2	Add: Addition during the year / period	-	-	-
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	1518.99	1518.99	1518.99
7	<b>Average Capital Cost</b>	<b>1518.99</b>	<b>1518.99</b>	<b>1518.99</b>
 (Petitioner)				

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Name of the Petitioner:		NTPC Ltd.		
Name of the Generating Station:		Rihand Super Thermal Power Station Stage-III		
<b>Statement showing Return on Equity at Normal Rate</b>				
Amount in Rs. Lakhs				
S. No.	Particulars	2021-22 (01.03.2022 to 31.3.2022)	2022-23	2023-24
1	2	3	4	5
<b>Return on Equity</b>				
1	Gross Opening Equity (Normal)	455.70	455.70	455.70
2	Less: Adjustment in Opening Equity			
3	Adjustment during the year			
4	Net Opening Equity (Normal)	455.70	455.70	455.70
5	Add: Increase in equity due to addition during the year / period	-	-	-
7	Less: Decrease due to De-capitalisation during the year / period	-	-	-
8	Less: Decrease due to reversal during the year / period	-	-	-
9	Add: Increase due to discharges during the year / period	-	-	-
10	Net closing Equity (Normal)	455.70	455.70	455.70
11	Average Equity (Normal)	455.70	455.70	455.70
12	Rate of ROE (%)	12.723%	12.723%	12.723%
13	Total ROE	57.98	57.98	57.98
 (Petitioner)				

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (व्यापारिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Plant Characteristics		
Name of the Petitioner	NTPC Ltd.	
Name of the Generating Station	Rihand Super Thermal Power S	
Unit(s)/Block(s)/Parameters	Unit-I	Unit-II
Installed Capacity ( MW)	500	500
Environmental Regulation related features	Combustion Modification	
Reagent	NA	
Date of Operation for Tariff (ODe)	01-03-2022	01-03-2022
Auxiliary Energy Consumption for emission control system (Design) (kW)*	NA	
 (Petitioner)		

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (ए.जी.एम.)  
 Addl. General Manager (Operations)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Normative parameters considered for supplementary tariff computations

Name of the Petitioner:		NTPC Ltd.				
Name of the Generating Station:		Rihand Super Thermal Power Station Stage-III				
		(Year Ending March)				
Particulars	Unit	Existing 2018-19	2021-22 (01.03.2022 to 31.3.2022)	2022-23	2023-24	
1	2	3	4	5	6	
Base Rate of Return on Equity	%	NA	10.50%	10.50%	10.50%	
Effective Tax Rate	%		17.472%	17.472%	17.472%	
Target Availability						
In High Demand Season				85.00%	85.00%	85.00%
Peak Hours				85.00%	85.00%	85.00%
Off-Peak Hours				85.00%	85.00%	85.00%
In Low Demand Season(Off-Peak)				85.00%	85.00%	85.00%
Peak Hours				85.00%	85.00%	85.00%
Off-Peak Hours				85.00%	85.00%	85.00%
Auxiliary Energy Consumption	%			6.25	6.25	6.25
Auxiliary Energy Consumption for emission control system (Design)	%					
Rate of Interest on Working Capital	%			10.50	10.50	12.00
O&M Expenses	% of Capital Cost					2
Maintenance Spares for WC	% of O&M					20.00%
Receivables for WC	In Days					45
Units	Date from which tariff is claimed					
Unit-I	01-03-2022					
Unit-II	01-03-2022					


  
Petitioner

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (E) (नियंत्रण)  
Addl. General Manager (E) (NTPC Ltd.)  
एन टी सी लिमिटेड/NTPC Limited  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)


Calculation of O&M Expenses

Name of the Company :		NTPC Ltd.		
Name of the Power Station :		Rihand Super Thermal Power Station Stage-III		
Amount in Rs. Lakhs				
S.No	Particulars	2021-22 (01.03.2022 to 31.3.2022)	2022-23	2023-24
1	2	3	4	5
1	O&M expenses under Reg.35(1)(7)			
1a	Normative O&M expenses- ECS	30.38	31.44	32.54
	<b>Total O&amp;M Expenses</b>	<b>30.38</b>	<b>31.44</b>	<b>32.54</b>

  
(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (परिमलियक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**Year wise Statement of Additional Capitalisation after COD**

Name of the Petitioner		NTPC Ltd.		
Name of the Generating Station		Rihand Super		
For Financial Year		Summary		
		Amount in Rs Lakh		
		ACE Claimed (Actual)		
Sl. No.	Head of Work /Equipment	2021-22 (01.03.2022 to 31.3.2022)	2022-23	2023-24
1	2	3	4	5
1	Combustion Modification System Unit 1	-	-	-
2	Combustion Modification System Unit 2	-	-	-
<b>Total Add Cap</b>		-	-	-
5	Discharge of Liabilities	-	-	-
<b>Total Add. Cap. Claimed including discharge of liabilities</b>		-	-	-
 (Petitioner)				

**परिमल पीयूष/PARIMAL PIYUSH**  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
**एन टी पी सी लिमिटेड/NTPC LIMITED**  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTPC Ltd.
Name of the Generating Station	Rihand Super Thermal Power Station Stage-III
For Financial Year	2021-22

Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed (Actual)			Regulations under which claimed	Justification	Admitted Cost by the Commission, if any
			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
1	Combustion Modification System Unit 1							
2	Combustion Modification System Unit 2							
3	Discharge of liabilities			-				
	<b>Total</b>	-	-	-	-			

  
 (Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (व्यावसायिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner		NTPC Ltd.						
Name of the Generating Station		Rihand Super Thermal Power Station Stage-III						
For Financial Year		2022-23						
Sl. No.	Head of Work /Equipment	ACE Claimed (Actual)				Regulations under which claimed	Justification	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
1	Combustion Modification System Unit 1	15.06	15.06	-	0			
2	Combustion Modification System Unit 2							
3	Discharge of liabilities			-		25(1)(f)	Discharge of liabilities of works already admitted/ claimed. Hon'ble Commission may be pleased to allow the same	*
	Total	15.06	15.06	-	-			

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)



## Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTPC Ltd.
Name of the Generating Station	Rihand Super Thermal Power Station Stage-III
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	IDC included in col. 3	5= (3-4)			
1	2	3	4	5= (3-4)	6	7	8	9	
1	Combustion Modification System Unit 1								
2	Combustion Modification System Unit 2								
3	Discharge of liabilities			-				*	
	Total	-	-	-	-				

  
 (Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Calculation of Depreciation

Name of the Petitioner

NTPC

Name of the Generating Station

Rihand Super Thermal Power Station Stage-III

Amount in Rs Lakh

Sl.No.	Name of the Assets <sup>1</sup>	Depreciation Rates as per CERC's Depreciation Rate Schedule	Gross Block as on 01.03.2022	Depreciation	Gross Block as on 01.04.2022	Depreciation	Gross Block as on 01.04.2023	Depreciation	Gross Block as on 01.04.2024	Depreciation
2	Plant & Machinery	5.28%	3,037.98	160.41	3,037.98	160.41	3,068.09	162.00	3,068.09	162.00
3	Cooling Towers & CW System	5.28%		0.00		0.00		0.00		0.00
4	Air conditioning	5.28%		0.00		0.00		0.00		0.00
5	Chimney	5.28%		0.00		0.00		0.00		0.00
6	Main Plant Building	3.34%		0.00		0.00		0.00		0.00
7	Ash Dyke/Disposal Area	5.28%		0.00		0.00		0.00		0.00
8	S-Yard	5.28%		0.00		0.00		0.00		0.00
9	Raw Water Reservoir	5.28%		0.00		0.00		0.00		0.00
10	MGR & Wagons	5.28%		0.00		0.00		0.00		0.00
11	Locomotive	9.50%		0.00		0.00		0.00		0.00
12	Residential Building	3.34%		0.00		0.00		0.00		0.00
13	Water Treatment Plant	5.28%		0.00		0.00		0.00		0.00
14	Spares	5.28%		0.00		0.00		0.00		0.00
15	Furniture & Fixtures, OFFICE EQUIPMENT	6.33%		0.00		0.00		0.00		0.00
16	Other MBOAs / T&Ps	6.33%		0.00		0.00		0.00		0.00
17	EDP, WP & SATCOM	15.00%		0.00		0.00		0.00		0.00
18	Construction equipment	5.28%		0.00		0.00		0.00		0.00
19	Temp. Constructions	100.00%		0.00		0.00		0.00		0.00
20	Central Repair/Workshop	5.28%		0.00		0.00		0.00		0.00
21	Road/Bridge	3.34%		0.00		0.00		0.00		0.00
22	Software	15.00%		0.00		0.00		0.00		0.00
23	Water Supply drainage	5.28%		0.00		0.00		0.00		0.00
24	5 Km Scheme	5.28%		0.00		0.00		0.00		0.00
25	Hospital Equipment	5.28%		0.00		0.00		0.00		0.00
26	Vehicle	9.50%		0.00		0.00		0.00		0.00
	<b>Total</b>		<b>3,037.98</b>	<b>160.41</b>	<b>3,037.98</b>	<b>160.41</b>	<b>3,068.09</b>	<b>162.00</b>	<b>3,068.09</b>	<b>162.00</b>
	<b>Weighted Average Rate of Depreciation (%)</b>			<b>5.2800%</b>		<b>5.2800%</b>		<b>5.2800%</b>		<b>5.2800%</b>

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (व्यावसायिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Statement of Depreciation

Name of the Company :		NTPC Ltd.		
Name of the Power Station :		Rihand Super Thermal Power Station Stage-III		
(Amount in Rs Lakh)				
S. No.	Particulars	2021-22 (01.03.2022 to 31.3.2022)	2022-23	2023-24
1	2	3	4	5
1	Opening Capital Cost	1,518.99	1,518.99	1,518.99
2	Closing Capital Cost	1,518.99	1,518.99	1,518.99
3	Average Capital Cost	1,518.99	1,518.99	1,518.99
5	Rate of depreciation (%)	5.28%	5.28%	5.28%
6	Depreciable value	1,367.09	1,367.09	1,367.09
8	Remaining depreciable value	1,367.09	1,360.28	1,280.08
9	Depreciation (for the period)	6.81	80.20	80.20
10	Depreciation (annualised)	80.20	80.20	80.20
11	Cumulative depreciation at the end of the period	6.81	87.01	167.22
12	Less: Cumulative depreciation adjustment on account of un-discharged liabilities deducted as on 01.04.2009	-	-	-
13	Add: Cumulative depreciation adjustment on account of liability Discharge	-	-	-
14	Less: Cumulative depreciation adjustment on account of de-capitalisation	-	-	-
12	Net Cumulative depreciation at the end of the period after adjustments	6.81	87.01	167.22

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

PART-I FORM- B						
Break-up of Capital Cost for New Coal/Lignite based projects						
Name of the Petitioner			NTPC Limited			
Name of the Generating Station			Rihand Super Thermal Power Station Stage-II			
(Amount in Rs. Lakh)						
Sl. No.	Break Down	As per Investment Approval	Capitalisation as on Unit-1&II DeNOx System Capitalization i.e. as on 1.3.2022 (cash basis)	Liabilities/ Provisions corresponding to (4)	Specific Reasons for Variation*	Anticipated expenditure upto cut-off date
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Cost of Land & Site Development					
1.1	Land*					
	Total Land & Site Development	0.00	-	-		-
2	Plant & Equipment					
2.1	Combustion Modification Package		1,518.99			
	Total Plant & Equipment	-	1,518.99	-		-
2.6	Taxes & Duties					
7	Total Capital cost excluding IDC & FC	0.00	1518.99	0.00		-
8	IDC, FC, FERV & Hedging Cost					
8.1	Interest During Construction (IDC)					
8.2	Financing Charges (FC)					
8.3	Foreign Exchange Rate Variation (FERV)					
8.4	Hedging Cost					
	Total of IDC, FC, FERV & Hedging Cost	-	-	-		-
9	Working Capital Margin					
10	Capital cost including IDC, FC, FERV & Hedging Cost	-	1,518.99	-		-

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Statement of Capital cost

Name of the Petitioner	NTPC Limited
Name of the Generating Station	Rihand Super Thermal Power Station Stage-III
COD	27-03-2014
For Financial Year	2021-24

(Rs Lakh)

Sl. No.	Particulars	01.03.2022-31.03.2022			01.04.2022-31.03.2023			01.04.2023-31.03.2024		
		Accrual Basis	Un-discharged Liabilities	Cash Basis	Accrual Basis	Un-discharged Liabilities	Cash Basis	Accrual Basis	Un-discharged Liabilities	Cash Basis
A	a) Opening Gross Block Amount as per books	1,518.99		1,518.99	1,518.99	-	1,518.99	1,534.05	15.06	1,518.99
	b) Amount of IDC in A(a) above	-	-	-	-	-	-	-	-	-
	c) Amount of FC in A(a) above	-	-	-	-	-	-	-	-	-
	d) Amount of FERV in A(a) above	-	-	-	-	-	-	-	-	-
	e) Amount of Hedging Cost in A(a) above	-	-	-	-	-	-	-	-	-
	f) Amount of IEDC in A(a) above	-	-	-	-	-	-	-	-	-
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)	-	-	-	15.06	15.06	-	-	-	-
	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	1,518.99		1,518.99	1,534.05	15.06	1,518.99	1,834.05		1,518.99
	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	-	-	-	-	-	-	-	-	-

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Statement of Capital Works in Progress

Name of the Petitioner		NTPC Limited								
Name of the Generating Station		Rihand Super Thermal Power Station Stage-III								
COD		27-03-2014								
For Financial Year		2021-24								
Sl. No.	Particulars	01.10.2022-31.03.2023			01.04.2022-31.03.2023			01.04.2021-31.03.2024		
		Accrual Basis	Un-discharged Liabilities	Cash Basis	Accrual Basis	Un-discharged Liabilities	Cash Basis	Accrual Basis	Un-discharged Liabilities	Cash Basis
A	a) Opening CWIP as per books	-	-	-	-	-	-	-	-	-
	b) Amount of IDC in A(a) above	-	-	-	-	-	-	-	-	-
	c) Amount of FC in A(a) above	-	-	-	-	-	-	-	-	-
	d) Amount of FERV in A(a) above	-	-	-	-	-	-	-	-	-
	e) Amount of Hedging Cost in A(a) above	-	-	-	-	-	-	-	-	-
	f) Amount of IEDC in A(a) above	-	-	-	-	-	-	-	-	-
B	a) Addition in CWIP during the period	-	-	-	15.06	-	15.06	-	-	-
	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	-	-	-	15.06	-	15.06	-	-	-
	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	-	-	-	-	-	-	-	-	-



(Petitioner)

परिमल पीयूष / PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Addl. General Manager (Commercial)  
एन टी पी सी लिमिटेड / NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Calculation of Interest on Normative Loan

Name of the Company :		NTPC Ltd.		
Name of the Power Station :		Rihand Super Thermal Power Station Sta (Amount in Rs Lakh)		
S. No.	Particulars	2021-22 (01.03.2022 to 31.3.2022)	2022-23	2023-24
1	2	4	5	6
1	Gross Normative loan – Opening	1,063.29	1,063.29	1,063.29
2	Cumulative repayment of Normative loan up to previous year	0.00	6.81	87.01
3	<b>Net Normative loan – Opening</b>	1,063.29	1,056.48	976.28
4	Add: Increase due to addition during the year / period	-	-	-
5	Less: Decrease due to de-capitalisation during the year / period	-	-	-
6	Less: Decrease due to reversal during the year / period	-	-	-
7	Add: Increase due to discharges during the year / period	-	-	-
8	Less: Repayment of Loan	6.81	80.20	80.20
9	<b>Net Normative loan - Closing</b>	1,056.48	976.28	896.07
10	<b>Average Normative loan</b>	1,059.89	1,016.38	936.18
11	Weighted average rate of interest	6.8796%	7.2697%	7.6249%
12	<b>Interest on Loan</b>	<b>72.92</b>	<b>73.89</b>	<b>71.38</b>


  
(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (ए)  
Add. General Manager (A)  
एन टी पी सी लिमिटेड, एन टी पी सी (एड)  
EOC, A-BA, Sector-4, Noida (उ.प्र.)

## Calculation of Interest on Working Capital

Name of the Company :		NTPC Ltd.			
Name of the Power Station :		Rihand Super Thermal Power Station Stage-III			
(Amount in Rs Lakh)					
S. No.	Particulars		2021-22 (01.03.2022 to 31.3.2022)	2022-23	2023-24
1	2		4	5	6
	No of days		365	365	366
1	Cost of Limestone/Reagent toward stock	20 days	-	-	-
2	Cost of Limestone/Reagent toward generation	30 days	-	-	-
3	Receivables	45 days	30.27	30.53	30.35
4	O & M Expenses	1 month	2.53	2.62	2.71
5	Maintenance Spares	@20%	6.08	6.29	6.51
6	Total Working Capital	Rs. Lakh	38.88	39.44	39.57
7	Rate of Interest	%	10.50%	10.50%	12.00%
8	Interest on Working Capital	Rs. Lakh	4.08	4.14	4.75



(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
अपर महाप्रबन्धक (वाणिज्यिक)  
Add. General Manager (Commercial)  
एन टी पी सी लिमिटेड/NTPC LIMITED  
EOC, A-8A, Sector-24, Noida-201301 (U.P.)



Flow of Capital liabilities									Part-3 Form-5	
Name of the Generating Station		Rihand Super Thermal Power Station Stage-III							Amount in Ro.	
Sr. No.	Name of the Party	Name of the work	Year of creation of liability capitalised in Gross Block	Undischarged liabilities relating to GB 01.04.2021	liability in additional capitalisation for 2021-22	Contractors ERV updation	Discharge during the year 2021-22		Total discharge	Undischarged liabilities relating to GB 31.03.2022
(1)	(2)	(3)	(4)	(5)	(6)	(7)	By Payment	By Reversal	(8)	(9)
1	Bharat Heavy Electricals Limited	Combustion Modification Package	01.03.2022-31.03.2022	-	-	-	-	-	-	-
2	Bharat Heavy Electricals Limited	Combustion Modification Package	01.04.2022-31.03.2023	-	-	-	-	-	-	-

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Flow of Capital liabilities										
Name of the Generating Station										
Rihand Super Thermal Power Station Stage-III										
Amount in Rs.										
Sr. No.	Name of the Party	Name of the work	Year of creation of liability capitalised in Gross Block	Undischarged liabilities relating to GB 01.04.2022	liability in additional capitalisation for 2022-23	Contractors ERV update	Discharge during the year 2022-23		Total discharge	Undischarged liabilities relating to GB 31.03.2023
							By Payment	By Reversal		
(1)	(2)	(3)	(4)	(11)						
1	Bharat Heavy Electricals Limited	Combustion Modification Package	01.03.2022-31.03.2022	-	-	-	-	-	-	-
2	Bharat Heavy Electricals Limited	Combustion Modification Package	01.04.2022-31.03.2023	-	15,05,770	-	-	-	-	15,05,770
				-	16,05,770	-	-	-	-	16,05,770

  
(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (व्यवसायिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

Flow of Capital liabilities									Part-I
Name of the Generating Station									Form-S
Rihard Super Thermal Power Station Stage-II									Amount in Rs.
Sr. No.	Name of the Party	Name of the work	Year of creation of liability capitalised in Gross Block	Undischarged liabilities relating to GB 01.04.2023	Liability in additional capitalisation for 2023-24	Contractors ERV updation	Discharge during the year 2023-24		Undischarged liabilities relating to GB 31.03.2024
							By Payment	By Reversal	
(1)	(2)	(3)	(4)	(11)					
1	Bharat Heavy Electricals Limited	Combustion Modification Package	01.03.2022-31.03.2022	-	-	-	-	-	-
2	Bharat Heavy Electricals Limited	Combustion Modification Package	01.04.2022-31.03.2023	15,05,770	-	-	-	-	15,05,770
				15,05,770	-	-	-	-	15,05,770

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

## Summary of issue involved in the petition

Name of the Company :		NTPC Ltd.
Name of the Power Station :		Rihand Super Thermal Power Station Stage-III
1	Petitioner:	NTPC Ltd.
2	Subject	Determination of Supplementary Tariff (for DeNOx System) for 2019-24 period
3	Prayer:	<p>i) Approve revised tariff of Rihand-III for the tariff period 2019-24 as per provision of Regulation 13 of Tariff Regulations 2019.</p> <p>ii) Approve supplementary tariff for Rihand Super Thermal Power Station Stage-III (2x500MW) on installation of Emission Control System for controlling Nox emissions.</p> <p>iii) Allow the Petitioner to recover the additional O&amp;M cost for ash transportation.</p> <p>iv) Allow the reimbursement of water charges, capital spares and security expenses for the instant station, as claimed by the Petitioner.</p> <p>v) Pass any other order as it may deem fit in the circumstances mentioned above.</p>
4	Respondents	
Name of Respondents		
1. Uttar Pradesh Power Corp. Ltd. (UPPCL)		
2. Rajasthan Urja Vikas Nigam Limited (RUVNL)		
3. Tata Power Delhi Distribution Limited		
4. BSES Rajdhani Power Limited		
5. BSES Yamuna Power Limited,		
6. Haryana Power Purchase Centre		
7. Haryana Power Purchase Centre		
8. Himachal Pradesh State Electricity Board Limited,		
9. Power Development Department		
10. Electricity Department of Chandigarh		
11. Uttarakhand Power Corporation Limited,		
5	Project Scope	
Cost		1518.99
Commissioning		
Claim		1518.99
AFC (2023-24)		246.86
Capital cost		1518.99
Initial spare		-
NAPAF (Gen)		85%
Any Specific		-

(Petitioner)

परिमल पीयूष/PARIMAL PIYUSH  
 अपर महाप्रबन्धक (कार्पोरेटिव) /  
 Addl. General Manager (Corporate)  
 एन टी पी सी लिमिटेड / NTPC LIMITED  
 EOC, A-8A, Sector-24, Noida-201301 (U.P.)

**AUDITOR CERTIFICATE**

S. No	Details	Amount (in Rs. )
Station:	Rihand Super Thermal Power Station	
Month:	Apr-2022 to Mar-2023	
1	Cumulative Ash transportation expenditure incurred (as per MOEF&CC Notification dt. 31.12.2021) including any adjustments in respect of any prior months. Such expenditure shall include liability, if any. (X)	1,181,027,313
2A	Opening balance of ash sale revenue as on 01.04.2022 (O)	0.00
2B	Cumulative Ash sale revenue / proceeds received including any adjustments in respect of any prior months. (Y)	549433
3	Cumulative Net Ash transportation expenses of Station (Z= X-Y-O)	1180477879
4	Billable Cumulative ash transportation expenses of Station (A = Z * F * 0.9)	1055607059
<b>RHTPS-1</b>		
5.1	Billable Cumulative Ash transportation expenses of Commercial Stage (C = A * Cum SG Commercial stage / Cum SG station)	321,960,804
6.1	Cumulative Ash transportation expenses billed to beneficiary N	$B_N = \text{Cum SG}_{\text{beneficiary N}} / \text{Cum SG}_{\text{commercial stage}} * [C]$
	AJMER	8,223,236
	AVVNL-NSM	3,210,680
	BRPL	22,556,306
	HARYANA	21,207,093
	HPSEB	12,870,046
	JAIPUR	12,070,098
	JDVVNL-NSM	4,088,332
	JODHPUR	10,469,795
	JVVNL-NSM	4,712,319
	MP	1,246,847
	NCR NVVN COAL	15,927,799
	NDMC	375,681
	NDPL	10,181,169
	NVVN-BPDB	8,282,740
	PDD J&K	25,342,688
	PGRH	267,400
	PUNJAB	36,270,565
	UP	106,343,960
	UPPCL-NSM	1,830,345
	UTCHD	3,218,332
	UTTARAKHAND	13,265,375

  
 ॐ नमो भगवते वासुदेवाय  
 Ash. General Manager (Commercial)  
 ए. जे. जी. आर. डी. लिमिटेड

RHTPS-2		
5.1	Billable Cumulative Ash transportation expenses of Commercial Stage (C = A * Cum SG Commercial stage / Cum SG station)	378,967,176
6.1	Cumulative Ash transportation expenses billed to beneficiary N	$B_N = \text{Cum SG}_{\text{beneficiaryN}} / \text{Cum SG}_{\text{commercial stage}} * [C]$
	AJMER	10,162,833
	AVVNL-NSM	4,075,781
	BRPL	21,282,746
	BYPL	12,491,064
	HARYANA	21,770,752
	HPSEB	15,057,643
	JAIPUR	14,920,522
	JDVVNL-NSM	5,192,461
	JODHPUR	12,945,742
	JVVNL-NSM	5,983,547
	MP	1,534,583
	NCR NVVN COAL	20,303,425
	NDMC	483,762
	NDPL	15,063,382
	NVVN-BPDB	5,825,016
	PDD J&K	38,502,462
	PUNJAB	39,502,111
	UP	114,027,751
	UPPCL-NSM	2,356,044
	UTCHD	3,207,571
	UTTARAKHAND	14,277,981

  
 Addl. General Manager (Commercial)  
 एन. डी. सी. लिमिटेड, WPC Limited

RHTPS-3		
5.1	Billable Cumulative Ash transportation expenses of Commercial Stage (C = A * Cum SG Commercial stage / Cum SG station)	354,679,079
6.1	Cumulative Ash transportation expenses billed to beneficiary N	$B_N = \text{Cum SG}_{\text{beneficiary N}} / \text{Cum SG}_{\text{commercial stage}} * [C]$
	AJMER	10,998,149
	AVVNL-NSM	4,234,702
	BRPL	28,133,412
	BYPL	19,568,814
	HARYANA	19,995,169
	HPSEB	13,023,390
	JAIPUR	16,156,595
	JDVVNL-NSM	5,396,453
	JODHPUR	14,014,337
	JVVNL-NSM	6,220,823
	MP	1,153,775
	NCR NVVN COAL	21,069,063
	NDMC	463,856
	PDD J&K	26,495,800
	PUNJAB	30,138,770
	UP	117,755,824
	UPPCL-NSM	2,457,583
	UTCHD	2,395,961
	UTTARAKHAND	15,006,608

For  
Management (NTPC)



Thota Vinodh Kumar  
General Manager (Finance)  
Date: 25/05/2023



For  
Diwanji and Associates

FRN : 100227



CMA Sweety Shah

(Partner)

M.No.: 45648

UDIN:2345648B2NYJMXOUYW



आपका वित्तप्रबन्धक (कॉन्सल्टेंट)  
Add. General Manager (Commercial)  
एन टी पी सी लिमिटेड / NTPC LIMITED

## AUDITOR CERTIFICATE

Station:	Rihand Super Thermal Power Station	
Month:	Apr-2023 to MAR 2024	
S. No	Details	Amount (in Rs. )
1	Cumulative Ash transportation expenditure incurred (as per MOEF&CC Notification dt 31.12.2021) including any adjustments in respect of any prior months. Such expenditure shall include liability, if any. (X)	2127718201
2A	Opening balance of ash sale revenue as on 01.04.2023 (O)	0.00
2B	Cumulative Ash sale revenue / proceeds received including any adjustments in respect of any prior months. (Y)	4409268
3	Cumulative Net Ash transportation expenses of Station (Z= X-Y-O)	2123308933
4	Billable Cumulative ash transportation expenses of Station (A = Z * F * 0.9)	1910978039
<b>RHTPS-1</b>		
5.1	Billable Cumulative Ash transportation expenses of Commercial Stage (C = A * Cum SG Commercial stage / Cum SG station)	65,42,54,581
6.1	Cumulative Ash transportation expenses billed to beneficiary N	$B_N = \text{Cum SG}_{\text{beneficiary N}} / \text{Cum SG}_{\text{Commercial stage}} * [C]$
	AJMER	1,76,59,772
	AVVNL-NSM	67,29,896
	BRPL	4,81,48,783
	GUJARAT	9,67,756
	HARYANA	4,38,70,272
	HPSEB	2,66,13,631
	JAIPUR	2,35,73,665
	JVVNL-NSM	82,19,908
	JODHPUR	2,15,63,789
	JVVNL-NSM	89,85,346
	MP	85,50,560
	NBPDCL - NTPC	54,416
	NCR NVVN COAL	3,18,15,339
	NOMC	1,37,432
	NDPL	2,07,80,128
	NVVN-BPOB	1,69,94,019
	PDD J&K	5,44,97,828
	PGRH	5,44,074
	PUNJAB	7,33,67,163
	SBPDCL - NTPC	63,878
	UP	20,13,19,748
	UPPCL-NSM	36,82,334
	UTCHD	80,37,959

  
 अखिल भारतीय (एन/एचएच)  
 Joint General Manager (Commercial)  
 एन. वी. वी. ए. लिमिटेड





UTTARAKHAND		3,01,06,885
<b>RHTPS-2</b>		
5.1	Billable Cumulative Ash transportation expenses of Commercial Stage (C = A * Cum SG Commercial stage / Cum SG station)	60,81,24,997
6.1	Cumulative Ash transportation expenses billed to beneficiary N	$B_N = \text{Cum SG}_{\text{beneficiary N}} / \text{Cum SG}_{\text{commercial stage}} * [C]$
	AJMER	1,70,33,916
	AVVNL-NSM	67,40,046
	BRPL	3,42,71,674
	BYPL	1,99,73,437
	GUJARAT	10,67,596
	HARYANA	3,55,50,694
	HPSEB	2,49,17,675
	JAIPUR	2,28,35,025
	JDVVNL-NSM	82,81,344
	JODHPUR	2,09,24,118
	JVVNL-NSM	90,37,010
	MP	57,62,383
	NBPDCL - NTPC	60,567
	NCR NVVN COAL	3,19,79,167
	NDMC	1,62,497
	NDPL	2,41,52,020
	NVVN-BPDB	94,08,256
	PDD J&K	6,51,24,543
	PUNJAB	6,30,13,641
	SBPDCL - NTPC	71,399
	UP	17,26,14,827
	UPPCL-NSM	37,01,294
	UTCHD	66,26,327
	UTTARAKHAND	2,49,15,632
<b>RHTPS-3</b>		
5.1	Billable Cumulative Ash transportation expenses of Commercial Stage (C = A * Cum SG Commercial stage / Cum SG station)	64,85,98,465
6.1	Cumulative Ash transportation expenses billed to beneficiary N	$B_b = \text{Cum SG}_{\text{beneficiary N}} / \text{Cum SG}_{\text{commercial stage}} * [C]$
	AJMER	2,11,14,953
	AVVNL-NSM	60,59,593
	BRPL	6,21,40,994
	BYPL	3,59,41,517
	GUJARAT	12,70,235
	HARYANA	3,78,55,257
	HPSEB	2,37,56,112

  
 Ashu  
 Ashu General Manager (Commercial)  
 Ashu & Co. Chartered Accountants



	JAIPUR	2,82,50,430
	JVVNL-NSM	98,80,398
	JODHPUR	2,58,65,803
	JVVNL-NSM	1,07,88,963
	MP	21,01,291
	NBPDCL - NTPC	69,143
	NCR NVVN COAL	3,81,87,408
	NDMC	1,84,491
	PDO J&K	5,19,48,373
	PUNJAB	5,54,97,034
	SBPDCL - NTPC	81,167
	UP	20,45,66,584
	UPPCL-NSM	44,19,841
	UTCHD	57,99,232.00
	UTTARAKHAND	3,08,19,646.00

For  
Management (NTPC)



Thota Vinodh Kumar  
General Manager (Finance)




श्री. विनोद कुमार (वित्त)   
 Sr. General Manager (Finance)   
 ए. डी. सी. ए. ए.सी. / NTPC LIMITED

**BEFORE THE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH  
NEW DELHI**

**ORIGINAL APPLICATION NO. 123 OF 2014  
AND  
M.A. NO. 419 of 2014**

**IN THE MATTER OF:**

Himmat Singh Shekhawat,  
98, Rooprajat Township, Phase-II,  
Pal Road, Jodhpur – 342008  
Rajasthan

..... Applicant

Versus

1. State of Rajasthan  
Through Principal Secretary, Mines Department,  
Government of Rajasthan, Secretariat,  
Jaipur – 302001,  
Rajasthan.
2. Director, Mines & Geology Department  
Khanij Bhawan,  
Shashtri Circle, Udaipur - 313001,  
Rajasthan
3. Union of India  
Through the Secretary  
Ministry of Environment and Forests  
Government of India,  
Paryavaran Bhawan, CGO Complex  
Lodhi Road, New Delhi – 110003
4. Secretary, Forest Department  
Government of Rajasthan,  
Secretariat, Jaipur – 302001,  
Rajasthan.
5. Larsen & Toubro Ltd.  
4<sup>th</sup> Floor, SDC Monarch,  
Plot no. D-236,  
Amrapali Marg,  
Jaipur – 302021  
Rajasthan  
Through Mr. Vivek Narayan Gokhale,  
Project Director, Larsen and Tourbo Ltd.
6. M/s. Hi-Tech Rock Products & Aggregates Ltd.

(A Company incorporated under the  
Companies Act, 1956)  
Having registered Office at  
Mount Poonamallee Road,  
Manapakkam, P.O. Box 979,  
Chennai - 600089

Through Mr. K. Prasanna Kumar,  
Manager (Mines)  
Hi-Tech Rock Products & Aggregates Ltd.

7. Mr. Prahlad Rai  
R/o Ward No. 10,  
Behind DSP Office,  
Ladnu Road,  
Sujan Garh,  
District Churu, Rajasthan  
Through POA holder - Shri Rohitash.
8. Mr. Jagdish Kumar Jat  
R/o 13, Ramdev Mandir Mohalla,  
P.O. Salasar, Tehsil-Sujangarh,  
District Churu,  
Rajasthan 331507  
Through POA holder - Shri Rohitash
9. Mr. Yogesh Kumar Nyariya  
R/o Krishi Upaj Mandi,  
Shrimadhapur,  
District Sikar, Rajasthan  
Through POA holder - Sh. Shahbuddin Quereshi
10. M Vinita Devi  
R/o Karni Dharma Kanta,  
H-Pratham,  
23-Industrial Area,  
Neemka Thana  
District Sikar, Rajasthan  
Through POA holder - Sh. Shahbuddin Quereshi
11. Ms. Kavita Jain  
R/o Sadar Bazar, Rupangarh,  
Tehsil-Kishangarh  
District Ajmer, Rajasthan  
Through POA Holer - Proprietor,  
M/s. Maruti Mines & Minerals  
Mr. Sarveshwar Agarwal &  
Sh. Sanjay Kumar Jain
12. Ms. Sushila Jain  
R/o Sadar Bazar, Rupangarh,  
Tehsil - Kishangarh  
District Ajmer, Rajasthan

Through POA Holder – Proprietor,  
M/s. Maruti Mines & Minerals  
Mr. Sarveshwar Agarwal &  
Sh. Sanjay Kumar Jain

13. Mr. Virendra Dave  
Bada Bas, Near Laxmi Temple,  
Sojat City,  
Dist, Pali, Rajasthan  
Through POA Holder – Shri. Rajuram Gurjar
14. Mr. Sohanlal Gurjar  
Gurjaro Ka Vas,  
Village Kharchi

.....Respondents

**AND**  
**APPEAL NO. 23 OF 2014**  
**AND**  
**M.As. NO. 469 OF 2014, 470 OF 2014, 471 OF 2014, 473 OF**  
**2014, 479 OF 2014, 480 OF 2014, 488 OF 2014, 489 OF 2014,**  
**512 OF 2014 AND 563 OF 2014**  
**IN**  
**APPEAL NO. 23 OF 2014**

**IN THE MATTER OF:**

Sunil Acharya  
S/o Shri Chndra Shekhar Acharya,  
245, Ramchandra, Matri Chhaya, Tajgiron Ki Bari,  
Kalika Mata Road, Banswara  
Rajasthan.

..... Applicant

Versus

1. Shri Sanjay Bakliwal  
S/o Shri Manak Chandra Bakliwal,  
Director, M/s. R.K. Grenny Marmo Pvt. Ltd.,  
R/o Oswali Mohalla, Madanganj, Kishangarh,  
District Ajmer, Rajasthan-305001
2. Shri Ashok Patni  
S/o Shri Kanwarlal Patni,  
Director, M/s. R.K. Premises Pvt. Ltd.,  
R.K. House, Madanganj, Kishangarh,  
District Ajmer, Rajasthan – 305001
3. Shri V.K. Gheeya  
S/o Late Shri Kamal Prasad Gheeya,  
Director, M/s. Patni Premises Pvt. Ltd.,  
R/o 202, Mahalaxmi Apartment, Post Badgaon,  
Bedla Road, Udaipur, Rajasthan-313001  
Through the Chief Secretary,



Delhi Secretariat, I.P. Estate,  
New Delhi - 110002

4. Shri Vinay Patni  
S/o Shri Suresh Kumar Patni,  
Director, M/s. Patni States Pvt. Ltd.  
Through its Vice Chairman,  
Vikas Bhawan,  
New Delhi - 110002
5. Shri Suresh Patni  
S/o Shri Kanwarlal Patni,  
Director, M/s. Supreme Buildstates Pvt. Ltd.  
R/o R.K. House, Madanganj, Kishangarh,  
District Ajmer, Rajasthan-305001
6. Shri Parmanand Patidar  
S/o Shri Prabhulal Patidar,  
Director, M/s. Elegant Premises Pvt. Ltd.  
R/o 20, Kanchan Deep, Bohra Ganesh Road,  
Udaipur, Rajasthan-313001.
7. Shri Jaideep Shah  
S/o M/s. R.K. Super Cement Product Pvt. Ltd.  
R/o D-8, Lal Bahadur Nagar,  
In front of Hotel Clark, J.L.N. Marg,  
Jaipur, Rajasthan.
8. The Government of Rajasthan  
Through the District Collector and the President,  
District Level Forest Rights Committee,  
Banswara, Rajasthan-327001.
9. The Assistant Engineer,  
Mines and Geology Department,  
Banwara - 327001.
10. The Dy. Forest Conservator,  
Department of Forest,  
Dahod Road,  
Banswara - 327001
11. The Senior Assistant Inspector General of Forest,  
Ministry of Forest Environment House,  
C.G.O. Complex, Lodhi Road,  
New Delhi.

.....Respondents

**AND**  
**ORIGINAL APPLICATION NO. 343/2013**  
**AND**  
**M.A. NO. 442 OF 2014 and M.A. NO. 1093 OF 2013**  
**IN**  
**ORIGINAL APPLICATION NO. 343 OF 2013**



Shri Ranbir Singh  
S/o Shri Swadesh Singh,  
Proprietor M/s. New Shiva Stone Crusher,  
Vill. & P.O. Kandwal, Tehsil Nurpur  
And Distt. Kangra,  
Himachal Pradesh.

..... Applicant

Versus

1. State of Himachal Pradesh  
Through Secretary (Industries) to the Govt. of  
Himachal Pradesh, Shimla-1.
2. Director Industries to the State of H.P.  
Udyog Bhawan,  
Shimla - 1
3. State Geologist to the State of H.P.  
Udyog Bhawan,  
Shimla -1
4. Mining Officer,  
Solan Distt., Solan,  
Himachal Pradesh
5. Mr. Parshant Joshi  
5-A, Agar Nagar,  
Ludhiana.

.....Respondents

**AND**

**ORIGINAL APPLICATION No. 279(THC) of 2013  
AND  
M.A. NO. 1120 OF 2013  
IN  
ORIGINAL APPLICATION No. 279(THC) of 2013**

1. Smt. Promila  
W/o Shri Rajesh Kumar,  
Proprietor M/s. Amarjeet Stone Crusher,  
Vill. Sainsiwala, P.O. Barotiwala, Tehsil Baddi  
And Distt. Solan,  
Himachal Pradesh.
2. Shri Mohan Lal Mehta  
S/o Shri Hira Nand Mehta,  
Proprietor M/s. Vishwakarma Hard Stone Crusher,  
Vill. Khali, P.O. Kumarhatti, Tehsil & Distt. Solan,  
Himachal Pradesh.



3. Shri Sanjay Singh  
S/o Shri Mohan Singh,  
Proprietor M/s. Shiva Stone Crusher,  
Vill. Kailar, P.O. Saproon, Tehsil & Distt. Solan,  
Himachal Pradesh.

..... Applicants

Versus

4. State of Himachal Pradesh  
Through Secretary (Industries) to the Govt. of  
Himachal Pradesh, Shimla-1.
5. Director Industries to the State of H.P.  
Udyog Bhawan,  
Shimla - 1
6. State Geologist to the State of H.P.  
Udyog Bhawan,  
Shimla - 1
7. Mining Officer,  
Solan Distt., Solan,  
Himachal Pradesh

.....Respondents

**AND**

**M.A. NOs. 529 of 2014 & M.A. NO. 623 OF 2014  
IN  
Original Application No. 171 OF 2013**

**IN THE MATTER OF:**

National Green Tribunal Bar Association  
Versus

..... Applicant

Ministry of Environment & Forests & Ors.

.....Respondents

**AND IN THE MATTER OF:**

Dr. Sarvabhoom Bagali,  
Kachari Road, Opp. Head P.O.,  
Indi, Dist. Bijapur, Karnataka-586209

..... Applicant

Versus

1. State of Karnataka  
Department of Mines and Geology,  
Through its Director,  
No. 49, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka - 560001



2. Department of Law, Justice & Human Rights,  
Government of Karnataka,  
Through its Principal Secretary,  
Vidhana Soudha, Bangaluru-560001
3. Karnataka State Pollution Control Board  
Through its Member Secretary,  
'Parisara Bhavan', #49, IVth & Vth Floor,  
Church Street, Bengaluru- 560001
4. Department of Industries and Commerce,  
Govt. of Karnataka,  
Through Secretary to the Government,  
No. 49, South Block, Khanija Bhavana,  
Race Course Road, Bengaluru- 560001
5. Karnataka State Environment Impact Assessment  
Authority (SEIAA), Through its Chairman,  
Department of Ecology & Environment,  
Room No. 709, VII Floor, IV Gate,  
M.S. Building, Bengaluru
6. Public Works Department,  
Through its Principal Secretary,  
Karnataka Government Secretariat,  
III Floor, Vikasa Soudha, M.S. Building,  
Dr. Ambedkar Road, Bengaluru- 560001
7. Executive Engineer,  
Public Works Department,  
Bangalore Rural Division,  
PWDD Annexue Building, II Floor  
K.R. Circle, Bengaluru,  
Karnataka - 560001
8. Executive Engineer,  
Public Works Department,  
PWD Division, 23<sup>rd</sup> Sector,  
Navanagar, Bagalkot,  
Bagalkot Distt., Karnataka - 587103.
9. Executive Engineer,  
Public Works Department,  
PWD Division, Kote, Belgaum,  
Belgaum Distt.,  
Karnataka - 590016
10. Executive Engineer,  
Public Works Department,  
PWD Division, Kote, Bellary,  
Bellary Distt.,

7

  
ಶ್ರೀ ಎಚ್.ಎಸ್.ಎಚ್. (ಉಪನಿರ್ದೇಶಕರು)  
 Add. General Manager (Commercial)  
 ಉಪ ನಿರ್ದೇಶಕರು (ವಾಣಿಜ್ಯ)



Karnataka - 583102

11. Executive Engineer,  
Public Works Department,  
PWD Division, Mangalpet,  
Opp. to S.P. Office, Bidar, Bidar Distt.,  
Karnataka - 585401
12. Executive Engineer,  
Public Works Department,  
PWD Division, Station Road,  
Opp. to State Bank of India, Bijapur,  
Bijapur Distt. Karnataka - 586101
13. Executive Engineer,  
Public Works Department,  
PWD Chamarajnar Division,  
Kote Road, Chamarajnar,  
Chamarajnar Distt., Karnataka - 571313
14. Executive Engineer,  
Public Works Department,  
PWD Chikkaballapur Division,  
Opp. to Govt. Hospital, Chikkaballapur,  
Chikkaballapur Distt., Karnataka - 562101
15. Executive Engineer,  
Public Works Department,  
PWD Chikmagalore Division,  
Near Azad Park, Belur Road, Chikmagalore,  
Chikmagalore Distt., Karnataka - 577101
16. Executive Engineer,  
Public Works Department,  
PWD Chitradurga Division,  
D.C. Circle, Chitradurga  
Chitradurga Distt., Karnataka - 577501
17. Executive Engineer,  
Public Works Department,  
PWD Mangalore Division, Mini Soudha,  
II Floor, Opp. Nehru Ground, Hampanakatte,  
Mangalore, Dakshina Kannada Distt., Karnataka - 575001.
18. Chief Secretary,  
Government of Mizoram  
Civil Secretariat,  
Block-C Aizwal-796001.
19. Chief Secretary,  
Government of Nagaland  
Secretariat,

ohi

- Kohima-797001.
20. Chief Secretary,  
Government of NCT of Delhi  
New Secretariat Building, I.P Estate  
New Delhi-110002.
  21. Chief Secretary,  
Government of Orissa,  
General Admn. Dept.  
Orissa Secretariat,  
Bhubaneshwar-751001.
  22. Chief Secretary,  
Government of Pondicherry  
No. 1, Beach Road,  
Pondicherry-605001.
  23. Chief Secretary,  
Government of Punjab  
Punjab Civil Secretariat,  
Chandigarh-160001.
  24. Chief Secretary,  
Government of Rajasthan  
Secretariat,  
Jaipur-302005.
  25. Chief Secretary,  
Government of Sikkim  
Tashiling Secretariat,  
Gangtok-737101.
  26. Chief Secretary,  
Government of Tamil Nadu  
Secretariat,  
Chennai-600009.
  27. Chief Secretary,  
Government of Tripura  
Civil Secretariat,  
Agaartala -799001.
  28. Chief Secretary,  
Government of Uttar Pradesh  
Lal Bahadur Shastri Bhavan  
UP Secretariat,  
Lucknow-226001.
  29. Chief Secretary,  
Government of Uttarakhand  
Uttarakhand Secretariat,

4B Shubhash Road  
Dehradun-248001.

30. Chief Secretary,  
Government of West Bengal  
Writers' Building,  
Kolkata -700001.
31. Chief Secretary,  
U.T. of Andaman & Nicobar Islands  
Secretariat, Port Blair  
Andaman - 744101
32. Adviser to Administrator  
U.T. of Chandigarh  
Secretariat, Sector 9  
Chandigarh - 160001
33. Administrator  
U.T. of Dadra & Nagar Haveli  
Secretariat, Silvassa - 396230
34. Administrator  
U.T. of Daman & Diu  
Fort Area, Secretariat  
Moti Daman - 396220
35. Administrator  
U.T. of Lakshadweep  
Secretariat, Kavaratti - 682555
36. State Level Environment Impact Assessment Authority  
Directorate of Environment, State of Uttar Pradesh  
Dr. Bhim Rao Ambedkar Paryayan Parisar,  
Vineet Khand - I, Gomati Nagar  
Lucknow, Uttar Pradesh PIN - 226010
37. Geological Survey of India  
3<sup>rd</sup> Floor, A wing,  
Shastri Bhawan, New Delhi 110001
38. Department of Geology & Mining  
Through Director  
State of Uttar Pradesh,  
Khanij Bhawan 27/8,  
Ram Mohan Rai Marg  
Lucknow - 226001
39. Department of Irrigation  
Through Engineer in Chief  
State of Uttar Pradesh,



New Planning Bhawan Toilibag, 3<sup>rd</sup> Floor  
Lucknow, PIN – 226001  
Uttar Pradesh

40. Central Pollution Control Board  
Through Member Secretary  
Parivesh Bhawan, CBD-Cum Office Complex  
East Arjun Nagar, Delhi – 110032
41. Uttar Pradesh State Pollution Control Board,  
Through the Member Secretary  
Picup Bhawan, 2<sup>nd</sup> Floor, B – block  
Vibhuti Khand, Gomiti Nagar,  
Lucknow – 226010
42. District Magistrate,  
Gautam Budha Nagar,  
Noida, Uttar Pradesh  
PIN 201301
43. Superintendent of Police,  
Gautam Budha Nagar,  
Noida, Uttar Pradesh  
PIN 201301
44. Ministry of Mining  
Shastri Bhawan, New Delhi
45. Vishal Agarwal  
S/o Lt. Sri Nahar Singh  
R/o 12/10, Ashirwad Enclave  
Ballupeer, Dehradun.
46. Vivek Kumar Aggarwal
47. Deepak Gupta
48. Jagannath Mane
49. Ministry of Environment and Forest.
50. Mohit, S/o Sh. Devendra,  
Resident of Mandi, Mailganj  
Tehsil Nagina, District.
51. Mrs. Muntur W/o P. Ismail  
R/o Puliyanthodi House,  
Vazhakkad Post  
Malapurram, Dist.  
Kerala.



52. Lasim C., S/o Basheer  
R/o Kodi thodina House,  
Payangadi Amsom,  
Kondotty Post,  
Malappuram Dist. Kerala
53. Dr. Sarvabhoom Bangali  
Kacheri Road.  
Opp. Head P.O.  
Distt. Bijapur  
Karnataka.
54. Ministry of Water Resources,  
New Delhi
55. Santhakumar A, S/o U. Achuthan  
Secretary, All Kerala Quarry Association,  
Palakkad.
56. K.M. Koyamu, S/o Modi Kattathodi  
Secretary, All Kerala Crusher Owner Association  
State Committee, Malappuram, Kerala
57. Muneer, P.M. S/o Moidu  
Paleri Town, P.O. Kulliyati  
Kerala
58. A.K. Sasi  
Athimattathil House  
Palakkad, P.O.  
Palakkad District  
Kerala

**Counsel for Applicants:**

- Mr. Anand Verma, Advocate in OA No.123/2014.  
Mr. Pinaki Mishra, Sr. Advocate with Mr. Rohit Gupta and Mrs. Megha Mehta Agarwal, Adv. in M.A. No. 419/2014 in OA No.123/2014.  
Mr. Raj Panjwani, Sr. Advocate with Mr. Aagney Sail, Advocate in M.A. No. 529/2014 in OA No.171/2013.  
Mr. Rishi Malhotra and Mr. Deepak Kaushal, Advocates in OA No.343/2013 and OA No. 279(THC)/2013.  
Mr. Parikshit Nayak, Advocate in Appeal No. 23/2014

**Counsel for Respondents :**

- Mr. Parag P. Tripathi, Sr. Advocate along with Mrs. Megha Mehta Agarwal and Mr. Rohit Gupta, Advocates for Respondent No. 5 – 14 in OA No.123/2014  
Mr. Vikas Malhotra along with Mr. P. Sahay, Advocates for MoEF in OA No.123/2014

unable to accept the contention of the applicants that this Office Memorandum should be quashed or declared invalid in its entirety on that ground alone.

Therefore, in their application, the only prayer is that their application for grant of Environmental Clearance should be considered expeditiously to avoid any prejudice to the progress of the projects. In view of the limited prayer made in this application, it is not necessary for us to again deliberate much on this application.

82. We dispose of this application with a direction that SEIAA shall consider these applications filed for seeking Environmental Clearance, in accordance with law and observations made in this judgment, expeditiously and in any case within a period of three months from today.

83. In light of the above discussion and particularly keeping in view the persistent conflict between the State Regulations and the Central Notifications, it is imperative for us to issue directions specially to provide for an interim period, during which appropriate steps should be taken to comply with the Judgment of the Hon'ble Supreme Court and to issue Notifications which are necessary in that regard. Therefore, we pass the following order and directions:

- I. For the reasons afore recorded, we hold and declare that the Notification dated 9<sup>th</sup> September, 2013 is invalid and inoperative for non-compliance of the statutorily prescribed procedure under the Environment (Protection) Rules, 1986 and

for absence of any justifiable reason for dispensation of such procedure.

- II. We also hold and declare that the Office Memorandums dated 24<sup>th</sup> June, 2013 and 24<sup>th</sup> December, 2013 to the extent afore-indicated are invalid and inoperative being beyond the power of delegated legislation.
- III. All the Office Memorandums and Notifications issued by MoEF i.e. 1<sup>st</sup> December, 2009, 18<sup>th</sup> May, 2012 and 24<sup>th</sup> June, 2013 and 24<sup>th</sup> December, 2013(except to the extent afore-stated) are operative and would apply to the lease mine holders irrespective of the fact that whether the area involved is more or less than 5 hectares.
- IV. We further hold that the existing mining lease right holders would also have to comply with the requirement of obtaining Environmental Clearance from the competent authorities in accordance with law. However, all of them, if not already granted Environmental Clearance would be entitled to a reasonable period (say three months) to submit their applications for obtaining the same, which shall be disposed of expeditiously and in any case not later than six months from pronouncement of this judgment.
- V. All the States and the Ministry of Environment and Forest shall ensure strict compliance to the directions issued by the Hon'ble Supreme Court in the case of *Deepak Kumar* (supra). We direct Secretary, Ministry of Environment and Forest to hold a



meeting with the State of Rajasthan, Himachal Pradesh and Karnataka to bring complete uniformity in application of the above referred Notifications and Office Memorandums including the Notification of 2006.

VI. We direct that in the meeting it shall also discuss and appropriate recommendations be made and placed before the Tribunal, as to whether riverbed mining covering an area of less than 5 hectares can be permitted, if so, the conditions and regulatory measures that need to be adopted in that behalf.

VII. We direct that the District Environmental Committees constituted by the respective State Governments shall not discharge any functions and grant approval as contemplated under the Notification of 2006.

VIII. Secretary, Ministry of Environment and Forest along with such experts and the States afore-referred will also consider the possibility of constituting the branches of SEIAA at the district or at least, division levels, to ensure easy accessibility to encourage the mine holders to take Environmental Clearance expeditiously.

IX. It is stated before us that in large number of cases, particularly in relation of State of Rajasthan, persons carrying on mining activity of minor minerals, non-coal mining and brick earth and ordinary earth have applied for obtaining Environmental Clearances in accordance with the terms and conditions of the Notification of 2006. Let all such applications be dealt with and



orders passed by the concerned authorities at the earliest and in any case not later than six months from today.

- X. We direct the respondent authorities, particularly SEIAA, to dispose of the application of all these private respondents who have already filed applications seeking Environmental Clearance as expeditiously as possible, in any case not later than three months from today. Thus, Appeal No. 23/2014 and M.A. No. 469/2014, M.A. No. M.A No. 488/2014, 489/2014, 479/2014, 480/2014, 473/2014, 470/2014, 471/2014 and 469/2014 stand disposed of with the above directions. Till the grant of environmental clearance they would not carry out any activity of marble mining.
- XI. We dispose of Original Application No. 123/13 with a direction that SEIAA shall consider the applications filed for seeking Environmental Clearance in accordance with law and observations made in this judgment, expeditiously, and in any case within a period of three months from today.
- XII. In the meanwhile, no State shall permit carrying on of sand mining or minor mineral extraction on riverbed or otherwise without the concerned person obtaining Environmental Clearance from the competent authority.
- XIII. We direct the Ministry of Environment and Forest to issue comprehensive but self-contained Notification relating to all minor mineral activity on the riverbed or otherwise, to avoid



unnecessary confusion, ambiguities and practical difficulties in implementation of the environmental laws.

XIV. In light of the judgment of the Supreme Court and what has emerged from the various cases that are subject matter of this Judgment, we direct the Ministry of Environment and Forest to formulate a uniform cluster policy in consultation with the States for permitting minor mineral mining activity including, its regulatory regime, in accordance with law.

84. For the reasons afore stated, we dispose of the Original Applications, Appeal and Miscellaneous Applications filed by different parties in all those Original Applications and Appeal, in terms of above directions, while leaving the parties to bear their own costs.

**Justice Swatanter Kumar**  
**Chairperson**

**Justice M.S.Nambiar**  
**Judicial Member**

**Dr. D.K. Agrawal**  
**Expert Member**

**Order:** This case was heard by a Bench consisting of Hon'ble Mr. Justice Swatanter Kumar (Chairperson), Hon'ble Mr. Justice M.S. Nambiar (Judicial Member), Hon'ble Dr. D.K. Agrawal (Expert Member) and Hon'ble Dr. R.C.



Trivedi (Expert Member). After the judgment was reserved, but, before its pronouncement, unfortunately, Dr. R.C. Trivedi, Learned Expert Member expired and left for heavenly abode on 26<sup>th</sup> December, 2014. Thus, the present judgment is being signed only by the remaining Members of the Bench.

**New Delhi**  
13<sup>th</sup> January, 2015



MINISTRY OF ENVIRONMENT AND FORESTS  
NOTIFICATION

New Delhi, the 3rd November, 2009

S.O. 2804(E).—WHEREAS, by notification of the Government of India in the Ministry of Environment and Forests number S.O. 763(E), dated the 14<sup>th</sup> September, 1999 (hereinafter referred to as the said notification) issued under sub-section (1), clause (v) of sub-section (2) of section 3 and section 5 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government, issued directions for restricting the excavation of top soil for manufacture of bricks and promoting the utilisation of fly ash in the manufacture of building materials and in construction activity within a specified radius of one hundred kilometers from coal or lignite based thermal power plants;

AND WHEREAS, the term “fly ash” means and includes all categories or groups of coal or lignite ash generated at the thermal power plant and collected by Electrostatic Precipitator (ESP) or bag filters or other similar suitable equipments; bottom ash is the ash collected separately at the bottom of the boiler; pond ash is the mixture of ESP Fly ash and bottom ash, but, for the purpose of this notification, the term “fly ash” means and includes all ash generated such as Electrostatic Precipitator (ESP) ash, dry fly ash, bottom ash, pond ash and mound ash as the objective is to utilise all the ashes;

AND WHEREAS, there is a need for restricting the excavation of top soil for manufacture of bricks and for other works which involve use of top soil and promoting utilisation of fly ash produced by coal or lignite based thermal power plants including captive power plants and co-generation plants in the manufacture of building materials and construction activity;

AND WHEREAS, it was observed that there was a gradual increase in the use of fly ash in the manufacture of fly ash bricks or products from about 1.5 million tonne in 2002-2003 to 3.19 million tonne in 2006-2007 which needs to be further encouraged for achieving the ultimate objective of conservation of top soil and minimise environmental pollution caused due to fly ash;

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AND WHEREAS, it is observed that construction agencies are yet to achieve their targets of utilization of fly ash based products even after the 31<sup>st</sup> August, 2007, the date prescribed for 100% utilisation of fly ash based products in the said notification of 1999 and it is also observed that many thermal power stations or plants are also yet to achieve the targets drawn up in their action plans;

AND WHEREAS, the representations of the brick kiln owners were considered with regard to transporting of fly ash over a long distance and also the logistics involved including the energy cost;

AND, WHEREAS, the issue has been examined by the Government of India in the Ministry of Environment and Forests;

AND WHEREAS, the Central Government is of the opinion that the said notification should be amended;

AND WHEREAS, clause (a) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986 provides that whenever the Central Government considers that prohibition or restrictions of any industry or carrying on any processes or operation in any area should be imposed, it shall give notice of its intention to do so;

AND WHEREAS, a draft of amendment to the Government of India, Ministry of Environment and Forests notification no. S.O.763 (E), dated the 14th September, 1999 duly amended vide notification No. S.O. 979 (E), dated the 27<sup>th</sup> August, 2003 (hereinafter referred to as the said notification) which the Central Government proposes to make under subsection (1) clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with clause (d) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (ii) dated the 6<sup>th</sup> November, 2008 vide S.O. 2623 (E), inviting objections and suggestions from all persons likely to be affected thereby before the expiry of sixty days from the date on which copies of the Gazette containing the said draft amendments were made available to the public.

AND WHEREAS, copies of the said Gazette were made available to the public on the day of 6<sup>th</sup> November 2008;

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AND WHEREAS, the objections and suggestions received from various persons or agencies likely to be affected thereby in respect of the said draft notification have been duly considered by the Central Government in the Ministry of Environment and Forests;

Now, therefore, in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with clause (d) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby makes the following amendments to the said notification, namely: -

#### AMENDMENTS

1. Throughout the said notification, save as otherwise expressly provided and unless the context otherwise requires, for the word "ash" wherever it occurs, the words "fly ash" shall be substituted.

2. In the said notification, in paragraph 1,—

(a) for sub-paragraph (1), the following shall be substituted, namely:-

"(i) use of fly ash based products in construction activities";

(b) for sub-paragraphs (1A) and (1B), the following sub-paragraphs shall respectively be substituted, namely:-

"(1A) Every construction agency engaged in the construction of buildings within a radius of hundred kilometers from a coal or lignite based thermal power plant shall use only fly ash based products for construction, such as: cement or concrete, fly ash bricks or blocks or tiles or clay fly ash bricks, blocks or tiles or cement fly ash bricks or bricks or blocks or similar products or a combination or aggregate of them, in every construction project.

(1B) The provisions of sub-paragraph (1A) shall be applicable to all construction agencies of Central or State or Local Government and private or public sector and it shall be the responsibility of the agencies either undertaking construction or approving the design or both to ensure compliance of the provisions of sub-paragraph (1A) and to submit annual returns to the concerned State Pollution Control Board or Pollution Control Committee, as applicable";

(c) after sub-paragraph (1B), the following sub-paragraph shall be inserted, namely:—

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“(1C) Minimum fly ash content for building materials or products to qualify as “fly ash based products” category shall be as given in the Table I below:

Table I

Serial Number	Building Materials or Products	Minimum % of fly ash by weight
(1)	(2)	(3)
1.	Fly ash bricks, blocks, tiles, etc. made with fly ash, lime, gypsum, sand, stone dust etc. (without clay).	50% of total input materials
2.	Paving blocks, paving tiles, checker tiles, mosaic tiles, roofing sheets, pre-cast elements, etc. wherein cement is used as binder.	Usage of PPC (IS-1489: Part-1) or PSC (IS-455) or 15% of OPC (IS-269/8112/12269) content.
3.	Cement.	15% of total raw materials
4.	Clay based building materials such as bricks, blocks, tiles, etc.	25% of total raw materials.
5.	Concrete, mortar and plaster.	Usage of PPC (IS-1489: Part-1) or PSC (IS-455) or 15% of OPC (IS-269/8112/12269) content.

(d) in sub-paragraph (2), for the brackets and number “(1)”, the brackets, number and letter “(1C)” shall be substituted and the number of sub-paragraph (2) shall be substituted by 1(D);

(e) in paragraph (2A), the paragraph 1(A) shall be substituted by 1(A) and 1(B) and the amended paragraph 2(A) is to be numbered as 1(E);

(f) for sub-paragraphs (3) and (3A), the following sub-paragraphs shall respectively be substituted, namely:—

“(3) In case of non-availability of fly ash from thermal power plants in sufficient quantities as certified by the said power plants, within 100 km of the site, the stipulation under sub-paragraph (1A) shall be suitably modified (waived or relaxed) by the concerned State Government or Union territory Government level monitoring committee mentioned elsewhere in this notification.

(3A) A decision on the application for manufacture of fly ash bricks, blocks and tiles and similar other fly ash based products shall be taken within thirty days from the date of receipt of the application by the concerned State Pollution Control Board or Pollution Control Committee.”;

(g) sub-paragraphs (3B), (3C) and (3D) shall be omitted;

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h) for sub-paragraphs (4) and (5), the following sub-paragraphs shall be substituted, namely:-

“(4) Each coal or lignite based thermal power plant shall constitute a dispute settlement committee which shall include the General Manager of the thermal power plant and a representative of the relevant Construction and Fly ash Brick Manufacturing Industry Association or Body, as the case may be and such a Committee shall ensure unhindered loading and transport of fly ash in an environmentally sound manner without any undue loss of time. Any unresolved dispute shall be dealt with by the concerned State or Union territory Government level monitoring committee mentioned elsewhere in this notification.

(5) No agency, person or organization shall, within a radius of hundred kilometers of a thermal power plant undertake construction or approve design for construction of roads or flyover embankments with top soil; the guidelines or specifications issued by the Indian Road Congress (IRC) as contained in IRC specification No. SP: 58 of 2001 as amended from time to time, regarding use of fly ash shall be followed and any deviation from this direction can only be agreed to on technical reasons if the same is approved by Chief Engineer (Design) or Engineer-in-Chief of the concerned agency or organisation or on production of a certificate of “fly ash not available” from the thermal power plant(s) (TPPs) located within hundred kilometers of the site of construction and this certificate shall be provided by the TPP within two working days from the date of receipt of a request for fly ash, if fly ash is not available”;

(i) in sub-paragraph (6), for the words “Voids created due to soil borrow area shall be filled up with ash with proper compaction and covered with topsoil kept separately as above and this would be done as an integral part of embankment project within the time schedule of the project”, the words “Voids created at soil borrow area shall be filled up with fly ash with proper compaction and covered with topsoil kept separately as above and this would be done as an integral part of embankment project” shall be substituted;

(j) for sub-paragraph (7), the following sub-paragraphs shall be substituted, namely:—

“(7) No agency, person or organisation shall within a radius of hundred kilometers of a coal or lignite based thermal power plant undertake or approve or allow reclamation and compaction of low-lying areas with soil; only fly ash shall be used for compaction and reclamation and they shall also ensure that such reclamation and compaction is done in accordance with the specifications and guidelines laid down by the authorities mentioned in sub-paragraph (1) of paragraph 3.

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(8)(i) No person or agency shall within fifty kilometers (by road) from coal or lignite based thermal power plants, undertake or approve stowing of mine without using at least 25% of fly ash on weight to weight basis, of the total stowing materials used and this shall be done under the guidance of the Director General of Mines Safety (DGMS);

Provided that such thermal power stations shall facilitate the availability of required quality and quantity of fly ash as may be decided by the expert committee referred in sub-paragraph (10) for this purpose.

(ii) No person or agency shall within fifty kilometers (by road) from coal or lignite based thermal power plants, undertake or approve without using at least 25% of fly ash on volume to volume basis of the total materials used for external dump of overburden and same percentage in upper benches of back filling of opencast mines and this shall be done under the guidance of the Director General of Mines Safety (DGMS);

Provided that such thermal power stations shall facilitate the availability of required quality and quantity of fly ash as may be decided by the expert committee referred in sub-paragraph (10) for this purpose.

(9) The provisions contained in clauses (i) and (ii) of sub-paragraph (8) shall be applicable to all mine agencies under Government, public and private sector and to mines of all minerals or metals or items and it shall be the responsibility of agencies either undertaking or approving the external dump of overburden, backfilling or stowing of mine or all these activities to ensure compliance of provisions contained in clauses (i) and (ii) of sub-paragraph (8) and to submit annual returns to the concerned State Pollution Control Board or Pollution Control Committee as applicable.

(10) The Ministry of Coal for this purpose shall constitute an expert committee comprising of representatives from Fly Ash Unit, Department of Science and Technology, Ministry of Science and Technology, Director General of Mines Safety (DGMS), Central Mine Planning and Design Institute Limited (CMPDIL), Ministry of Environment and Forests, Ministry of Power, Ministry of Mines and the Central Institute of Mining and Fuel Research (CIMFR), Dhanbad; the Committee shall also guide and advise the back filling or stowing in accordance with the provisions contained in sub-paragraphs (8) (i), 8 (ii) and (9), and specifications and guidelines laid down by the concerned authorities as mentioned in sub-paragraph (1) of paragraph 3.

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(11) The concerned State Government or Union territory Government shall be the enforcing and monitoring authority for ensuring compliance of the provisions of sub-paragraphs (8) (i) and (8) (ii);

3. in the said notification, ~~of~~ paragraph 2,—

(a) for sub-paragraphs (1), (2) and (3), the following sub-paragraphs shall be substituted, namely:—

(1) All coal or lignite based thermal power stations would be free to sell fly ash to the user agencies subject to the following conditions, namely:—

(i) the pond ash should be made available free of any charge on "as is where is basis" to manufacturers of bricks, blocks or tiles including clay fly ash product manufacturing unit(s), farmers, the Central and the State road construction agencies, Public Works Department, and to agencies engaged in backfilling or stowing of mines.

(ii) at least 20% of dry ESP fly ash shall be made available free of charge to units manufacturing fly ash or clay-fly ash bricks, blocks and tiles on a priority basis over other users and if the demand from such agencies falls short of 20% of quantity, the balance quantity can be sold or disposed of by the power station as may be possible.

Provided that the fly ash obtained from the thermal power station should be utilized only for the purpose for which it was obtained from the thermal power station or plant failing which no fly ash shall be made available to the defaulting users.

(2) All coal and, or lignite based thermal power stations and, or expansion units in operation before the date of this notification are to achieve the target of fly ash utilization as per the Table II given below:

Table II

Serial Number	Percentage Utilization of Fly Ash	Target Date
(1)	(2)	(3)
1.	At least 50% of fly ash generation	One year from the date of issue of this notification.
2.	At least 60% of fly ash generation	Two years from the date of issue of this notification.
3.	At least 75% of fly ash generation	Three years from the date of issue of this notification.

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4.	At least 90% of fly ash generation	Four years from the date of issue of this notification.
5.	100% fly ash generation	Five years from the date of issue of this notification.

The unutilised fly ash in relation to the target during a year, if any, shall be utilized within next two years in addition to the targets stipulated for those years and the balance unutilized fly ash accumulated during first five years (the difference between the generation and the utilization target) shall be utilized progressively over next five years in addition to 100% utilization of current generation of fly ash.

(3) New coal and, or lignite based thermal power stations and, or expansion units commissioned after this notification to achieve the target of fly ash utilization as per Table III given below:

Table III

Serial Number	Fly ash utilization level	Target date
(1)	(2)	(3)
1.	At least 50% of fly ash generation	One year from the date of commissioning.
2.	At least 70% of fly ash generation	Two years from the date of commissioning.
3.	90% of fly ash generation	Three years from the date of commissioning.
4.	100% of fly ash generation	Four years from the date of commissioning.

The unutilised fly ash in relation to the target during a year, if any, shall be utilized within next two years in addition to the targets stipulated for these years and the balance unutilized fly ash accumulated during first four years (the difference between the generation and utilization target) shall be utilized progressively over next five years in addition to 100% utilization of current generation of fly ash.”;

(b) in sub-paragraph (4), for the words “six months”, the words “four months” shall be substituted;

(c) for sub-paragraph (6), the following sub-paragraphs shall be substituted, namely:—

“(6) The amount collected from sale of fly ash and fly ash based products by coal and/or lignite based thermal power stations or their subsidiary or sister concern unit, as applicable should be kept in a separate account head and shall be utilized only for development of infrastructure or facilities, promotion and facilitation activities for use of fly ash until 100 percent

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fly ash utilization level is achieved; thereafter as long as 100% fly ash utilization levels are maintained, the thermal power station would be free to utilize the amount collected for other development programmes also and in case, there is a reduction in the fly ash utilization levels in the subsequent year(s), the use of financial return from fly ash shall get restricted to development of infrastructure or facilities and promotion or facilitation activities for fly ash utilization until 100 percent fly ash utilisation level is again achieved and maintained.

(7) Annual implementation report (for the period 1<sup>st</sup> April to 31<sup>st</sup> March) providing information about the compliance of provisions in this notification shall be submitted by the 30<sup>th</sup> day of April, every year to the Central Pollution Control Board, concerned State Pollution Control Board or Committee and the concerned Regional Office of the Ministry of Environment and Forests by the coal or lignite based thermal power plants, and also be made a part of the annual report of the thermal power plant as well as thermal power plant wise information be provided in the annual report of thermal power producing agency owning more than one thermal power plant”;

4. in the said notification, in paragraph 3,—

(a) in sub-paragraph (2), for the words “schedules of specifications and construction applications, including appropriate standards and codes of practice, within a period of four months from the publication of this notification”, the words “tender documents, schedules of specifications and construction applications including appropriate standards and codes of practice within a period of four months from the publication of this notification” shall be substituted;

(b) for sub-paragraph (2A), the following sub-paragraph shall be substituted, namely:—

“(2A) Building construction agencies both in public and private shall prescribe the use of fly ash and fly ash-based products in their respective tender documents, schedules of specifications and construction applications, including appropriate standards and codes of practice and make provisions for the use of fly ash and fly ash based bricks, blocks or tiles or aggregates of them in the schedule of approved materials and rates within a period of four months from the publication of this notification.”;

(c) for sub-paragraphs (2B) and (3), the following sub-paragraphs shall be substituted, namely:—

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"(2B) All agencies undertaking construction of roads or fly over bridges and reclamation and compaction of low lying areas, including Department of Road Transport and Highways (DORTH), National Highways Authority of India (NHAI), Central Public Works Department (CPWD), State Public Works Departments and other State Government Agencies, shall within a period of four months from the publication of this notification-

(a) make provisions in their tender documents, schedules of approved materials and rates as well as technical documents for implementation of this notification, including those relating to soil borrow area or pit as per sub-paragraph (6) of paragraph 1; and

(b) make necessary specifications or guidelines for road or fly over embankments that are not covered by the specifications laid down by the Indian Road Congress (IRC).

(3) All local authorities shall specify in their respective tender documents, building bye-laws and regulations, the use of fly ash and fly ash-based products and construction techniques in building materials, roads embankments or for any usage with immediate effect.

(4) The Central Electricity Authority and other approving agencies may permit the land area for emergency ash pond or fly ash storage area up to 50 hectares for a 500 MW unit, based on 45% ash content coal, or in the same proportion for units in other capacities taking into account the ash content in coal or lignite to be used.

(5) All Financial institutions and agencies which fund construction activities shall include a clause in their loan or grant document for compliance of the provisions of this notification.

(6) A Monitoring committee shall be constituted by the Central Government with Members from Ministry of Coal, Ministry of Mines, Ministry of Power, Central Pollution Control Board, Central Electricity Authority, Head Fly Ash Unit of Department of Science and Technology and Building Material Technology Promotion Council to monitor the implementation of the provisions of the notification and submit its recommendations or observations at least once in every six months to the Secretary, Ministry of Environment and Forests. Concerned Advisor or Joint Secretary in the Ministry of Environment and Forests will be the convener of this committee.

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(7) For the purpose of monitoring the implementation of the provisions of this notification the State Governments or Union territory Government shall constitute a Monitoring Committee within three months from the date of issue of this notification under the Chairmanship of Secretary, Department of Environment with representatives from Department of Power, Department of Mining, Road and Building Construction Department and State Pollution Control Board and this Committee would deal with any unresolved issue by Dispute Settlement Committee as prescribed in sub-paragraph (4) of paragraph 1, in addition to monitoring and facilitating implementation of this notification at the respective State Government or Union territory level and this Committee would also be empowered to suitably modify (waive or relax) the stipulation under sub-paragraph (1) in case of non-availability of fly ash in sufficient quantities from thermal power plant as certified by the said power plants and the Committee will meet at least once in every quarter.

[F. No. 9-8/2005-HSMD]

G. V. SUBRAHMANYAM, Scientist 'G'

Foot Note :—The principal notification was published in the Gazette of India, Part II, Section 3, Sub-section (ii) vide notification number S.O. 763(E), dated the 14th September, 1999 and was amended vide notification number S. O. 979(E), dated the 27th August, 2003.

- (10) संबद्ध प्राधिकारी सभी सरकारी स्कीमों या कार्यक्रमों में, उदाहरणार्थ महात्मा गांधी राष्ट्रीय ग्रामीण रोजगार गारंटी अधिनियम, 2005 (मनरेगा), स्वच्छ भारत अभियान, शहरी और ग्रामीण आवासन स्कीम, जहां संनिर्मित क्षेत्र एक हजार वर्ग फुट से अधिक है और अवसंरचना संबंधी संनिर्माण में, जिसके अंतर्गत अभिहित औद्योगिक संपदाओं या पार्कों या विशेष आर्थिक जोनों में भवन निर्माण भी है, ऐश आधारित ईंटों या उत्पादों के आसपास उपयोग को सुनिश्चित करेंगे।
- (11) कृषि मंत्रालय कृषि क्रियाकलापों में ऐश के मृदा अनुकूलक के रूप में उपयोग का संवर्धन करने पर विचार कर सकेगा।”
5. सभी संबद्ध प्राधिकारियों द्वारा उपरोक्त उपबंधों का अनुपालन करने की समयावधि 31 दिसंबर, 2017 है। कोयला या लिम्नाइट आधारित तापीय विद्युत संयंत्र, उनके द्वारा उत्पादित फ्लाई ऐश के 100 प्रतिशत उपयोग के अतिरिक्त उपरोक्त उपबंधों का अनुपालन 31 दिसंबर, 2017 से पूर्व करेंगे।

[फा. सं. 9-8/2005-एचएसएमडी]

विश्वनाथ सिन्हा, संयुक्त सचिव

टिप्पण:- मूल अधिसूचना भारत के राजपत्र, असाधारण, भाग II, खंड 3, उप-खंड (ii) में अधिसूचना सं. फा.आ. 763(अ), तारीख 14 सितंबर, 1999 द्वारा प्रकाशित की गई थी और इसमें पश्चातवर्ती संशोधन अधिसूचना सं. फा.आ. 979(अ), तारीख 27 अगस्त, 2003 और फा.आ. 2804(अ), तारीख 3 नवंबर, 2009 द्वारा किए गए थे।

MINISTRY OF ENVIRONMENT, FORESTS AND CLIMATE CHANGE  
NOTIFICATION

New Delhi, the 25th January, 2016

**S.O. 254(E).**—Whereas a draft of certain amendments to the Government of India in the Ministry of Environment, Forests and Climate Change number S.O. 763(E), dated the 14th September, 1999 (hereinafter referred to as the said notification) which the Central Government proposes to make under sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with clause (d) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, was published in the Gazette of India, Extraordinary, Part II, section 3, Sub-section (ii), vide S.O. 1396(E), dated the 25<sup>th</sup> May, 2015 inviting objections and suggestions from all persons likely to be affected thereby before the expiry of sixty days from the date on which copies of the Gazette containing the said draft amendments were made available to the public.

And, whereas copies of the said Gazette were made available to the public on 25th May, 2015;

And, whereas all the objections and suggestions received from all persons likely to be affected thereby in respect of the said draft notification have been duly considered by the Central Government;

Now, therefore, in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with clause (d) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby makes the following amendments to the said notification, namely:—

1. In the said notification, in paragraph 1,-

- in sub-paragraph 1(A), for the words “hundred kilometers”, the words “three hundred kilometers” shall be substituted;
- in sub-paragraph (3), for the figures and letters “100 km”, the words “three hundred kilometers” shall be substituted;
- in sub-paragraph (5), for the words “hundred Kilometers”, the words “three hundred Kilometers” shall be substituted;
- in sub-paragraph (7), for the words “hundred Kilometers”, the words “three hundred Kilometers” shall be substituted.

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अनिल कुमार सिंह (सचिव)  
Add. General Manager (Consumer)  
एन डी सी लिमिटेड/NDC LIMITED



**2. In the said notification, in paragraph 2:-**

**(a) after sub-paragraph (1), the following proviso shall be inserted, namely:-**

“provided further that the restriction to provide 20 % of dry ESP fly ash free of cost shall not apply to those thermal power plants which are able to utilise 100 % fly ash in the prescribed manner.”

**(b) after sub-paragraph (7), the following sub-paragraphs shall be inserted, namely:-**

- “(8) Every coal or lignite based thermal power plants (including captive and or co-generating stations) shall, within three months from the date of notification, upload on their website the details of stock of each type of ash available with them and thereafter shall update the stock position at least once a Month.
- (9) Every coal or lignite based thermal power plants shall install dedicated dry ash silos having separate access roads so as to ease the delivery of fly ash.
- (10) The cost of transportation of ash for road construction projects or for manufacturing of ash based products or use as soil conditioner in agriculture activity within a radius of hundred kilometers from a coal or lignite based thermal power plant shall be borne by such coal or lignite based thermal power plant and the cost of transportation beyond the radius of hundred kilometers and up to three hundred kilometers shall be shared equally between the user and the coal or lignite based thermal power plant.
- (11) The coal or lignite based thermal power plants shall promote, adopt and set up (financial and other associated infrastructure) the ash based product manufacturing facilities within their premises or in the vicinity of their premises so as to reduce the transportation of ash.
- (12) The coal or lignite based thermal power plants in the vicinity of the cities shall promote, support and assist in setting up of ash based product manufacturing units so as to meet the requirements of bricks and other building construction materials and also to reduce the transportation.
- (13) To ensure that the contractor of road construction utilizes the ash in the road, the Authority concerned for road construction shall link the payment of contractor with the certification of ash supply from the thermal power plants.
- (14) The coal or lignite based thermal power plants shall within a radius of three hundred kilometers bear the entire cost of transportation of ash to the site of road construction projects under Pradhan Mantri Gramin Sadak Yojna and asset creation programmes of the Government involving construction of buildings, road, dams and embankments”.

**3. In the said notification, in paragraph 2, sub-paragraph (2A) be read as sub-paragraph (15) and at the end of the said sub-paragraph, the following sub-paragraph shall be added, namely:-**

“and the coal or lignite based thermal power plants located in coastal districts shall support, assist or directly engage into construction of shore line protection measures.”

**4. In the said notification, in paragraph 3, after sub-paragraph (7), the following shall be inserted, namely:-**

- “(8) It shall be the responsibility of all State Authorities approving various construction projects to ensure that Memorandum of Understanding or any other arrangement for using fly ash or fly ash based products is made between the thermal power plants and the construction agency or contractors.
- (9) The State Authorities shall amend Building Bye Laws of the cities having population One million or more so as to ensure the mandatory use of ash based bricks keeping in view the specifications necessary as per technical requirements for load bearing structures.
- (10) The concerned Authority shall ensure mandatory use of ash based bricks or products in all Government Scheme or programmes e.g. Mahatma Gandhi National Rural Employment Guarantee Act, 2005 (MNREGA), SWACHH BHARAT ABIYAN, Urban and Rural Housing Scheme, where built up area is more than 1000 square feet and in infrastructure construction including buildings in designated industrial Estates or Parks or Special Economic Zone.

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(11) The Ministry of Agriculture may consider the promotion of ash utilisation in agriculture as soil conditioner."

5. **The time period to comply with the above provisions by all concerned authorities is 31<sup>st</sup> December, 2017. The coal or lignite based thermal power plants shall comply with the above provision in addition to 100 % utilization of fly ash generated by them before 31<sup>st</sup> December, 2017.**

[F. No. 9-8/2005-HSMD]

BISHWANATH SINHA, Jt. Secy.

**Note:-** The principal notification was published in the Gazette of India, Extraordinary, Part II, section 3, Sub-section (ii) *vide* notification S.O. 763(E), dated the 14<sup>th</sup> September, 1999 and was subsequently amended *vide* notification S.O. 979(E), dated the 27<sup>th</sup> August, 2003 and S.O. 2804(E), dated the 3<sup>rd</sup> November, 2009.

**Fwd: Minutes of meeting of Joint Committee (JC) held on 18th April, 2019 under the Chairmanship of Shri Ritesh Kumar Singh, Joint Secretary to discuss action plan to achieve 100% fly ash utilization by the Thermal Power Plants-reg.**

**From :** Prabhat Kumar Sinha <pksinha01@ntpc.co.in> Thu, Jun 13, 2019 01:07 PM  
**Subject :** Fwd: Minutes of meeting of Joint Committee (JC) held on 18th April, 2019 under the Chairmanship of Shri Ritesh Kumar Singh, Joint Secretary to discuss action plan to achieve 100% fly ash utilization by the Thermal Power Plants-reg. 1 attachment  
**To :** aksrivastava03@ntpc.co.in, rkkhandekar@ntpc.co.in

सादर,  
 प्रभात कुमार सिन्हा  
 कार्यकारी निदेशक ( Safety, AU,EMG)  
 NTPC Ltd

Begin forwarded message:

**From:** Aditya Narayan Singh <aditya.narayan@nic.in>  
**Date:** 12 June 2019 at 4:37:44 PM IST  
**To:** pawan.kalarwal@gov.in, dirtech.moc@nic.in, gdranf@iitr.ernet.in, ccb.cpcb@nic.in, nazim.cpcb@nic.in, cpwd\_ddg@nic.in, b.k.nayak@ospcb.org, sudiptomondal.cea@gov.in, pksinha01@ntpc.co.in  
**Cc:** riteshkumar.singh@nic.in, m.gangeya@gov.in  
**Subject:** Minutes of meeting of Joint Committee (JC) held on 18th April, 2019 under the Chairmanship of Shri Ritesh Kumar Singh, Joint Secretary to discuss action plan to achieve 100% fly ash utilization by the Thermal Power Plants-reg.

-----Email received from [External domain] from Internet. Actual Sender:--  
 prvs=059aed21f=aditya.narayan@nic.in-----

No. HSM 11/3/2018

Government of India

Ministry of Environment, Forest and Climate Change

(HSM Division)



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 Add: General Manager (Communication)  
 एन टी पी लिमिटेड / NTPC LIMITED

Indira Paryavaran Bhawan

Jorbagh Road

New Delhi- 110 003

Date: 12<sup>th</sup> June, 2019

**Subject: Minutes of meeting of Joint Committee (JC) held on 18<sup>th</sup> April, 2019 under the Chairmanship of Shri Ritesh Kumar Singh, Joint Secretary to discuss action plan to achieve 100% fly ash utilization by the Thermal Power Plants-reg.**

I am directed to forward herewith the minutes of meeting of Joint Committee (JC) held on 18<sup>th</sup> April, 2019 under the Chairmanship of Shri Ritesh Kumar Singh, Joint Secretary to discuss action plan to achieve 100% fly ash utilization by the Thermal Power Plants.

(A. N. Singh)

Scientist 'E'/Addl. Director

**Encl: as above.**

**To:**

1. Shri Pawan Kr. Kalarwal, Director, Ministry of Power, Shram Shakti Bhawan Rafi Marg, New Delhi-110001 ([pawan.kalarwal@gov.in](mailto:pawan.kalarwal@gov.in); Phone : 23710271; 23711316)
2. Shri Peeyush Kumar, Director, Ministry of Coal, Shastri Bhawan, New Delhi ([dirtech.moc@nic.in](mailto:dirtech.moc@nic.in); Phone 011-23384884)
3. Dr. G.D. Ransinchung R.N., Associate Professor, Transportation Engineering Group, Civil Engineering Department, Indian Institute of Technology, Roorkee ([gdranfce@iitr.ernet.in](mailto:gdranfce@iitr.ernet.in))
4. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-110032. ([ccb.cpcb@nic.in](mailto:ccb.cpcb@nic.in); Phone 22307233 )
5. Shri Nazimuddin, Scientist 'E', CPCB, Parivesh Bhawan, East Arjun Nagar, Delhi-110032. ([nazim.cpcb@nic.in](mailto:nazim.cpcb@nic.in))
6. Shri Harish Kumar, DDG, CPWD, Ministry of Housing and Urban Affairs, Nirman Bhawan, Maulana Azad Road, New Delhi-110011. ([cpwd\\_ddg@nic.in](mailto:cpwd_ddg@nic.in); Phone No. : 23062377).

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Addl. General Manager (Commercial)  
एन.ए.सी. लिमिटेड, नई दिल्ली

7. Shri Ajay Kumar Sabharwall, GM, National Highways Authority of India, G 5&6, Sector-10, Dwarka, New Delhi - 110 075 (25074100 & 25074200)

8. Shri B K Nayak, Sr. Env. Scientist, Odisha State Pollution Control Board.  
([b.k.nayak@ospcb.org](mailto:b.k.nayak@ospcb.org))

9. Shri Sudipto Mondal, Dy. Director, TCD Div. , CEA([sudiptomondal.cea@gov.in](mailto:sudiptomondal.cea@gov.in))

10. Shri Bhagaban Bhattacharya, Asst. Director, TCD Div. , CEA ([tcd.cea@gov.in](mailto:tcd.cea@gov.in))


11. The Executive Director, National Thermal Power Corporation, Noida.

**Copy to:**

i) PS to Joint Secretary (HSMD)

ii) PS to Director (HSMD)

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 **Final minutes Joint Committee Fly Ash.pdf**  
519 KB

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आर्य समाज (संस्कृत)  
Ary Samaj (Sanskrit)  
ए. ए. ए. लि. / A. A. A. LIMITED

**Minutes of 2<sup>nd</sup> meeting of Joint Committee (JC) under the Chairmanship of Shri Ritesh Kumar Singh, Joint Secretary, (MoEF&CC) held on 17<sup>th</sup> and 18<sup>th</sup> July 2019 to discuss action plan to achieve 100% fly ash utilization by the Thermal Power Plants(TPPs).**

The 2<sup>nd</sup> meeting of the Joint Committee (JC) to discuss action plan to achieve 100% fly ash utilization by the Thermal Power Plants was held in the Ministry of Environment, Forest and Climate Change (MoEF&CC) on 17<sup>th</sup> and 18<sup>th</sup> July 2019 under the Chairmanship of Shri Ritesh Kumar Singh, Joint Secretary. The list of participants of the meeting is placed at Annexure I. Representative from Ministry of Coal and Dr. G.D. Ransinchung R.N., Associate Professor, Transportation Engineering Group, Civil Engineering Department, Indian Institute of Technology, Roorkee could not attend the meeting due to unavoidable circumstances.

2.0 At the outset of the meeting, after a round of introduction by the members of the Expert Committee and the representatives of TPPs, the Chair welcomed all the participants and elucidated on the mandate of 100% fly ash utilization generated by thermal power plants. The Chair requested Sh. Manoj Kumar Gangeya, Director (HSMD) to further brief the agenda. Director (HSMD) apprised about the NGT orders dated 20.11.2018 and 12.03.2019. He also added that the previous meeting of Joint Committee was held on 18th April, 2019, wherein a period of 1 year to achieve 100 % utilization was agreed upon for non-compliant plants having fly ash utilization more than 85% and a period of maximum 2 years may be given to achieve 100 % fly ash utilization for non-compliant TPPs having fly ash utilization below 85%.

3.0 The Committee asked the representatives of TPPs to share their concerns while achieving the said target of 100% fly ash. The Committee also informed that remotely located as well as clustered TPPs should identify abandoned coal mines for fly ash backfilling and share the list with Task Force of Ministry of Power for obtaining the approval of Ministry of Coal. The CPCB has also formulated guidelines for mines backfilling in an environmentally sound manner. It was also informed that expenses incurred in fly ash disposal may be recovered from power tariff. Accordingly, CEA communicated that TPPs should submit their requests directly to CERC for reimbursement of expenses towards fly ash disposal. Further, the Thermal Power Plants were requested to give presentation on the action plan as well time frame to achieve 100% fly ash utilization. The presentations and discussions are summarized below:

### **1. TANGEDCO Thermal Power Plants**

TANGEDCO informed that total 5 thermal power plants located at North Chennai – I (3x 120 MW & 630 MW), North Chennai –II (2x 600 MW), Mettur – I (4x210 MW), Mettur – II (1x600 MW) and Tuticorin (5 x210 MW) are operational. Their fly ash utilization was in the range of 39% -66% during previous FY 17-18 and FY

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Add. General Manager (Commercial)  
Tamil Nadu Power Corporation Limited

18-19. The Committee noted that they have submitted the action plan for only one quarter instead of four quarters. However, the Committee decided that TPPs should submit revised quarterly action plan for 100 % utilization of fly ash by FY 20-21 including bottom ash within a week time.

## **2. Sasan Ultra Mega Power Project**

Power generating capacity of Sasan Ultra Mega Power Project is 3960 MW (6 x 660 MW). During FY 17-18 and FY18- 19, fly ash utilization was in the range of 24% - 30 %. Now, Sasan Ultra Mega Power Project has submitted quarterly action plan to achieve 70 % fly ash utilization by 2019-20 and 100% utilization by FY 20-21.

## **3. Uttar Pradesh Rajya Vidyut Utpadan Nigarh (UPRVUN)**

Uttar Pradesh Rajya Vidyut Utpadan Nigarh (UPRVUN) is operating four TPPs at Anpara (2630 MW), Obra (1000 MW), Harduanganj (610 MW) and Parochha. They informed that fly ash utilization was less than 15 % in Anpara and Obraa TPPs during 2017-18 and 2018-19. Whereas fly ash utilization was around 90 % in Harduanganj and around 87 % in Parichha. The Committee noted that they have submitted action plan for only one quarter instead of four quarters. However, the Committee decided that the TPP should submit revised quarterly action plan for 85 % utilization of fly ash by FY 19-20 and 100 % fly ash utilization by FY 20-21 within a week time.

## **4. APCPL – Indira Gandhi Super Thermal Power Project**

Power generating capacity of APCPL – Indira Gandhi Super Thermal Power Project is 1500 MW. Fly ash utilization was 69.93 % during FY 17-18 and 103.4 % during FY 18-19. They informed that APCPL has achieved 100 % fly utilization in the FY 18-19. They have also submitted quarterly action plan to achieve 100 % fly ash utilization for the FY 19-20.

## **5. Jhabua Power Ltd.**

Power generation capacity of Jhabua Power Ltd. is 600 MW. Fly ash utilization was 67 % during FY 17-18 and 70 % during FY 18-19. The Committee noted that they have submitted the quarter wise action plan for 81.38 % fly ash utilization instead of 100 %. They have also submitted quarterly action plan to achieve 80 % fly ash utilization in FY 19-20 and 100 % fly ash utilization in FY 20-21.

## **6. NTECL**

Power generation capacity of NTECL. is 1500 MW. Fly ash utilization was 64 % during FY17-18 and 67 % during FY 18-19. They informed that they will achieve 81 % fly ash utilization by FY 19-20 and 100 % fly ash utilization will be achieved by

FY 20-21.

**7. Odisha Power Generation Corporation Ltd. (OPGC)**

Power generation capacity of OPGC. is 420 MW. Fly ash utilization was 55 % during year 2017-18 and 33 % during 2018-19. The Committee noted that they have submitted the quarter wise action plan for 60 % fly ash utilization instead of 100 % in the year 2019-20. They informed that they will achieve 100 % utilization in the year 2023-24. However, the Committee decided that the TPP should submit revised quarterly action plan for 85 % utilization of fly ash by FY 19-20 and 100 % fly ash utilization by FY 20-21.

**8. West Bengal Power Development Corporation Limited**

West Bengal Power Development Corporation Limited (WBPDCL) is operating Thermal Power Plants at Sagardighi (1600 MW) and Bakreswar ( 5x 120 MW). They informed that fly ash utilization by the Bakreswar Thermal Power Station was 99.38 % in 2017-18 and 116.98 % in 2018-19. However, fly ash utilization by Sagardighi Thermal Power Plant was 65.54 % in 2017-18 and 93 % in 2018-19. The Committee noted that there is improvement in fly ash utilization and also Sagardighi Thermal Power Plant has submitted fly ash utilization action for 75 % in 2019-20 and 96 % in 2020-21. However, the Committee decided that the TPP should submit revised quarterly action plan for 85 % utilization of fly ash including bottom ash by FY 19-20 and 100 % fly ash utilization by FY 20-21.

**9. O P Jindal Super Thermal Power Plant Stage-I (Jindal Power Limited)**

Jindal Power Limited is operating O P Jindal Super Thermal Power Plant TPP Stage – I (1000 MW) and TPP Stage – II ( 2400 MW). Fly ash utilization of both TPPs Stage – I and II was 75 % in 2017-18 and 102 % in 2018-19. They have also submitted action plan for achieving 100 % fly ash utilization in 2019-20.

**10. Damodar Valley Corporation (DVC)**

DVC is operating 5 thermal power plants namely, Bokaro Thermal Power Station (BTPS; 710 MW), Durgapur Thermal Power Station (DTPS; 210 MW), Durgapur Steel Power Station (DSTPS; 1000 MW), Koderma thermal power Station (KTPS; 1000 MW), Raghunathpur thermal power Station (RTPS; 1200 MW). Fly ash utilization by BTPS was 82.20 % in 2017-18 and 36.12 % 2018-19. Fly ash utilization by DTPS was 4.5 % in 2017-18 and 8.5 % 2018-19. Fly ash utilization by DSTPS was 76 % in 2017-18 and 76 % in 2018-19. Fly ash utilization by KTPS was 71.69 % in 2017-18 and 98 % in 2018-19. Fly ash utilization by RTPS was 2.5 % in 2017-18 and 9.7 % in 2018-19. They have submitted quarter wise action plan for 100 fly ash utilization by BTPS for 2019-20; 97 % fly ash utilization by KTPS; 86 % fly ash utilization by DTPS and 28 % fly ash utilization by RTPS. Therefore, the

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Committee suggested them to submit revised quarterly action plan to achieve 100 % fly ash utilization for KTPS, DTPS, DSTPS and RTPS.

### **11. Telangana State Power Generation Corporation Limited (TSPGCL)**

Telangana State Power Generation Corporation Limited (TSPGCL) is operating 4 Thermal Power Plants namely Ramagundam 'B' (62.5 MW), Kothhagudem thermal power station Stage – V & VI(1000 MW), Paloncha (720 MW) and Kakatiya (600 MW). TPP Ramagundam has achieved 69 % fly ash utilization in 2017-18 and 126 % in 2018-19. Fly ash utilization by TPP, Kakatiya was 75 % in 2017-18 and 100 % in 2018-19. They also informed that Ramagundam TPP and Kakatiya TPP will achieve 100 % fly ash utilization in 2019-20. Fly ash utilization by Kathagudam TPP V & VI was 6 % in 2017-18 and around 20 % in 2018-19. Fly ash utilization by Kathagudam TPP, Paloncha was 33.8 % in 2017-18 and 41.2 % in 2018-19. The Committee noted that submitted action plan for Kathagudam TPP and Paloncha TPP is not as per format. Therefore, the Committee decided that both TPPs should submit revised quarterly action plan for 85 % utilization of fly ash including bottom ash by FY 19-20 and 100 % fly ash utilization by 20-21.

### **12. Karnataka Power Corporation Limited (KPCL)**

Karnataka Power Corporation Limited (KPCL) is operating 3 TPPs namely Raichur Thermal Power Plant (1720 MW), Ballari Thermal Power Plant (1700 MW) and Yeramarus Thermal Power Plant (1600 MW). Raichur Thermal Power Plant has achieved 57.18 % and 70.14 % fly ash utilization in 2017-18 and 2018-19 respectively. Ballari Thermal Power Station has achieved 50 % and 73 % fly ash utilization in 2017-18 and 2018-19 respectively. Fly ash utilization by the Yeramarus Thermal Power Plant was 0 % in 2017-18 and 32 % in 2018-19 respectively. KPCL informed that 100 % fly ash utilization will be achieved by Ballari and Yeramarus TPPs in 2019-20 and also submitted quarter wise action plan. The Committee noted that KPCL has submitted action plan to achieve 87 % fly ash utilization by the Raichur Thermal Power Plant in 2019-20. However, the Committee decided that the Raichur Thermal Power Plant should submit revised quarterly action plan for 85 % utilization of fly ash including bottom ash by FY 19-20 and 100 % fly ash utilization by FY 20-21.

### **13. Hinduja National Power Corporation Limited (Andhra Pradesh)**

Power generating capacity of TPP is 1040 MW. Fly ash utilization by TPP was 18 % in 2017-18 and 256 % in 2018-19 respectively. They have also submitted action plan to achieve 69 % fly ash utilization in 2019-20 and 100 % fly ash utilization in 2020-21.

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#### **14. Bajaj Energy Limited (BEPL)**

Bajaj Energy Limited (BEPL) has 5 TPPs with total power generation capacity of 450 MW at Barkhera, Khambra Khera, Kunarki, Maqsoodapur and Utraila, UP. Fly ash utilization by all 5 TPPs was 99 % in 2017-18 and 100 % in 2018-19 respectively. They have also submitted action plan for achieving 100 % fly ash utilization in 2019-20.

#### **15. Kanti Bijlee Utpadan Nigam**

Power generation capacity of the TPP is 610 MW. They informed that percentage fly ash utilization by the TPP was 34 % and 40 % in 2017-18 and 2018-19. Now, they have submitted quarterly action plan for 72 % fly ash utilization in 2019-20 and 100% in 2020-21.

#### **16. Andhra Pradesh Power Development Corporation Limited (APPDCL)**

APPDCL is operating Sri Damodaran Sanjeevaiah Thermal Power Station with capacity of 1500 MW. This unit has achieved 75 % and 65 % fly ash utilization in 2017-18 and 2018-19 respectively. They informed that fly ash is being used in nearby brick industry, clicker manufacturing, export. They have submitted quarter wise action plan for 70 % fly ash utilization for 2019-20. However, the Committee decided that TPP should submit revised quarterly action plan for 85 % utilization of fly ash including bottom ash by FY 19-20 and 100 % fly ash utilization by FY 20-21.

#### **17. Gujarat State Electricity Corporation Limited (GSECL)**

Gujarat State Electricity Corporation Limited (GSECL) is operating 2 TPPs namely Ukai (1100 MW) and Wanakbori Thermal Power Plant (147 MW). Ukai TPS has achieved 75 % and 82 % in 2017-18 and 2018-19 respectively. Wanakbori Thermal Power Plant has achieved 84 % and 60 % fly ash utilization in 2017-18 and 2018-19 respectively. GSECL has submitted quarter wise action plan for Ukai to achieve 85 % in 2019-20 and 100 % in 2020-21. Wanakbori TPP will achieve 100 % fly ash utilization in FY 19-20.

#### **18. HPGCL (Rajiv Gandhi Thermal Power Plant)**

Power generation capacity of the TPP is 1200 MW. They informed that percentage fly ash utilization by the TPP was 84.8 % and 60 % in 2017-18 and 2018-19. They informed that there is no cement plant nearby the TPP and also not receive any response from NHAI for fly ash utilization. But they have planned to utilize their fly ash for brick manufacturing, clinker manufacturing etc. Now, they have submitted

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quarterly action plan to achieve 100 % fly ash utilization in 2019-20.

**19.MSPGCL (Bhusawal Thermal Power Station)**

Power generation capacity of the TPP is 1210 MW. They informed that percentage fly utilization by the TPP was 85 % and 95 % in 2017-18 and 2018-19. Bhusawal Thermal Power Station has submitted action plan to achieve 95% for 2019-20. However, the Committee decided that TPP should submit revised quarterly action plan for 100 % utilization of fly ash including bottom ash by FY 19-20.

**20.Rosa Power Supply Co. Ltd.**

Power generation capacity of Rosa Power Supply Co. Ltd. is 1200 MW. They informed that percentage fly utilization by the TPP was 76 % and 100 % in 2017-18 and 2018-19 respectively. They informed that Rosa Power Supply Co. Ltd. has achieved 100 % fly ash utilization in 2018-19 and they will also achieve 100 % fly ash utilization in 2019-20.

**21.Spectrum Coal & power Ltd.**

Power generation capacity of the TPP is 100 MW. They informed that percentage fly utilization by the TPP was 86 % and 77 % in 2017-18 and 2018-19 respectively. Now, they have submitted quarterly action plan to achieve 100 % fly ash utilization by 2019-20.

**22.Maruti Clean Coal and Power Ltd.**

Power generation capacity of the TPP is 300 MW. They informed that percentage fly utilization by the TPP was 93 % and 100 % in 2017-18 and 2018-19 respectively. They are using fly ash in road project. Now, they have submitted quarterly action plan to achieve 100 % fly ash utilization by 2019-20.

**23.ACB India Limited**

Power generation capacity of the TPP is 270 MW. They informed that percentage fly utilization by the TPP was 100 % in 2017-18 and 2018-19. Now, they have submitted quarterly action plan to achieve 100 % fly ash utilization by 2019-20.

**24.TRN Energy Pvt. Ltd.**

Power generation capacity of the TPP is 600 MW. They informed that percentage fly utilization by the TPP was 76 % and 92 % in 2017-18 and 2018-19 respectively. They informed that there is no cement manufacturing unit within radius of 100 km from TPP and also no response has been received from NHAI regarding utilization

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of fly ash in road project. Now, they have also submitted quarter wise action plan for 2019-20 to achieve 93 % fly ash utilisation. However, the Committee decided that TPP should submit revised quarterly action plan for 100 % utilization of fly ash including bottom ash by FY 19-20.

#### **25. Jindal Steel & Power Ltd.**

Jindal Steel & Power Ltd. is operating 3 TPPs namely Thermal Captive Power Dongamahua, Chattisgarh (576 MW), Captive Power Plant, Raigarh (134 MW) and Captive Power Plant, Angul (810 MW). They informed that fly ash utilization by TPP Dongamahua and Raigarh was 100% in 2017-18 and 2018-19. Representative of TPP informed that they are utilizing fly ash in their working mines successfully. CPCB praised their efforts and informed that DGMS approved the backfilling in operation mines. The Committee suggested them to share their experience with the Committee as well as other TPPs. But fly ash utilization by TPP Angul was 98 % and 97 % in 2017-18 and 2018-19 respectively. Now, they have submitted quarterly action plan to achieve 100 % fly ash utilization by 2019-20.

#### **26. R K M Powergen Pvt. Ltd.**

Power generation capacity of the TPP is 1440 MW. They informed through e-mail that fly ash utilization was 90 % in year 2017-18 and 2018-19. Now, they have submitted quarterly action plan to achieve 100 % fly ash utilization by 2019-20.

#### **27. KSK Mahanadi Power Company Limited, Village Nariyara, Janjgir Champa District, Chhattisgarh**

KSK Mahanadi Power Company Limited has total installed capacity of 3600 MW (1800 MW operational and 1800 MW under construction). Unit III and Unit IV have achieved 100 % fly ash utilization in 2017-18 and 2018-19. However, Unit – II has achieved 50 % fly ash utilization in 2017-18 and 70 % in 2018-19. It was informed that unit II has started commercial operation on 26.08.2018. They have informed that Unit – III and Unit- IV will achieve 100 % fly ash utilization in 2019-20. The Committee noted that they have not submitted action plan for Unit II to achieve 100 % fly ash utilization. Therefore, the Committee suggested that the TPP should submit quarterly action plan for Unit II to achieve 85 % utilization of fly ash including bottom ash by FY 19-20 and 100 % fly ash utilization by 20-21.

#### **28. Andhra Pradesh Power Generation Corporation (APGENCO)**

APGENCO is operating 1650 MW Rayalaseem Thermal Power Project. Fly ash utilization by the TPP was 74 % and 84 % in 2017-18 and 2018-19 respectively.

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Now, they have also submitted quarter wise action plan for 2019-20 to achieve 90 % fly ash utilisation. However, the Committee suggested that the TPP should submit quarterly action plan for 90 % utilization of fly ash including bottom ash by FY 19-20 and 100 % fly ash utilization by FY 20-21.

### 29.Sai Wardha Power Generation Ltd.

Power generation capacity of the TPP is 540 MW. Fly ash utilization by the TPP was 96 % and 91 % in 2017-18 and 2018-19 respectively. They informed that the said TPP will not be operational during 2019-20.

### 30.Tata Power Corporation (Jharkhand)

The Committee noted that Tata Power Corporation has submitted their action plan to achieve 100 % fly ash utilization in the 1<sup>st</sup> meeting of the Joint Committee.

4.0 The Committee noted that many Thermal Power Plants have not attended the meeting of Joint Committee. Therefore, it was decided that TPPs which have not attended the said meeting and also not submitted the action plan to achieve 100 % fly ash utilization by 2020-21 of their TPPs should be communicated to submit the action plan to achieve 100 % fly ash utilisation by FY 2020-21 urgently.

**(Action: CPCB, MoEF&CC & TPPs)**

5.0 In the meeting of Joint Committee held on 18.04.2019, wherein it was decided that "CPCB would come out with the mechanism to determine the quantum of penalty based on (per Ton or percentage basis) to be paid for violation. Accordingly, CPCB has submitted a draft proposal for determining environmental compensation (EC). The draft proposal will be discussed in the meeting of Joint Committee and based on the recommendations, the Ministry will take necessary decision on the matter.

6.0 In the meeting of Joint Committee held on 18.04.2019, the Committee suggested NTPC to submit revised action plan for 100 % fly ash utilization for their category 'B' Thermal Power Stations namely, Mouda, Kudgi, Bongaigaon, Farakka and Barh as well as Category 'C' Thermal Power Stations namely Singrauli, Rihan, Vindychal, Kahalgaon, Talchar-K, Korba and Sipat. Accordingly, for category B TPPs, NTPC has submitted action plan to achieve 100 % fly ash utilization by 2020-21 and for Category 'C' TPPs by 2021-22. **Therefore, the Committee decided that NTPC should submit revised quarterly action plan for Category 'C' TPPs to achieve 85 % utilization of fly ash including bottom ash by FY 19-20 and 100 % fly ash utilization by FY 20-21.**

The meeting ended with vote of thanks to the Chair.

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## List of Participants

### A. Joint Committee

1. Shri Manoj Kumar Gangeya, Director, HSMD, Ministry of Environment, Forest and Climate Change
2. Sh Nazimuddin, Scientist 'E', CPCB (17.07.2019)
3. Sh. A N Singh, Scientist 'E', MoEF&CC
4. Dr. P.K.Prusty, Chief Environment Scientist SPCB, Odisha (17 & 18.07.2019)
5. Shri S K Paliwal, Scientist 'D', CPCB (18.07.2019)
6. Shri Bhanu Joshi, Section Officer MoP (17 & 18.07.2019)
7. Shri Bhagaban Bhattacharya, TCD, CEA(17 & 18.07.2019)
8. Sri Vijender Singh, TCD, CEA(17 & 18.07.2019)

### B Thermal Power Plants (17.07.2019)

1. Shri Jaswal Singh, AE, PTPP Parichha Jhansi
2. Shri N.K. Maurya, EE, PTPP
3. Shri Mohammed Rashid, EE, PTPP, Anpara
4. Shri Ravi Prakash Yadav, EE, PTPP, Anpara
5. Shri Rajeev Kumar, EE, Obra TPS
6. Shri Jabar Singh, SE Civil HTPS Harduaganj Aligarh
7. Shri Diwakar Swaroop, S.E (E&S) UPRVUNL, Lucknow
8. Shri P. S. U. Nair, AGM (EMR), NTECL, Chennai
9. Shri D. Sarkar, CEO, NTECL, Chennai
10. Shri T. Narayan, C&I Civil TSGENCO
11. Shri G.Srinivasa Rao
12. Shri G. Raysen
13. Shri S. Sangamnerkar
14. Shri Anoop kumar
15. Shri D. Mohan Raj, TANGEDCO (Tamil Nadu)
16. Shri M. M. Maha Lakshmi, Asst. Exe. Engineer/ Civil TANGEDCO (Tamil Nadu)
17. Shri Md. Eyasin, Chief Engineer – I DVC
18. Shri Arritava roy Chowdhury, Chief Engineer – I (EM&PL)
19. Shri R. K. Chander, APCPL, Jhajjar
20. Shri J.Ramarao
21. Shri Araun Krishna
22. Dr. Lokesh Singhal, Bajaj Energy
23. Shri Balbir Singh, Advisor Power, LPGCL
24. Dr. J. K. Soni, JSPL
25. Shri Yogesh Kumar, JSPL
26. Shri Rajan Ananad, JSPL

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27. Shri B Govinda Rao
28. Shri Dipak Nath Kanti, NTPC
29. Shri V.K.Pandey, Sr. Manager(EMG) KBUNL, Muzaffarpur
30. Shri Bejaya Kumar Mishra, Sr. General Manager, OPGC Ltd,
31. Shri Umakanth Pahi, General Manager (BHS) Ib Thermal Power Station, OPGC Ltd.,
32. Shri Rupa Charan Padhy, VP HNPCL
33. Shri Abhijit Nandi, TPP, WBPDCR DGM, Env. & Safety
34. Shri Jnanendra Narayan Mondal, SM (Env) & IC, Corporate Office, WBPDCR
35. Shri Ashok Kumar Mondal, Dy. General Manager (E&S)
36. Shri R. Balasubramanian, Company Secretary, KPCL
37. Shri Bhuvanesh G.D, AEE, KPCL
38. S.N.Sharma, KPCL
39. Bijan Mishra, Sr. VP- Reliance Power

(18.07.2019)

40. Shri M. V. R. N Acharyulu, Sr. Deputy General Manager KSK Mahanadi Power Limited
41. Shri Nilesh kumar B. Shinde, JE, Bhusawal, MSPGCL
42. Dr. J.K.Soni (EVP), Jindal Steel & Power Ltd.
43. Shri Yogesh Sindhu (Manager), Jindal Steel & Power Ltd.
44. Er. Tinku Goyal, Asst. Executive HPGCL, Hisar
45. Shri Shanti Das Bhattacharje, Head (Chemical & Environment) Tata Power Jamshedpur
46. Shri D. M. Patel, Exc. Engr. (Ash Handling Plant) GSECL, UkaiTPS, Gujarat
47. Shri S.S.Passi, S.E., Wanokbori TPS GSKCL, Wanokbori Gujarat.
48. Shri A. B. Jaiswal, E.E (Env.) GSECL, Corporate Office, Vadodara
49. Shri H. J. Patel, DE (Fly ash Cell) GSECL, Corporate Office, Vadodara
50. Shri Bijan kumar Mishra, Sr. VP- Reliance Power
51. Shri R. Raju EE/Tech/RTPP
52. Ch. Krishna Prasa, DYEE/APPDCL
53. Shri C. P. Malik, COO, TRNEPL, Rajgarh
54. Shri Vijay Gupta, COO-ACB+ MCCC
55. Shri Tushar Ahlawat, Environment Department, ACB India Ltd.

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# Guidelines for Continuous Emission Monitoring Systems



**CENTRAL POLLUTION CONTROL BOARD**  
Parivesh Bhawan, East Arjun Nagar,  
Delhi-110032

**August, 2018**  
**Revision-01**

**Note:** Efforts have been made to include all available monitoring technologies/instrumentation in the document. In case any high end technology/ instrumentation is not covered or is introduced subsequently the details be forwarded to CPCB, so that the same can be incorporated while reviewing this document subsequently.

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**Technical Guidance:**

Shri J.S. Kamyotra, Ex-Director, CPCB

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## 1.0 BACKGROUND

In order to track release of pollutants through air emissions and effluent discharge from industries with high pollution potential, Central Pollution Control Board (vide its letter No. B-29016/04/06PCI-1/5401 dated 05.02.2014 issued directions under section 18(1) b of the Water and Air Acts to the State Pollution Control Boards and Pollution Control Committees for directing the 17 categories of highly polluting industries (such as Pulp & Paper, Distillery, Sugar, Tanneries, Power Plants, Iron & Steel, Cement, Oil Refineries, Fertilizer, Chloral Alkali Plants, Dye & Dye Intermediate Units, Pesticides, Zinc, Copper, Aluminum, Petrochemicals and Pharma Sector, etc.), Common Effluent Treatment Plants (CETP), Sewage Treatment Plants (STPs), Common Bio Medical Waste and Common Hazardous Waste Incinerators; for installation of online effluent quality and emission monitoring systems. The directions envisage:

- a) Installation of online emission quality monitoring system in 17 categories of highly polluting industries and in Common Hazardous waste and Biomedical waste incinerators for measurement of the parameters, Particulate Matter, NH<sub>3</sub> (Ammonia), SO<sub>2</sub> (Sulphur Dioxide), NO<sub>x</sub> (Oxides of Nitrogen) and other sector specific parameters, not later than by March 31, 2015 and transmission of online data so generated simultaneously to SPCB/PCC and CPCB as well. The deadline was later extended to June 31, 2015.
- b) Installation of surveillance system with industrial grade IP (Internet Protocol) cameras having PAN, Tilt, Zoom (PTZ) with leased line real time connection for data streaming and transmission of the same in case of industries claiming Zero Liquid Discharge (ZLD); and
- c) Ensure regular maintenance and operation of the online system with tamper proof mechanism having facilities for online calibration (onsite/ offsite; Remote).

In addition to above, G.S.R. 96(E) January 29, 2018 Notified by MoEF&CC under Environment (Protection) Act, 1986 mandates installation of CEMS with the Boilers used in the Industries namely Sugar, Cotton Textile, Composite Woolen Mills, Synthetic Rubber, Pulp & Paper, Distilleries, Leather Industries, Calcium Carbide, Carbon Black, Natural

Rubber, Asbestos, Caustic Soda, Small Boilers, Aluminium Plants, Tanneries, Inorganic Chemicals & other such industries using boilers.

Parameters required to be monitored in the stack emissions using Continuous Emission Monitoring system, are industry specific and are specified below: -

- a) PM (Particulate Matter)
- b) HF (as Total Fluoride)
- c) NH<sub>3</sub> (as Ammonia)
- d) SO<sub>2</sub> (Sulphur Dioxide)
- e) NO<sub>x</sub> (Oxides of Nitrogen as NO<sub>2</sub>)
- f) Cl<sub>2</sub> (Chlorine)
- g) HCl (Hydrochloric acid) and HF (Hydro Fluoric Acid)
- h) TOC (Total Organic Carbon) / THC (Total Hydro Carbon) / VOC (Volatile Organic Carbon)- C<sub>n</sub>H<sub>m</sub>
- i) Hg (Gaseous mercury)
- j) Process parameters (Mandatory) to be monitored at each stack at sampling point/plane:
  - 1 Temperature
  - 2 Flow (applicable wherever load based standards prescribed and DC Tribo system installed for monitoring of PM)
- k) Diluents gas CO<sub>2</sub> or O<sub>2</sub> as prescribed in the emission standards of respective processes /industries
- l) Carbon Monoxide as prescribed in the emission standards of respective processes /industries i.e. Incinerators, etc.;
- m) The emission values should be corrected for Moisture Content (For In-situ and Hot extractive analyzer real time moisture monitoring values of inbuilt measurements can be used). Moisture content value recorded during manual monitoring conducted by empaneled labs, at the time of verification/calibration can be considered for correction.
- n) For normalization of emission values absolute pressure is also required to be monitored in the sampling plane. Value recorded during manual monitoring can be used for normalization.
- o) Real time moisture monitoring is incinerator stack.

## 2.0 NEED FOR CEMS

Industries such as Power, Cement, Iron & Steel, Chlor-alkali, Pharmaceuticals, Fertilizers, Refineries, Pesticides, Distilleries, Sugar, Pulp & Paper, Textile, Tanneries, and other categories of industries release large quantum of pollutants through air emissions and effluent discharge.

In order to regulate such emissions and discharges to safe limits, SPCBs and PCCs have prescribed standards for various pollutants emitted/ discharged by the industries as notified under the Environment(Protection) Act, 1986. Compliance monitoring needs strengthening to ensure that industries and facilities comply with emission standards.

With rapid industrialization, it is becoming a need and necessity to regulate compliance by industries with minimal inspection of industries. Therefore, efforts need to be made to bring discipline in the industries to exercise self-monitoring so as impart confidence on their compliance to notified standards; one such mechanism is to implement online emission and effluent monitoring systems and transfer reliable data on compliance to regulatory authorities (SPCBs/PCCs / CPCB, other government agencies). Online emission and effluent monitoring systems need to be installed and operated by the developers and the industries on 'Polluter Pays Principle'.

Verification, validation and accuracy check of the values indicated by the online devices needs to be done. For proper interpretation of data, measures need to be taken at the level of SPCBs/PCCs. For regulatory and for purpose of actions to be taken against non-complying industries/facilities, the existing method of sampling, analysis and related procedures under the existing statutes need to be continued, till further direction.

Various technologies are available for monitoring the particulate matter and gaseous emission from the stacks of industries and effluent discharge from industries and facilities for the parameters specified in the directions issued by CPCB/SPCB or notified under E(P) Act, 1986. However, this guideline document aimed to help industries and regulatory agencies in implementation of online emission monitoring system through proper selection, operation and

data transfer in a transparent self-regulatory mechanism.

### 3.0 CONTINUOUS EMISSION MONITORING SYSTEM (CEMS)

In recent years Online Emission Monitoring Technology has received attention and interest in context of providing accurate and continuous information on particulate matter/ gaseous emission from stacks. There are already commercially available systems for monitoring parameters such as PM, HCl, HF, NH<sub>3</sub>, SO<sub>2</sub>, CO, O<sub>2</sub>, CO<sub>2</sub>, NO<sub>x</sub>, VOC, etc.

#### 3.1 Objectives of Continuous Emission Monitoring Systems

The Continuous Emission Monitoring (CEM) System comprises of all the equipment necessary to determine the concentration of gaseous emission and/or particulate matter and/or emission rate using analytical measurements and a computer program to provide results in units of the applicable emission limits or standards. The data generated is gathered either through analog outputs to a recording system or send directly to a DAS (Data Acquisition System) for storage and onward transmission.

Data Acquisition System includes special modules for data validation and further transmission to Central servers located at SPCB/ CPCB through a cloud server compatible to specific types of analyzers. It is important to have properly engineered CEM systems.

##### i) Compliance with legislation

For any given process, limits have been imposed on the quantum of emissions that an industry is permitted to release to the atmosphere for a particular parameter/ pollutant. These limits are expressed as: -

- Maximum concentration in ppm or mg/Nm<sup>3</sup> (as specified in standards)
- Maximum mass emission (Kg/Tonne or Kg/unit production)

For calculating maximum mass emissions i.e., Kg/Tonne or Kg/unit production, values of flow and concentration are required.

CEMS data shall be used as tool to monitor performance of pollution control systems as well as to generate alarms on exceedances with respect to notified standards (for manual measurement). CEMS data will be used for regulatory purposes once CEMS based standards are notified by Government of India. However, at present CEMS data would



help regulatory bodies in close surveillance on industries based on alarm system.

**ii) Validity/ Availability of Measured Data**

Quality assurance procedures shall be used to validate the quality of data produced by the CEMS required for comparing compliance with notified standards (for manual measurement). Reference methods will be defined to substantiate the accuracy and precision of the CEMS.

Performance Specifications will be used for evaluating the acceptability of the CEMS at the time of or soon after installation and whenever specified in the Indian regulations. The CEMS has to include continuous quality check for Zero and for scale(Span) point, preferably without human intervention, to ensure continuous data validity and credibility.

Zero check on Gaseous CEMS must be achieved, by using zero air supply using high grade instrument air (free from moisture, component of gases under measurement and gases having interference) or an inert gas like N<sub>2</sub>, done automatically and periodically. The Instrument supplier is responsible for verification of zero gas / instrument air being used in the industry. A certificate to this effect has to be provided by the instrument supplier to the industry at the time of installation.

Use of Certified Zero & Span Test Gas Cylinders or Gas filled “Calibration Cuvette / Cells”, Certified by leading global Agencies like TUV/ MCERT are also acceptable for CEMS in India. Cuvette/ Cells known to have long term stability compared to cylinders can also be used for calibration. Ambient air not being a certified gas is not recommended for calibration.

**iii) Basic Requirement**

The major prerequisites of efficient Continuous Emission Monitoring System are:

- a) It should be capable of operating unattended over prolonged period of time.
- b) It should produce analytically valid results with precision/ repeatability
- c) The analyzer should be robust and rugged, for optimal operation under extreme environmental conditions, while maintaining its calibrated status.

- d) The analyzer should have inbuilt zero check capability or external capability with a condition that no human intervention should be required to carryout daily check at defined time.
  - e) It should have data validation facility with features to transmit raw and validated data to central server at SPCB/CPCB. The data validation will be done after approval of SPCB/PCC or after 07 days of submission of request for validation to SPCB/PCC wherever is earlier.
  - f) It should have Remote system access from central server for provisional log file access. The facility shall be incorporated in the system within 06 months of the issue of these 1<sup>st</sup> Revised Guidelines.
  - g) It should have provision for simultaneous Multi-server data transmission from each station without intermediate PC or plant server.
  - h) It should have provision to send system alarm to central server in case any changes are made in configuration or calibration. The facility shall be incorporated in the system within 06 months of the issue of these 1<sup>st</sup> Revised Guidelines.
  - i) It should have provision to record all operational information in log file.
  - j) There should be provision for independent analysis, validation, calibration & data transmission for each parameter.
  - k) The instrument must have provision of a system memory (non-volatile) to record data for atleast one year of continuous operation. Existing instruments not having adequate system memory shall be backed up with external devices within six months. All new instruments installed shall have inbuilt provision of system memory.
  - l) It should have provision of Plant level data viewing and retrieval with selection of Ethernet, Modbus & USB.
  - m) Record of calibration and validation should be available on real time basis at central server from each location/parameter.
  - n) Record of online diagnostic features including analyzer status should be available in database for user-friendly maintenance.
  - o) It must have low operation and maintenance requirements.
- iv) The analyzer must include the following features (typical

characteristics):

- a) Continuous measurements on 24x7 basis.
- b) Direct Measurement of pollutant concentration.
- c) Expression and display of measurements in ppm, mg/m<sup>3</sup> or volume % as specified in standards.
- d) Display of the measurement values as well as all the information required for checking/maintenance of the analyzer.
- e) Display of functional parameters.
- f) Response time < 200 seconds.
- g) Power supply compatible with utilities available on Indian industrial sites.
- h) Digital communication with distant computer for data acquisition/recording/reporting.
- i) RS232 / RS485 / Ethernet / USB communication ports.
- j) Analog Outputs for transmission to Plant's supervision center.
- k) Maximum lifetime of analyzers should be restricted to expected life period specified by the Vendors or up on the perusal of deterioration in performance of the analyzers i.e. frequent breakdowns and requirement of minimum data capture is not on it.
- l) Type approved according to Indian Certification Scheme (or by foreign accredited institutes such as TÜV, MCERTS or USEPA).

### 3.2 Merits of CEMS

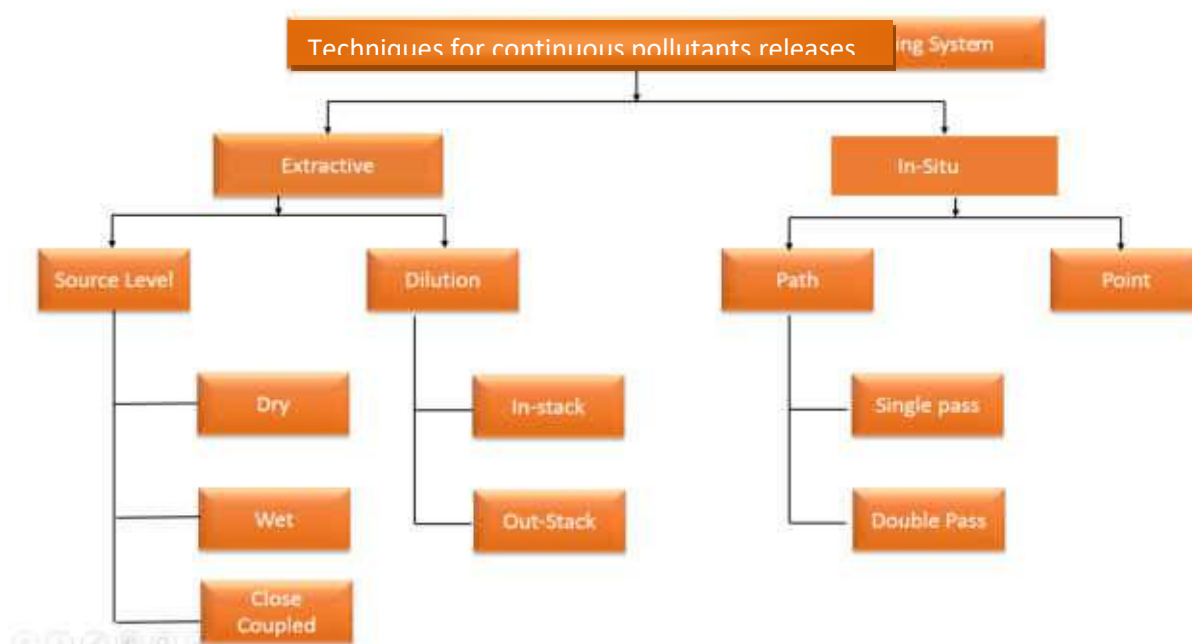
The major advantages of CEMS over traditional laboratory based and portable field methods are:

- a) CEMS provide continuous measurement of data for long periods of time, at the monitoring site of interest, without skilled staff being required to perform the analysis.
- b) All the major steps in traditional analysis like sample collection, transportation, conditioning, calibration and analysis procedures including QC are usually automated in the sampling systems and on-line analyzers.
- c) In case of sudden disturbance in the Production Process/ Pollution Control system, the on-line analyzers provide timely information for taking immediate corrective/preventive steps compared to conventional methods.

## 4.0 TECHNICAL OPTIONS FOR SAMPLING OF POLLUTANTS IN CEMS

The sampling technologies are summarized in **Figure 1**. Two types of systems available for monitoring of particulate and gaseous pollutant are mentioned below: -

- 1) In-Situ Systems: - Folded Beam/ Point  
- Cross Duct
- 2) Extractive systems: -
  - Hot Extractive Systems with Heated Analyzer (Hot and Wet System)
  - Hot Extractive Systems with Sample Cooling and Cold Analyzer (Cold and Dry System)
  - Extractive dilution system (In-stack and out stack)



**Figure 1: Techniques for Continuous Sampling of Pollutant Releases from Stacks**

The sampling location has major impact on the representativeness and accuracy of sample collected. Suitable measurement sites and sections are necessary to obtain reliable and comparable emission measurement results. Appropriate measurement sections and sites have to be planned while designing a plant.

Emission measurements in flue gases require defined flow conditions in the measurement plane, i.e. an ordered and stable flow profile without vortexing and backflow so that the velocity and the mass concentration of the measured pollutant being released in the waste gases can be determined. Emission

measurements require appropriate sampling ports and working platforms. The installation of measurement ports and working platforms should be considered in the planning phase of a measurement section, refer **Figures 1.1& 1.2**. Specifications of regulations along with official requirements if any, should be considered in selection and specification of measurement site and sections.

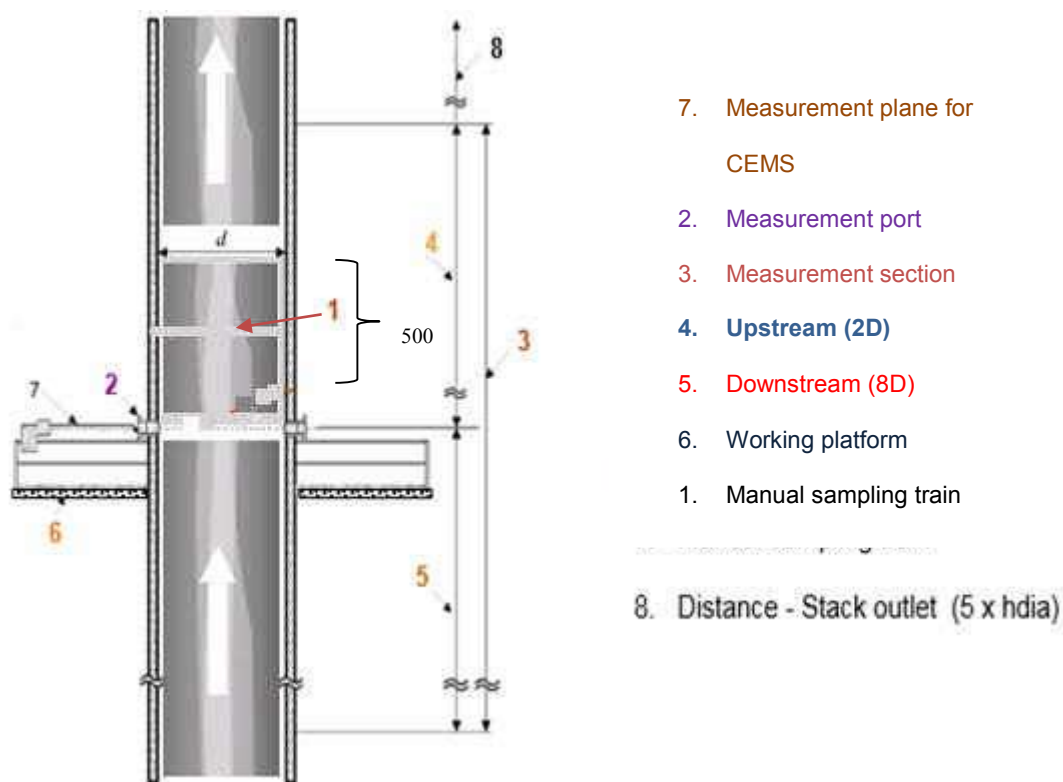


Figure 1.1: Measurement Site and Measurement Section

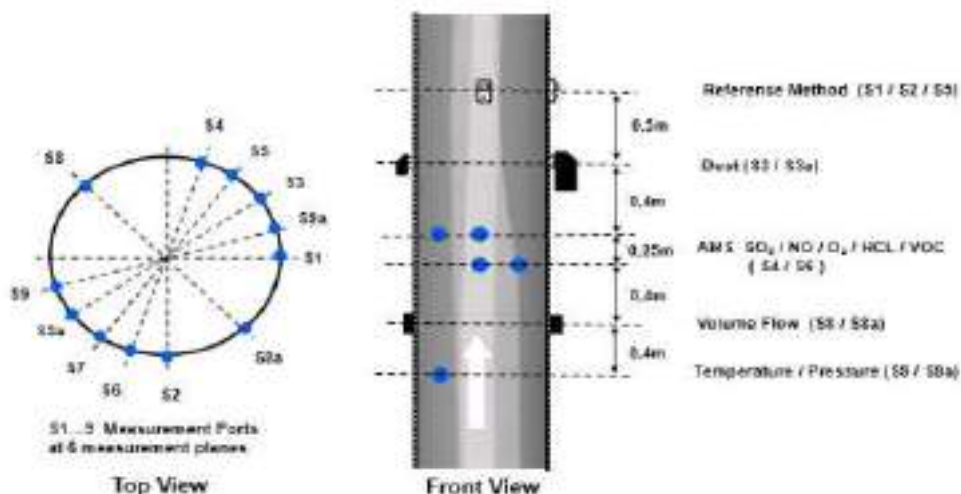
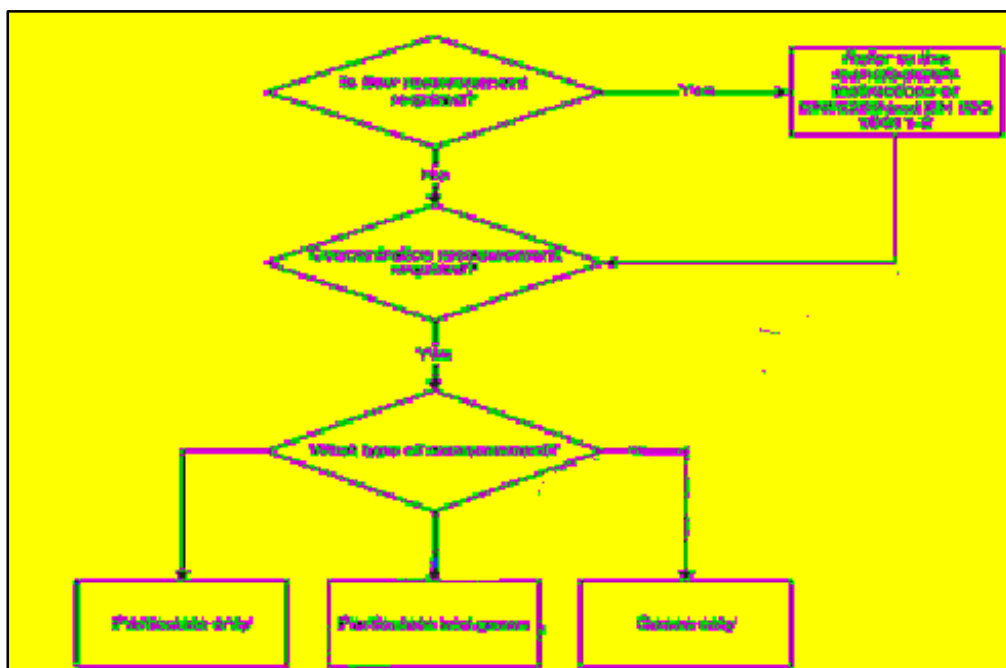


Figure 1.2 : Measurement Site and Measurement Section

The measurement site and measurement section for CEMS is based on EN 15259 criteria for selection of measuring point/ port locations and depends upon following conditions (For Details refer EN15259 Standards):

- a) Whether to monitor concentration alone or gas flow also;
- b) Whether the system requires periodic calibration using standard method or whether the CEMS can be calibrated by other means.

The influence of these factors in determining the positional requirements is shown in the decision tree in **figure 2**.



**Figure 2: Selecting a sample location**

#### 4.1 Sampling Location for Particulate Matter

The analyser/ systems installed for particulate matter monitoring require calibration performed by manual isokinetic sampling carried out through either BSEN 13284-1, IS: 11255 Part 1 (Particulate Matter) or EPA method 17 or EPA method 5 or BS ISO 9096:2003. The sampling location for the analyser must be in accordance with the CPCB prescribed guidelines (Emission Regulation Part-III).

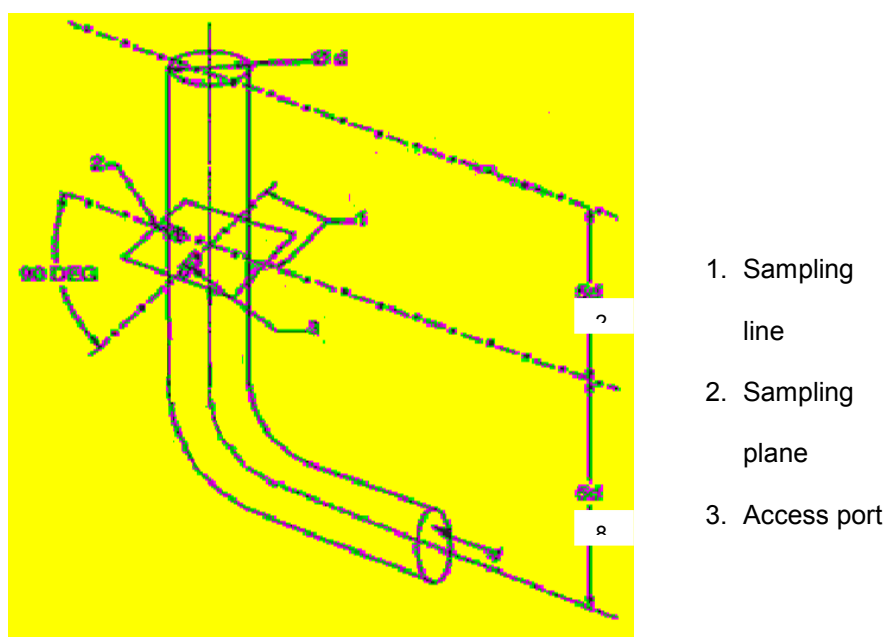
The sampling plane for PM-CEMS should be 500 mm below manual sampling plane vertically. In addition to the above, for convenience of CEMS maintenance and manual sampling from the same platform, the manual sampling port may be shifted 30-50 cm right or left at horizontal plane of CEMS port without altering their vertical position (500 mm apart). For gaseous CEMS the same plane can be shared. In case of existing stacks where provision

cannot be complied with, the industry shall inform the respective SPCBs/PCCs and proceed as advised/directed.

The sampling point or plane should be in a straight length of stack/duct (**Figure 3**) where;

- The angle of gas flow is less than  $15^\circ$
- No local negative flow is present;
- The minimum velocity is higher than the detection limit (3 m/ Sec) of the method used for the flow rate measurement (for Pitot tubes, a differential pressure larger than 5 Pa);
- The ratio of the highest to lowest local gas velocities is less than 3:1.

If the above information cannot be verified e.g. on a new installation, then the above criteria is generally fulfilled by siting the ports in sections of duct with at least eight hydraulic diameters of straight duct down streams of the sampling plane and two hydraulic diameters upstream hydraulic diameters from the top of a stack.



**Figure 3: Sample Plane Requirement for Particulate Matter Measurement**

#### 4.1.1 Sampling location for systems with particulate matter and gas analyzers

While selecting a location for installation of analyzers in large ducts, the gas profile at the proposed sampling point must be checked for stratification. A stratification test is undertaken to confirm that the gas composition is homogenous. Typically, a surrogate gas such as oxygen or carbon dioxide is measured using a direct reading instrument in order to obtain information on the

gas profile within the duct. The stratification test must take into account variations of gas composition with time. This can be achieved by using two continuous analysers each connected to sampling probes. One probe is placed at a fixed location in the duct; the other is used to obtain samples at grid locations across the duct traverses. The two sets of data can then be compared in order to compensate for variations in concentration with time.

#### **4.1.2 Sampling location for gas analysers**

Selection of a sampling location for gas analysis alone is less difficult than for particulate measurement. A location in the duct where the gas is well mixed and therefore homogenous should be chosen.

**4.1.3** Design of porthole locations for new stacks being installed after the date of issue of this 1<sup>st</sup> Revision of Guidelines is mandatory. For stacks which are already in place as on date the new design implementation must be done within a period of six months from date of issue of 1<sup>st</sup> Revision of Guidelines.

**4.1.4** Stacks that are more than 15 (Fifteen) years old (from the date of 1<sup>st</sup> revision of guidelines) / stacks built with thick RCC walls / stacks with inner rubber lining / etc. where it is considered that making provisions for monitoring as per new guidelines is not possible or it may take longer period; industry is advised to communicate the reasons thereof to SPCBs/PCCs and SPCBs/PCCs to verify and certify the reasons in writing to this effect. In such cases CPCB should be intimated by the industry with records of documents scanned and sent at [cems.cpcb@nic.in](mailto:cems.cpcb@nic.in).

## **4.2 Analysis of Measurement Techniques**

### **4.2.1 In Situ system:**

In-situ is defined as in situation.

Non-extractive (in-situ) systems

In-situ type analyzers may be of two types: point in-situ type or cross stack type. These are explained below.

- Point in-situ

Point in-situ systems perform measurements at a single point in the stack, as do extractive system probes. Now a days in the in-situ systems the sensing



optics are contained in a tube fitted with holes or filters to allow flow-through of stack gases. The sampling path will be relatively short compared to the stack or duct diameter, so the sampling location must be carefully chosen to ensure that the sample is representative of the flue gas.

- Multi Point in-situ

In certain CEMS, the measurement length is extended over the length of a probe (say 0.05mt to 1.00mt) to increase resolution and provide more coverage (representative measurement). In any case 1/3rd of the stack cross section ensures better representation.

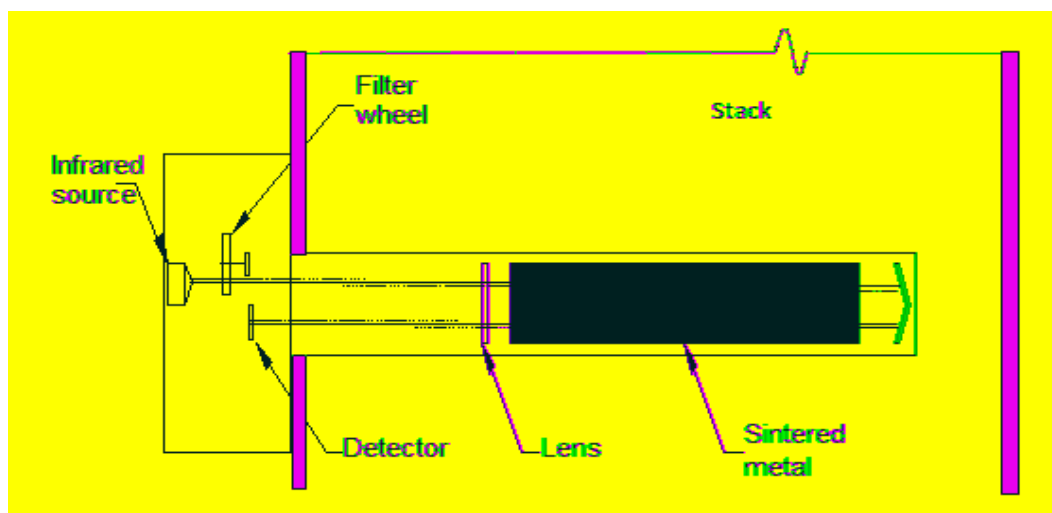
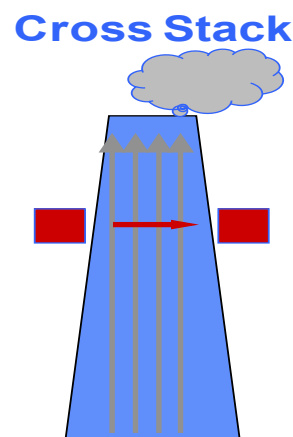


Figure 4.2.1 a: Point in-situ gas analyzer

### Cross stack monitors

Cross stack monitors measure over the entire stack or duct diameter. They are based on a beam of a certain wavelength that crosses the duct and is attenuated proportionately to the concentration of the target compound. In some systems, a pipe may be used in the stack for support or calibration purposes, or to reduce the optical path lengths in very large stacks or ducts. There are two basic types of path systems: single pass and double pass where the beam is reflected back across the stack. These systems can be simpler than extractive systems, however there are additional challenges associated with making valid zero and span checks and minimizing interference from other pollutants.



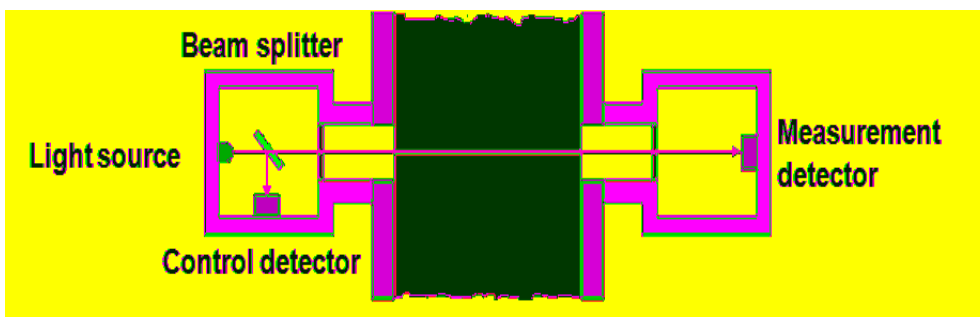


Figure4.2.1 b. Single pass transmissometer /opacity monitor

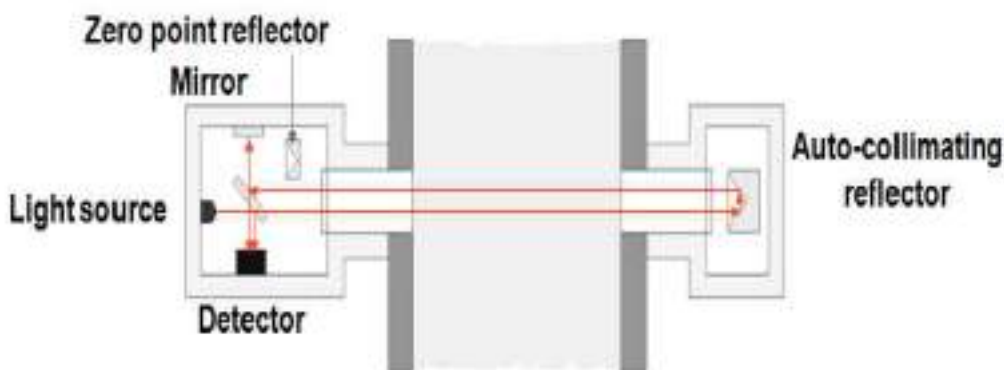


Figure4.2.1 c. Double pass transmissometer /opacity monitor

Single beam and double beam principle- Single-beam configuration is simplest where one light beam from source is passed to receiver. Dual or double-beam configurations internally split the light emitted from the source into two beams – one becomes measurement beam and another becomes reference beam. The measurement beam is projected through the optical medium of interest and is referenced to the second (reference) beam, which is totally contained within the instrument. There can be common or separate detectors for both the beam.

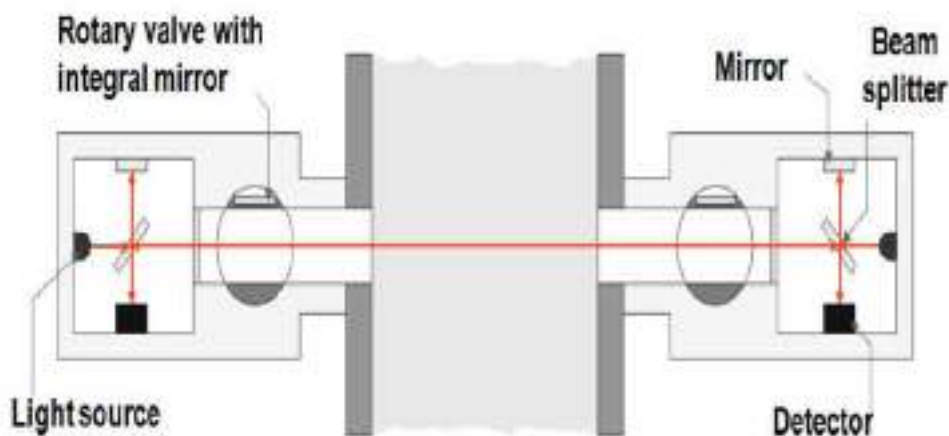


Figure4.2.1 d: Double Beam Transmissometer (Measurement)

➤ **Benefits:**

- ✓ Fast Response time
- ✓ Reasonable cost
- ✓ Process control
- ✓ No sample conditioning required.

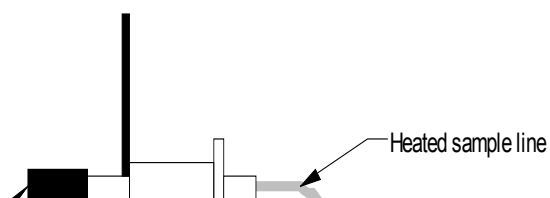
➤ **Limitations:**

- ✓ Two flanges may be needed so an access to both side of stack is required.
- ✓ Systems are subject to stack vibration and temperature variations
- ✓ Proper alignment is required for correct measurement
- ✓ Sensitivity is limited due to the path length (critical for stacks with small diameters)
- ✓ Limited quantity of gases can be monitored
- ✓ Analyzer is subject to cross interferences especially from Water (Moisture)/ Temperature / Pressure.
- ✓ In situ systems are installed outside at top of stack so inconvenient conditions for maintenance
- ✓ No absolute method of On Line Calibration using injection of span gases along the path length.
- ✓ Complete Calibration equipment to be installed with analyser on top of stack platform.
- ✓ After readjustment the equipment has to be brought down to lab for calibration / validation checks.

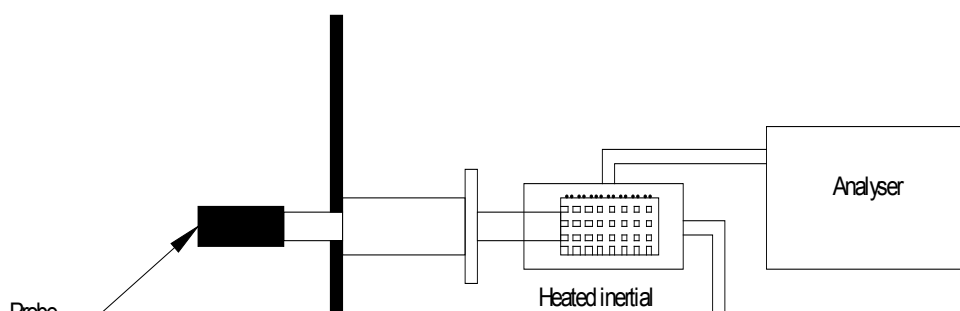
#### 4.2.2 Extractive system (Gaseous Pollutant)

Source-level extractive systems are those in which a sample of flue gases is continuously extracted from a pointmoi and conveyed to the analyzer using a sampling line. Particulate matter may be removed from the gas, and it may be cooled and dried, but in all other respects the sample is not altered by the sampling process. Three types of source-level extractive systems are marketed commercially:

- a. Hot and wet systems and Hot and Wet -Close Coupled Systems
- b. Dilution Extractive Systems
- c. Cool and dry systems with conditioning at the analyzer enclosure



**Figure4.2.2 a: Hot and wet gas sampling system**



**Figure4.2.2 b: Close coupled gas analyzer**

In some cases, a combination of these systems may be used, for example when there is a requirement to measure both highly reactive and less reactive pollutants concurrently.

A source-level extractive system consists of several basic components: probe, sample line, filters, moisture-removal system and pump. In some source-level systems the analyzer, for example IR analyzer, O<sub>2</sub> zirconia sensor or TOC Flame Ionization Detector (FID), is mounted on the stack or duct, after a short sample line. In this case, analyzer response times are very fast and apart from particulate filtering, sample conditioning is not required. These systems are known as close coupled.

➤ **Benefits:**

- ✓ Sensitivity of the system is not related to stack diameter.
- ✓ Varying stack temperature does not affect the measurements
- ✓ Can be proven using reference calibration gases.

➤ **Limitations**

- ✓ Longer response time, moisture removal, however meets the emission requirement.
- ✓ The closed coupled systems are subject to stack vibration and temperature variations requiring higher maintenance as calibration also mounted on stack, however extractive system (Hot-Wet or Dry Direct Extractive does not have this issue)

#### 4.2.3 Dilution based extractive system

The need is to transport the sample hot, and to filter and dry relatively large volumes of flue gas. This problem can be largely avoided by using dilution systems, where gas is drawn into the probe at much lower flow rates than in a source-level system. Dilution systems are used in conjunction with ambient air level gas analyzers.

Oxygen or CO<sub>2</sub> must be measured separately for correction purposes (the diluted sample is 'swamped' by dilution air).

There are two types of commercially available dilution systems: **dilution probes**, where dilution of the sample gas takes place **in the stack**, and **out-stack dilution systems**, where dilution is carried out external to the stack. The out-stack dilution sampling is less sensitive to changes in stack gas temperature, pressure and density. However, heated sample line is required for out stack dilution system.

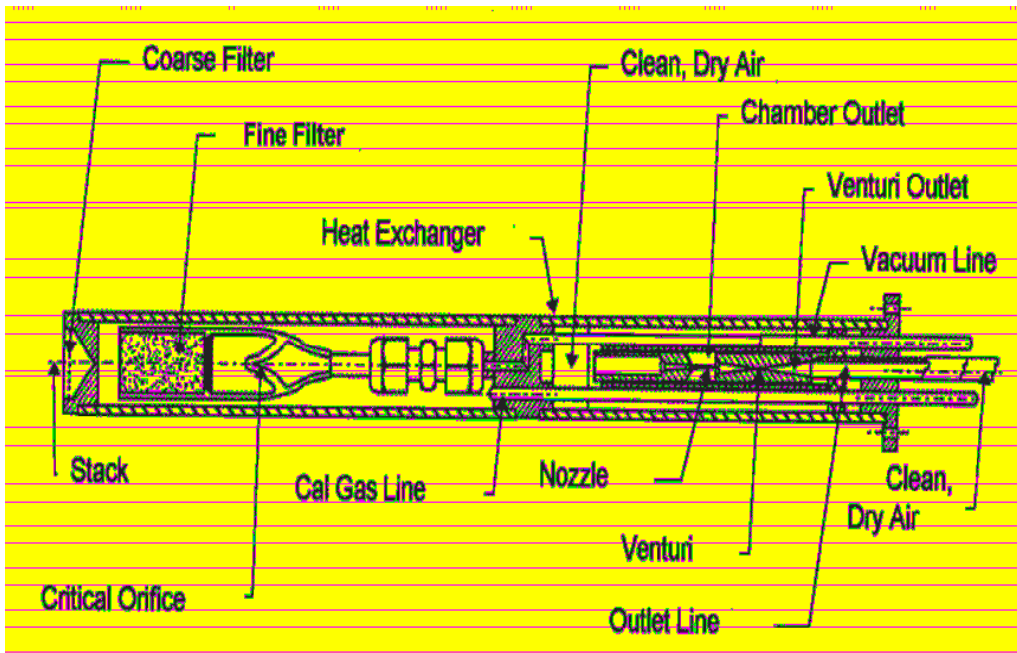


Figure 4.2.3 a: Typical in-stack dilution probe

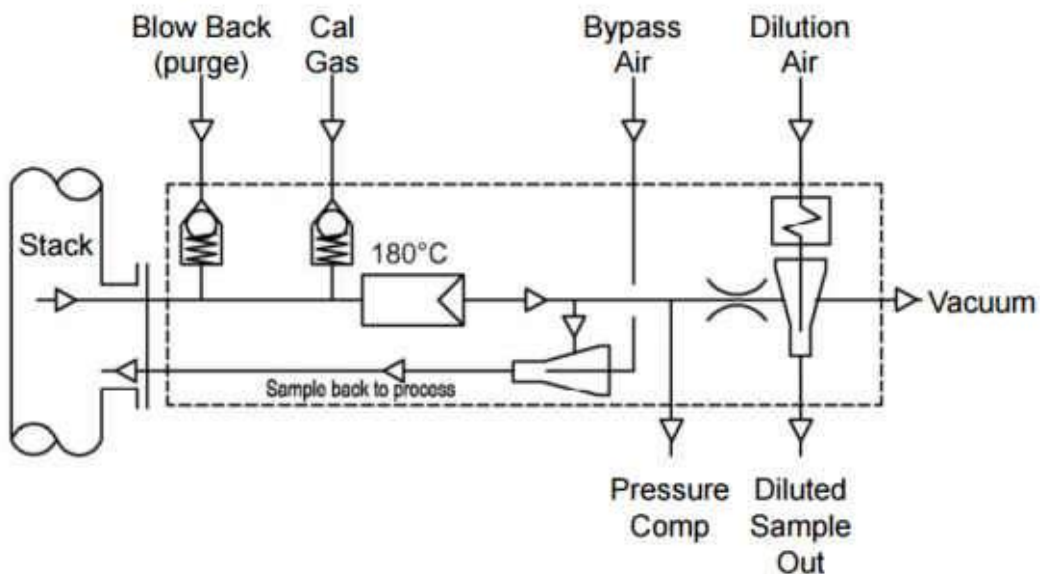


Figure 4.2.3 b: Typical out-stack dilution probe

Sample gas is extracted from the stack at a known flow rate, mixed with a known flow rate of dry air / dilutant.



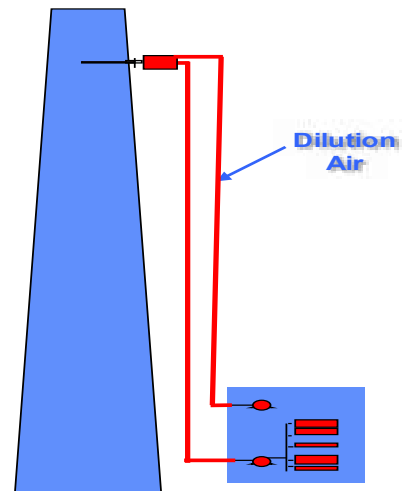
**Benefits:**

- ✓ It can be used to reduce moisture content so no heated sampling components are required.
- ✓ No power required at the probe so it can be used in hazardous areas.
- ✓ Low effect of stack temp variation, dust & moisture as dilution is done.

- ✓ long distance transportation of sample at positive pressure can be done

➤ **Limitations:**

- ✓ Flow rates are critical and need to be controlled to avoid varying dilution ratios.
- ✓ Balance is to be maintained with respect to Sample gas concentration vs analyzer sensitivity.
- ✓ Cannot be used for all gases including oxygen.
- ✓ Careful consideration of probe materials for high temperature and corrosive applications.
- ✓ Require periodical controlled cleaning due to presence of dust / ash \ sulfur presence, which effect the micro critical orifice leading to erroneous measurements.



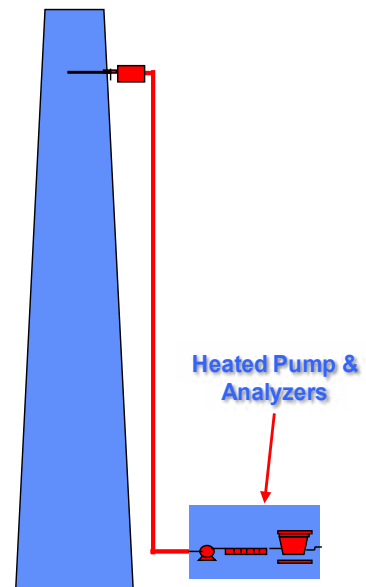
**4.2.4 Hot Wet Extractive system with Heated Analyzer**

Sample gas is extracted from the stack and transported to the analyzer using heated line and heated sampling components – filters, pumps etc., including the analyzer measurement cell.

The temperature of all components in contact with the sample gas is typically at 180°C to avoid condensation and loss of soluble gases.

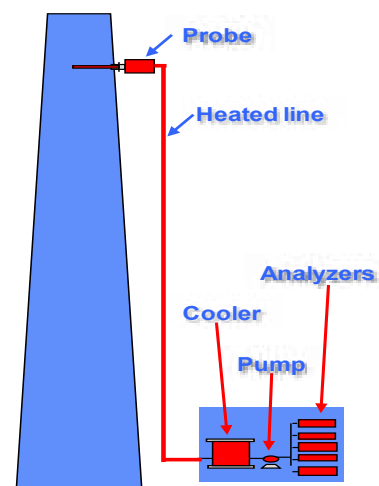
➤ **Benefits**

- ✓ Sensitivity of the system is not related to stack diameter.
- ✓ Varying stack temperature does not affect the measurements
- ✓ Use technologies like FTIR that can measure most gases including NH<sub>3</sub>, HF, HCl, VOC, H<sub>2</sub>O and O<sub>2</sub>.
- ✓ Multi gases including specialty gases that are difficult to measure in other techniques.



➤ **Limitations**

- ✓ Costly heated sample lines and components.
- ✓ Heated lines not UPS protected due to power required- risk of condensation and damage.
- ✓ More time required to maintain the system and heat stressed components.
- ✓ Online continuous H<sub>2</sub>O measurement for online correction of moisture as normalization being a
- ✓ hot wet technique.



**4.2.5 Cool and Dry Systems - Hot Extractive System with Gas Cooler and Cold Analyzer**

Sample gas is passed through a cooler to bring the sample gas temperature down to a low temperature and to remove water so sample is almost dry. Coolers are typically Peltier or Compressor type with outlet at about 3-4°C.

➤ **Benefits**

- ✓ Varying stack temperature does not affect the measurements
- ✓ Multi gas measurement is possible with flexibility of different principle of measurements.
- ✓ Can use analyzers operating at low/ambient temperatures so components are not heat stressed.
- ✓ These analyser are versatile as suitable for harsh environments and can be placed in a clean, dry & temperature controlled environment, so more stable system and easier to maintain
- ✓ Analyzers are running at low temperatures, so systems tend to be cheaper than heated systems and widely used concept.
- ✓ These are also available in hazardous area installation.

➤ **Limitations**

- ✓ It cannot be used on very soluble/corrosive gases.
- ✓ Soluble gases (HCl, HF, NH<sub>3</sub>, SO<sub>2</sub>) can be lost during the cooling resulting in lower than actual readings.
- ✓ Heated Sample gas line is required to maintain the flue gases above dew point.
- ✓ Leakage in sampling line will give erroneous results due to mixing of ambient air.



- ✓ Possibility of choking of lines in case of high dust loading.
- ✓ Risk of condensation in case of power fail
- ✓ In high dust concentration applications frequent choking occurs

#### 4.2.6 Extractive sample drying by other method

- ✓ Extracted sample may also be dried by applying specific sample line through selective permeation. Water gets eliminated from the sample stream to the outer jackets containing dry and cold air.

#### 4.2.7 Gas Sampling and Conditioning

The accuracy, repeatability and response time of the analysers are more dependent on the sample handling system rather than the analysers only. The reliability, accuracy, repeatability and response time of the measurement results of extractive analysers are impacted by possible failure of some of the components of sample handling system for extractive sampling.

Inline filters – used for applications where dust concentration in sample gas is on higher side, gets frequently choked and need regular maintenance which effects percentage availability of measurement. The incorporation of technology for effective, heated, automatic back flush to clean these filters from outside can enhance the measurement data availability.

Heated Probe – accommodates heated fine filter, to arrest dust particles in sample gas to protect sensitive analyzer and provide uniform heating to the sample coming out from the stack and avoid condensation or cold spots.

For effective filtering, the probe should have more filtering area with automated back purge and back flush to reduce filter cleaning frequency and increasing the uptime of measurement.

Heated Filter: the common problem with the heated filter is associated with ineffective filtering area and selection of right micron size.

Sample Gas Pumps – are running 24x7 for months need to be robust and reliable.

## 5.0 MEASUREMENT TECHNIQUES FOR PARTICULATE MATTER AND GASEOUS POLLUTANT

### 5.1 Techniques / Instrumentation for Online PM Monitoring

Particulate Matter Continuous Emission Monitoring Systems (PM CEMS) measure a parameter (e.g. scattered light) which can be correlated to dust concentration by comparison to a gravimetric sample taken under isokinetic conditions rather than the mass concentration directly. The performance and suitability of any particulate monitor is therefore application dependent. A number of techniques are used in practice which provide a practical and robust solution for most industrial applications. There are two main types of Particulate Measurement Techniques:

- A. **In-Situ Systems** (Point or Cross-duct) for application in flue gas stream with temperature above dew point ( $>95\text{ }^{\circ}\text{C}$ )
- B. **Extractive Systems** for applications with entrained water droplets in the gas stream

#### A. In-situ systems

The main cross-duct techniques used for Continuous Monitoring of Particulate Matter are: -

- a) **Light Attenuation (Transmissometry)**: In this method the amount of light absorbed by particles crossing a light beam is measured and correlated to dust concentration. In Opacity/Extinction instruments the amount of light reduction is measured directly, whereas in Ratio-metric Opacity systems the ratio of the amount of light variation (flicker) to the transmitted light is measured.

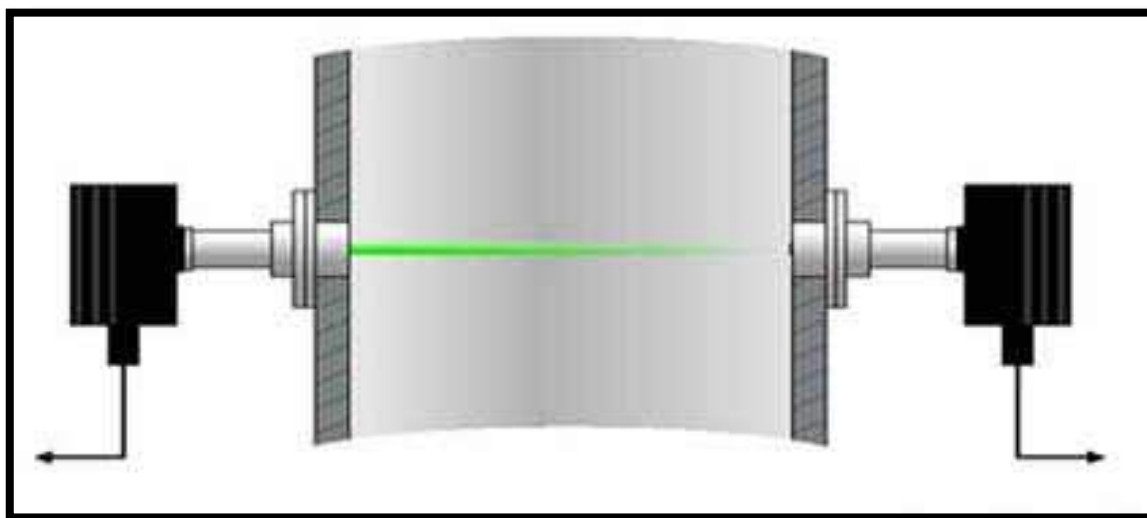


Figure 5.1: Light Attenuation

As with in-situ path systems for monitoring gaseous pollutants transmissometers may be single-pass or double-pass design. Double-pass types use a reflector on the opposite side of the stack or duct so that the light is transmitted twice through the flue gas. The single pass transmissometers have become obsolete. Some modern single-pass transmissometers are designed with two identical senders and receivers on each side of the stack to alternatively transmit and receive light in order to increase sensitivity and reduce the effects of fouling of the optical surfaces. The light sources use includes filament bulbs, light emitting diodes and lasers. Light colour green shown in figure is symbolic to understand the mechanism.

The simplest of the transmissometers will produce an opacity that can be correlated with a smoke colour scale, e.g. the Ringelmann scale. More sophisticated analysers that are equipped with on-line zero and span adjustment can be programmed to produce an output proportional to 1.0 mg/m<sup>3</sup> based on the results of calibration measurements.

Transmissometers are usually designed for cross duct measurement with a sender and receiver on opposite sides of the stack for single pass system. For double pass both light source and receiver are placed in the same side with a reflector at opposite end to pass the light through the flue gas twice.

Point in-situ transmissometer type analysers have been developed in which the light source and detector are carried at opposite ends of a rigid tube. The tube contains a series of slots which allows the passage of PM-laden flue gas through the tube and hence between the light source and detector. This arrangement overcomes some of the problems associated with the cross duct systems with regard to alignment of sender and receiver and differential expansion caused by temperature variations, and stack vibrations.

**Limitations of measurement:** Transmissometry (Opacity monitors) is used extensively worldwide to monitor, “Opacity”. This is particularly true in the utility and power generation industries. Adoption of opacity monitors for particulate matter monitoring in stacks is less universal due

to their inapplicability to the lower levels of particulate now found in industrial processes. Industries where Opacity monitors are still well accepted are the power, cement and steel industries due to their historical experience in satisfying opacity requirements. There are a number of Opacity instruments with TUV approvals for particulate measurement. The certification ranges for opacity monitor are dependent on path length. The measuring range of 0-1000mg/m<sup>3</sup> is suggested for a path length of 0.5 to 15 mt. However, low range i.e. 0 to 10 mg/Nm<sup>3</sup> can be monitored in stack with minimum 5m path length. The limitations of technologies are widely accepted.

- It cannot monitor particulate levels below 25mg/m<sup>3</sup> per meter path-length in general, as at low concentrations the reduction in the light beam caused by the particles is indistinguishable from the zero drift of the source/detector (i.e. variation in the intensity of the receiver with no dust conditions). This limitation makes the instrument unsuitable for many well abated emission applications (e.g. after a bag filter).
- The system is sensitive to dust contamination on the lens surfaces since it is not possible to distinguish between the reduction in light caused by dust in the stack and dust on the lenses. In practice a curtain of air (provided by a blower) is injected into the transmitter and receiver heads to keep the lens surfaces clean.
- Systems without retro-reflectors (i.e. non double-pass) are sensitive to misalignment between the transmitter and receiver.
- The calibration of the instrument changes with changes in the particle properties:
  - Particle type and refractive index (mainly changes the amount of light scattering)
  - Particle colour mainly changes the amount of light absorbed
  - Particle size and shape (changes the amount of light scattering) manifests itself in requiring a number of regression curves to be calculated at differing process conditions and differing fuels used for combustion.
- Water vapour and water droplets absorb light over the light frequency range used by opacity monitors and therefore opacity instruments are

not suitable for stacks with flue gas below dew point or containing water droplets from wet collectors. This makes opacity monitors unsuitable for monitoring particulate matter emissions from coal fired power plant applications where Flue Gas Desulphurization (FGD) plant is not fitted with stack reheat (wet FGD).

- b) **Light scattering:** In this system the amount of light scattered by the particles in a specific direction is measured. Forward, side or back scatter are a function of the angle of scattered light that is measured by the detector. Light scattering techniques (especially forward scatter) are capable of measuring dust concentrations several magnitudes smaller than that measured by transmissometers.

When light is directed toward a particle, the particle may both absorb and scatter the light, deflecting it from its incident path. An opacity monitor or transmissometer measures the intensity of light that is not scattered. Other instruments have been developed to measure the scattered light. The intensity of the scattered light depends on the angle of observation, the size of the particle, its refractive index and shape, and the wavelength of the incident light. Both in-situ and extractive analysers of this type have been developed. A light beam is passed through the Particulate Matter (PM) laden flue gas. Absorption and scatter attenuate the light. Light scatter analysers measure the intensity of the scattered light at a predetermined angle to the beam direction. The amount of light scattered in any direction is dependent on the size distribution and shape of the dust particles. Variations in the intensity of the light source and sensitivity of the detector are compensated for by the use of a reference beam, in the opposite phase to the measuring beam, onto the photoelectric detector.

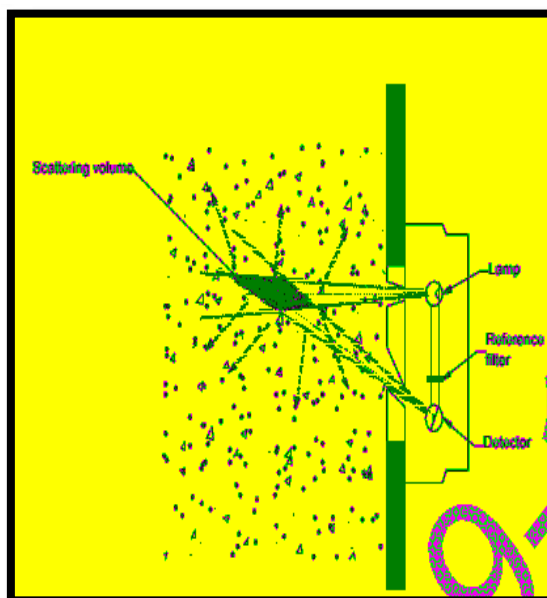
Scatter light measurement is a more sensitive measurement method for low dust loading. Opacity measurement at low loading is limited by the requirement to measure very small variations in the light received on the axis from the transmitter. Scatter light analysers measure only the scattered light and do not have to deal with the small variation in a large amount of transmitted light.

Instruments can be based on the forward scatter, side scatter or back scatter principles, and can be in-situ, point in-situ or extractive. This type

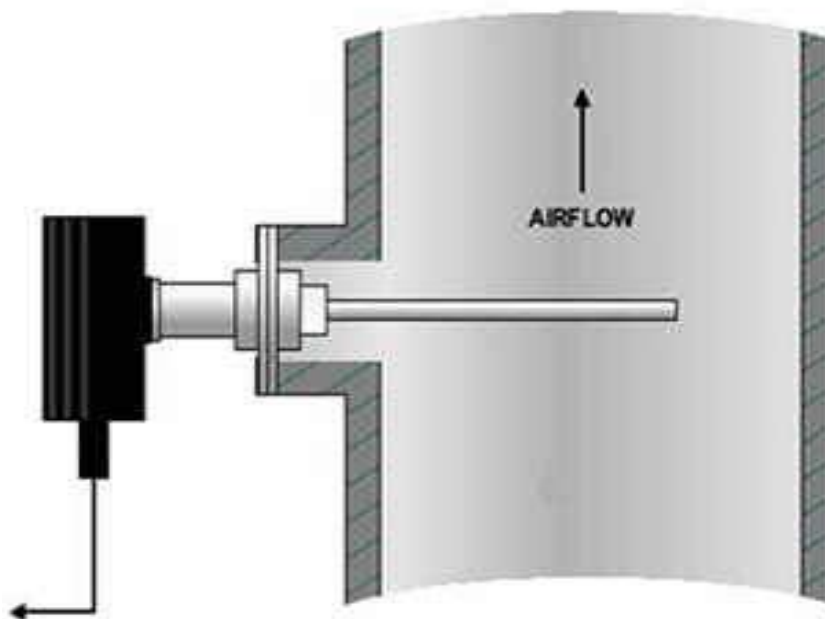
of analysers can be claimed to be more accurate for measure low PM concentrations of upto  $1\text{mg}/\text{m}^3$

**Limitations of technology:** Side Scatter or Back Scatter instruments are used in low dust concentration applications, such as those found in Power plant, Lead Smelters and Incinerators equipped with bag house as pollution control systems. Their technical limitations are as follows:

- The calibration is affected by changes in particle size and type of particle. For example, with absorbing particles (such as black fly ash) the response of a Back Scatter device is reduced by a factor of 20% from peak response when the particle size changes from  $0.8\mu\text{m}$  to  $0.7\mu\text{m}$ . The peak response for non-absorbing particles is three times greater than for absorbing particles.
- Back and Side Scatter devices are less sensitive than Forward Scattering devices although can still provide sensitivity of less than  $1\text{mg}/\text{m}^3$ .
- In-situ light scattering instruments cannot differentiate between water aerosols and solid particles



- c) **Probe Electrification (Non-Optical):** The electrical current produced by particles interacting with a grounded rod protruding across the stack/duct is measured and correlated to dust concentration. Charge induction (AC Triboelectric and Electro Dynamic) and DC Triboelectric instruments are types of probe electrification devices in which different signal and current analysis are performed. The Probe Electrification techniques are not all the same and should not be confused by each other. Electro Dynamic systems are used in Europe as Compliance devices due to their inherent reliability, repeatability and self-check capability.

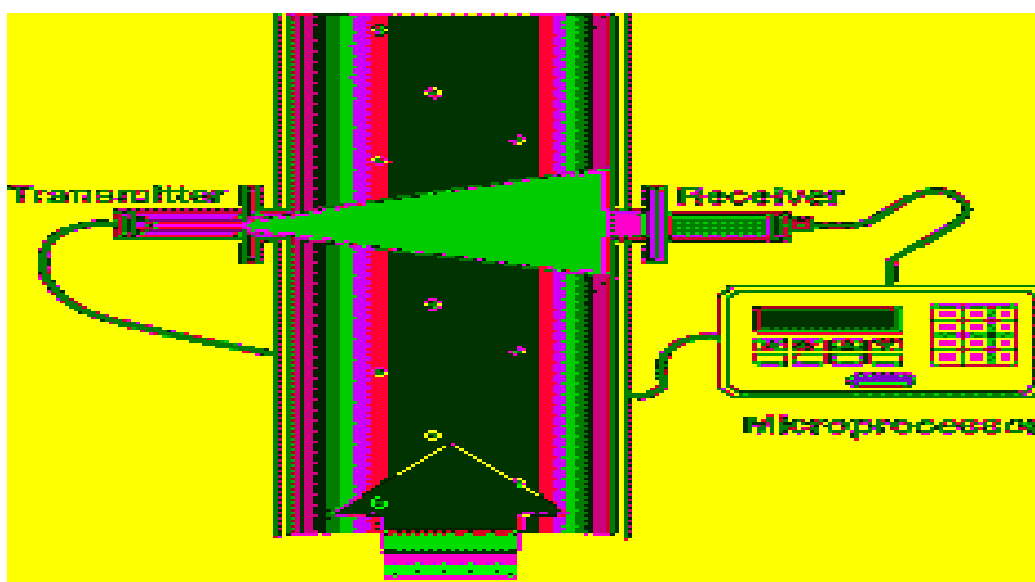


Consideration should be taken when selecting Probe Electrification instruments. It should not be used after Electrostatic Precipitators as the action of the filter can affect the charge characteristics of the measured particulate causing errors in the instruments readings. In case Tribo probe is mounted above ESP, then a Faraday Shield is placed around the entire probe length and grounded to negate the charge of flue gas particles emerging from the ESP field. All three techniques are highly sensitive and are responsive at low concentrations below  $1\text{mg}/\text{m}^3$ . The stack diameter may be a limiting factor in probe electrification technique. The probe length shall cover at least half diameter to make representative sampling. Sticky, moist flue gases always pose threat to the performance, as the surface of the probe gets easily coated and restrict the charge exchange resulting in poor performance. Frequent cleaning and maintenance is required.

#### d. Optical Scintillation

Optical scintillation, like light extinction, utilizes a light source and a remote receiver that measures the amount of received light. The difference is that the scintillation monitor uses a wide beam of light, no focusing lenses, and the receiver measures the modulation of the light frequency due to the movement of particles through the light beam and not the extinction of light. The principles at work here are that the particles

in a gas stream will momentarily interrupt the light beam and cause a variation in the amplitude of the light received (scintillation). The greater the particle concentration in the gas stream the greater the variation in the amplitude of the light signal received. The scintillation monitor must be calibrated to manual gravimetric measurements at the specific source on which it is installed. Little advance against opacity as it reduces zero and upscale drift with modulated light to eliminate effects of stray or ambient light. The transmitter and receiver are located on opposite sides of the duct; therefore, this instrument also measures across-stack PM concentration. The instrument response increases with PM concentration and can be correlated by comparison to manual gravimetric data.



**Table 1: The advantages and disadvantages Optical Scintillation**

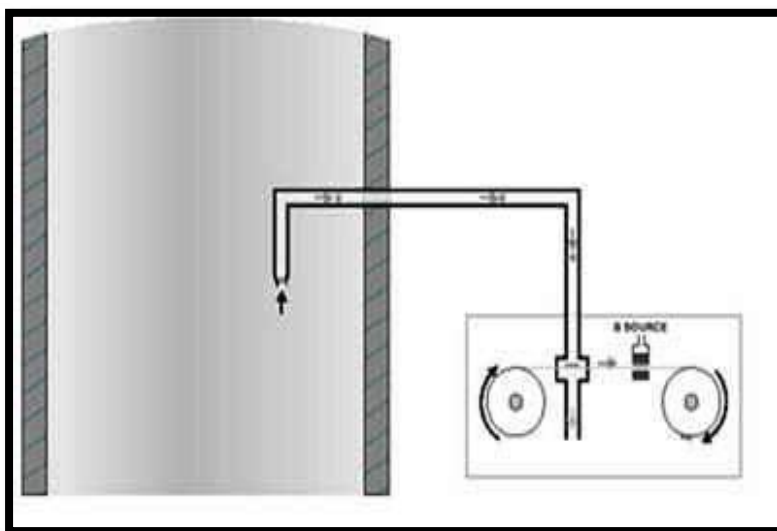
Advantages	Disadvantages
Low price	Measures secondary particles as PM
Easy to install	properties of PM Adversely affected by Particle size, density, shape change
Low maintenance	The cleaning of receiver in a dirty stack is an issue
Sensitivity to little high concentration	Not Sensitive to low PM concentration
Perform better in dry stack Moisture	Measures liquid drops as PM;



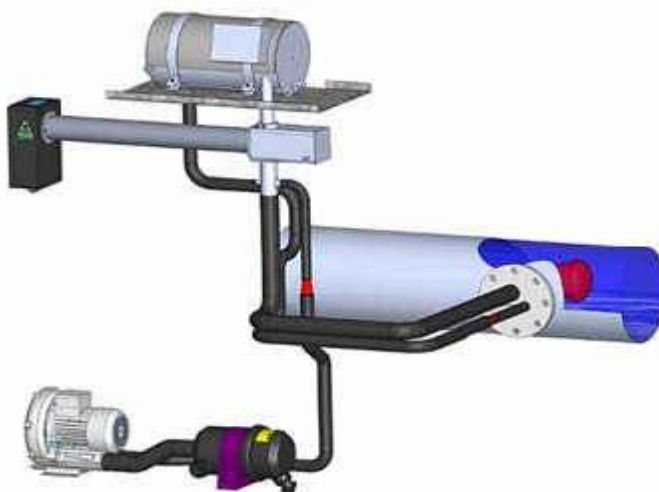
## B. Extractive systems

The presence of water droplets in saturated gas streams below the dew point i.e., after wet collectors will affect the monitoring response of all in-situ technologies to an extent where calibrated results cannot be guaranteed. In these instances, extractive systems must be used. The two common methods for measuring in wet stacks are: -

- a) **Beta Attenuation:** The moving gas stream is sampled and the particulate is collected onto a filter. The filter is advanced periodically (typically every 15 minutes) into a measurement chamber, so that radioactive Beta particles can be passed through the sample and the amount of Beta particles transmitted through the sample is measured. The advantage of this technique is that the absorption of radioactivity is not significantly affected by the type of particle (although particles with different Nucleonic density have different responses).



- b) **Extractive Light Scatter:** The flue gas is extracted (recommended under isokinetic conditions) and then passed into a heater unit to evaporate any water or water vapour below dew point water before measurement in an external light scattering chamber. A Forward Light scattering technique is normally used in the chamber. Extractive systems have been designed to overcome the problematic issues of sample handling on a continuous basis. In stacks filled with wet scrubber as air pollution control device, where dust concentration is low and mass of water droplets is high compared to the dust particular extraction of sample slightly over isokinetic is deserved.



### 5.1.1 Requirements of an efficient on-line PM CEMS

One of the fundamental issues in obtaining good results from particulate matter measuring instruments is to ensure that the instrument fits for purpose of the intended application. This means that the instrument: -

1. Must have a stable, reliable response, which can be directly correlated to dust concentration with limited cross interference from likely changes in process or flue gas conditions. Certified products provide guidance on the application suitability of different instruments. Manufacturers should be contacted for more detailed guidance on the application suitability of a specific type of instrument. Industry is responsible for the selection of appropriate technology for measurement of emission as per CPCB guidelines.
2. Can operate over a long duration in the application without the need for frequent maintenance or cleaning. The Maintenance Interval as stated in the certificate can provide guidance on servicing issues. The maintenance and calibration schedules suggested by manufacturer should be followed strictly.
3. The system has sufficient resolution for the intended application. The systems certificates state the ranges in  $\text{mg}/\text{Nm}^3$  for the instrument which is the lowest dust range at which the instrument will still meet the required performance standards.
4. Instrument measuring range selection: The Measuring Range should be 2.5 to 3.0 times of Prescribed Standard value. i.e. if Prescribed Standard

for PM parameter is 50 mg/Nm<sup>3</sup> then selected Instrumental Measuring range should be in between 0-125 or 0-150mg/Nm<sup>3</sup>.

The span calibration (for gaseous parameters) should be performed at 60 to 80% of the selected instrumental measurement range.

5. The minimum detection level of the instrument should be considered in relation to the normal operating condition of the plant to ensure a meaningful stable response from the instrument at normal plant conditions which can then be calibrated.
6. The operating technology should be suitable for the type of Filtration system (pollution control system) used, the diameter of the stack or duct, the dust loading and any other additional parameters (like corrosiveness, stickiness, moisture, etc.) that may affect the operation of the PM CEMS i.e. for applications with entrained water droplets an extractive PM CEMS which conditions the wet gas stream to remove the entrained liquid must be used to obtain quantitative results.

## 5.2 Techniques/ Instrumentation for Online Gaseous Pollutant Monitoring

The extractive type of emission gas analyzers available are:

### 1. Non Dispersive Infrared (NDIR)

Many gaseous pollutants absorb light energy in one or more regions of the spectrum. Sulphur dioxide / Nitric Oxide / Carbon Monoxide and a wide range of other gases absorb infrared radiation and ultraviolet radiation. Each type of pollutant molecule absorbs light at a characteristic wavelength, and therefore it can be distinguished from other pollutant species.

Continuous emission monitors using this principle apply the Beer-Lambert Law, which states that the transmittance of light (i.e., the ratio of the intensities of the transmitted and incident light) through a medium that absorbs it is decreased exponentially.

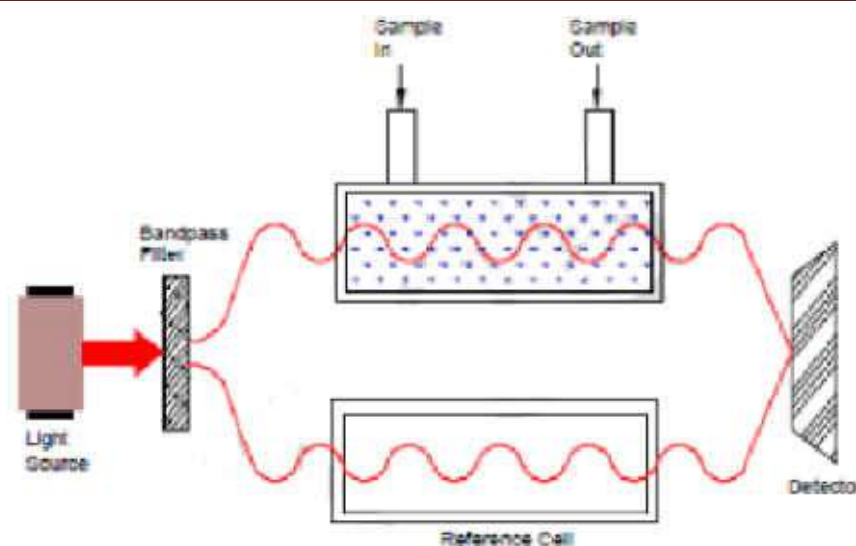
Hetero-atomic gaseous molecules, which contain two or more dissimilar atoms in the molecule, display unique absorption characteristics in the infrared region of the spectrum. Homo-atomic molecules containing only one type of atom within the molecule do not produce characteristic vibrations when exposed to light in the infrared region; therefore, they cannot be measured by this technique.

By using this principle an instrument can be designed to measure pollutant gas concentrations. Non-dispersive photometry analysers using infrared (NDIR) have been developed for monitoring a wide range of gases.

Simple non-dispersive infrared analysers use filters or other methods to measure the absorption of light over a relatively small range of wavelengths centered at an absorption peak of the molecule of interest. In a simple NDIR analyser, infrared light is emitted from a source such as a heated coil or other type of infrared radiator. The light is transmitted through two gas cells: a reference cell and a sample cell. The reference cell contains a gas such as nitrogen or argon that does not absorb light at the wavelength used in the instrument. A sample of the gas is passed through the sample cell of the instrument. As the infrared beam passes through the sample cell, pollutant molecules will absorb some of the light. As a result, when the light emerges from the end of the sample cell it has less energy than when it entered. It will also have less energy than the light emerging from the reference cell. The energy difference is detected by a detector. The ratio of the detector signals from the two cells gives the light transmittance, which can be related to the pollutant gas concentration.

Simple non-dispersive infrared analysers are still supplied for applications where only one gaseous species is to be monitored. They are relatively low cost, reliable and robust. A limitation of analysers based on this principle is that gases that absorb light in the same spectral region as the gas of interest will cause a positive interference in the measurement.

Water vapour are strongly absorbing in the infrared region and must be removed from the sample before the gas enters the analyser. One solution to this problem is to use absorption cells arranged in series, as in the O<sub>2</sub> detector. The NDIR analysers combine with O<sub>2</sub> measurement for online continuous correction / normalization for any diluent of emission gases being measured by CEMS system.



**Figure 5.2 : NDIR System**

## 2. Photoacoustic Detector

A variant of the pneumatic detector technique is the photoacoustic detector. Analysers based on this principle of operation monitor acoustic waves resulting from the absorption of chopped light by molecules in a sealed sample cell.

In a light-absorbing molecule, when vibrational-rotational energy dissipates absorbed light energy into kinetic energy, the pressure will increase in the sealed chamber in which they are confined. If the light beam is turned on and off, the pressure will alternately increase and decrease, producing a pressure pulse or acoustic signal. In practice this is achieved by placing a rotating chopper between the light source and the measurement chamber. When the chopper produces pulses between 20Hz and 20 KHz frequency, the pressure pulse can be detected by sensitive microphones.

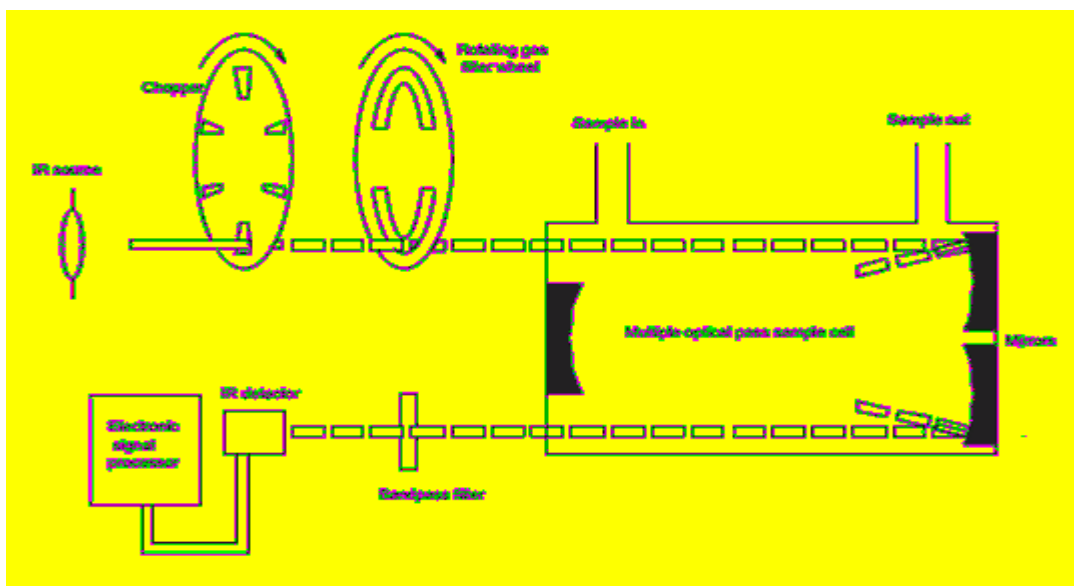
By placing different optical filters in a carousel located between the chopper and measurement chamber, a range of organic and inorganic compounds can be measured at ppb levels. In the photoacoustic technique light absorption is measured directly, so if there is no absorbing gas in the measurement cell, no pressure pulse will be generated. If some gas is present, some sound will be generated and if more gas is present more sound will be generated.

The technique does not provide continuous analysis, as the sample must be sealed in the measurement chamber before the analysis sequence can begin. This cycle typically takes 40 seconds to complete five determinants.

### 3. Gas Filter Correlation (GFC) NDIR

A type of NDIR technique, which is widely used in in-situ monitors, is also applied to extractive system analysers. The gas filter correlation (GFC) technique uses a reference cell that contains a 100% concentration of the pollutant of interest, instead of the 0% concentration in the techniques discussed previously. Radiation from an infrared source passes through a filter wheel, which contains a neutral gas, such as N<sub>2</sub>, in one cell and the gas of interest in the other cell. The light is then passed through a modulator that creates an alternating signal.

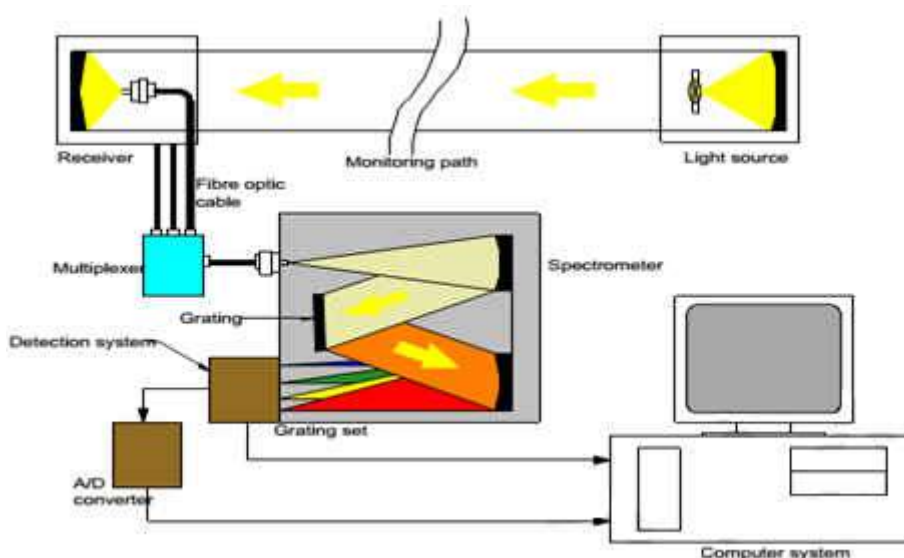
When the instrument is operating the filter wheel is continuously rotating. When light passes through the gas filter it will be attenuated. The gas filter contains enough of the target gas to remove most of the light at the wavelength where the target gas absorbs. The gases not absorbed at selected wavelengths are not removed and are passed on to the detector. The net result is reduction of light energy reaching the detector. When the light passes through the neutral cell its intensity is not reduced. If a sample of gas containing the target pollutant is introduced into the sample cell the molecules will absorb light energy at the absorption wavelength of the target gas. Because the gas filter was chosen to absorb energy at the same wavelengths, the absorption is already complete in the gas filter cell beam, and the detector will see the same signal as it did when the sample cell contained zero gas. The beam passing through the N<sub>2</sub> side however will carry less energy because light is absorbed by the target gas in the sample cell. The difference between the two beams is monitored, and can be related to the concentration of the gas of interest in the sample. Other gases having spectral patterns in the same regions as the target gas will not affect the measurement, as they do not correlate. Moisture has absorption and needs to be removed and adequate correction is required.



**Figure 5.2.a: Gas Filter Correlation NDIR**

**4. Differential Optical Absorption Spectroscopy (DOAS)**

Another non-dispersive method measures light absorption at different wavelengths, those at which the molecule absorbs energy and those that do not. In this system a reference wavelength is used instead of a reference cell. The system can monitor SO<sub>2</sub>, NO<sub>2</sub>, HCl, HF, CO, CO<sub>2</sub> and NH<sub>3</sub> in stack emissions. These parameters are however selective to UV/IR-DOAS technology. The extractive UV-DOAS system can also measure gaseous mercury when fitted with heated sample gas probe, heated gas transfer line and also heated measuring cell after conversion of total gaseous mercury into elemental mercury.



**Figure 5.2.b: Differential Optical Absorption Spectroscopy**

## 5. Fourier Transform Infrared Spectroscopy (FTIR)

Infrared-active gases, such as CO<sub>2</sub>, CO, SO<sub>2</sub>, NO, NO<sub>2</sub>, HCl, HF, VOC, H<sub>2</sub>O, can be measured simultaneously using Fourier transform IR spectroscopy (FTIR spectroscopy). Unlike in traditional spectroscopy, the absorption spectrum is not recorded by means of dispersive elements such as lattices or prisms, but using an interferometer arrangement.

Most FTIR spectrometers are based on the Michelson interferometer which has the function of a mono-chromator. The radiation hits a beam splitter which reflects 50 % of the radiation and transmits the remaining 50%. The reflected and transmitted beams hit two mirrors which are perpendicular to one another and are reflected back to the beam splitter. The beam splitter recombines the two reflected beams into one. The recombined beam is passed through a cell filled with the gas component to be measured and then focused on an IR detector.

Continuously shifting one of the mirrors opposite the beam splitter produces differences in the optical path length which the two beams have to cover on the way back to the beam splitter. This difference (path difference of the interferometer) produces interference in the recombined beam which results in the fundamental coding. The shifting makes the interference signal (local intensity distribution) variable (interferogram). This means the interferogram contains all the information about the spectrum in encrypted form. The absorption of the modulated IR radiation in the measurement cell means that the interferogram contains all the spectral information at the same time.

A mathematical Fourier transformation into the IR range (demodulation) is then applied to the interferogram recorded. By comparing the IR spectrum recorded to a reference spectrum, the FTIR spectrometer can quantitatively detect a number of IR-active measured objects, depending on the software version used. Once the instrument has been calibrated the calibration data are stored as a spectral library, which is stored as software. Essentially the FTIR technique provides a 'signature' of the total absorption spectrum of the sample gas over a broad spectral range. Instruments typically works in wavelength range from 2.5 to 25 $\mu$ m.

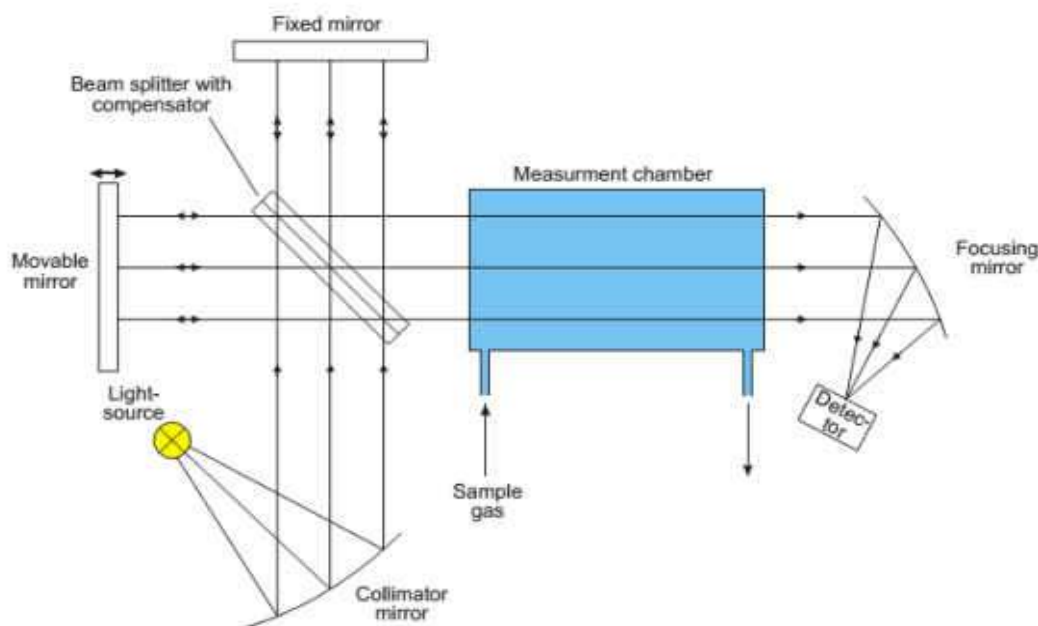
This FTIR is an advanced technology and works on Hot Wet Technique completely heated at 180°C and has wide applications due to multi gas



measurement over the IR spectrum of 2 to 25  $\mu\text{m}$  and can measure  $\text{CO}$ ,  $\text{CO}_2$ ,  $\text{SO}_2$ ,  $\text{NO}$ ,  $\text{NO}_2$ ,  $\text{HCl}$ ,  $\text{HF}$ ,  $\text{NH}_3$ ,  $\text{H}_2\text{O}$ ,  $\text{VOC}$ , etc. For monitoring of low concentration of  $\text{NH}_3$ ,  $\text{HCl}$  and  $\text{HF}$  extractive system is preferred. Additional modules of  $\text{O}_2$  &  $\text{VOC}$  can also be integrated into the online measurement. Best suited for wet process with high moisture even as high as 50 – 60 Vol% in background eg. Waste Incineration, waste to power, process like Dry Cement, process using alternative fuels like pet coke, waste, bio mass, etc. The minimum detection limit (MDL) is in parts per billion ( $10^{-9}$  ratio at atmospheres), when resolution is  $0.5\text{ cm}^{-1}$  and optical path is 100m (**Table 2**).

**Table 2: Minimum Detection Limit of FTIR Method for different compounds**

Sl. No	Compound	Frequency ( $\text{cm}^{-1}$ )	MDL (PPB)	Remarks
1.	Carbon Dioxide ( $\text{CO}_2$ )	2363	0.4	MDL is 0.4 ppb if no other $\text{CO}_2$ is present. In air, the minimum detectable change in $\text{CO}_2$ would be about 50 ppb
2.	Carbon Monoxide ( $\text{CO}$ )	2200-2100	2.0	Array of lines
3.	Hydrogen Chloride ( $\text{HCl}$ )	3050-2700	1.5	Array of lines
4.	Nitric Oxide ( $\text{NO}$ )	1920-1870	4.0	Array of lines
5.	Nitrogen Dioxide ( $\text{NO}_2$ )	2210	1.0	Array of Lines
6.	Sulfur Dioxide ( $\text{SO}_2$ )	1361	2.0	Spike; water must be carefully subtracted
7.	Water ( $\text{H}_2\text{O}$ )	1700-1400	5.0	MDL is 5 ppb if no other water is present. In Humid air, the minimum detectable change in water content would be 1000 ppb.



## 6. Non Dispersive Ultraviolet (NDUV)

The characteristics of light in the ultraviolet (UV) region of the spectrum (shorter wavelength, higher energy) lead to molecular electronic transitions when the light is absorbed. Absorption of ultraviolet photons excites the electrons of the atoms within the molecule to a higher energy state. The excited electrons quickly lose the energy by returning to the ground state by one of four methods; dissociation, where absorption of high-energy photons can cause the electron to leave the molecule completely, causing it to fragment; re-emission, where an identical photon is re-emitted as the electron decays back to its ground state; fluorescence, where a photon is emitted at a lower frequency than the original absorption as the electron decays back to its ground state, causing the gas to appear to glow.

Analysers that are designed to operate in the UV region typically employ the differential absorption technique. Analysers designed to measure SO<sub>2</sub> measure UV light absorption at a wavelength in the SO<sub>2</sub> absorption band centered at 285nm. This is then compared to the absorption at the wavelength region of 578nm where there is no SO<sub>2</sub> absorption.

Differential absorption NDUV instruments have proven to be very reliable in source monitoring applications and can also measure both NO & NO<sub>2</sub> simultaneously without need of NOX Converter. The technique has lower interferences but cannot measure other pollutants like CO / CO<sub>2</sub>.

## 7. Ultraviolet Fluorescence

Ultraviolet fluorescence analysers for SO<sub>2</sub> are based on the absorption of UV light at one specific wavelength by the SO<sub>2</sub> molecules, and its re-emission at a different wavelength. Commercially available instruments contain either a continuous or pulsed source of UV radiation. Filters are used to produce a narrow waveband around 210nm. The light (photon) emitted from the excited molecules is passed through a filter and then to a detector photomultiplier tube. The amount of light received at the specific wavelength is directly proportional to the number of SO<sub>2</sub> molecules and is a measure of concentration in the measurement cell, provided the sample flow rate is tightly controlled. A problem with this measurement principle is the 'quench effect' caused by the capture of the emitted radiation from the SO<sub>2</sub> molecules by other molecules present in the gas e.g. CO<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, etc. The quenching effect varies depending on the molecule involved and it is therefore very difficult to compensate for this effect when the matrix gas containing SO<sub>2</sub> has a time variable composition, e.g. a boiler flue gas. This effect has limited the use of this type of analyser for emission monitoring purposes, however it has found wide application as an ambient air analyser for SO<sub>2</sub> where the matrix gas, i.e. ambient air, does not vary significantly in composition.

UV fluorescence analysers can be used for emission monitoring purposes at Large Combustion Plants (LCPs) if a high ratio dilution sampling system as described earlier is used. In case of measurement of SO<sub>2</sub> concentrations in the stack gases, the quality of the dilution air significantly affects the measurement result. Besides inability to measure components like O<sub>2</sub>, CO, CO<sub>2</sub>, etc. is its limitation compared to other techniques like NDIR/NDUV with capacity for multi gas measurements.

## 8. Flame Photometry

Flame photometry analysers are specified in Environment Agency Technical Guidance Note M2 for the measurement of total sulphur. The technique is non-selective, and is not specific to SO<sub>2</sub>. It is therefore rarely used for continuous monitoring, but is a popular technique for Total Sulfur measurement as an online ASTM Technique.

## 9. Chemiluminescence Analysers

Chemiluminescence is the emission of light energy that results from a chemical reaction. It was found in the late 1960s that the reaction of nitric oxide (NO) and ozone ( $O_3$ ) produced infrared radiation from about 500 to 3000nm. It lost its status due to interferences/ Quench Effect of  $CO_2$ /Moisture and requirement of additional accessories like Ozone generators, pumps etc besides the inability to measure measurement components like  $SO_2$ , CO,  $CO_2$ , etc. compared to other techniques like NDIR/NDUV which can do multi gas measurements.

Nitrogen dioxide ( $NO_2$ ) does not participate in this reaction and must be reduced to NO before it can be measured by this method. Most commercial analysers contain a converter that catalytically reduces  $NO_2$  to NO. The NO (converted from  $NO_2$ ) plus the original NO in the sample is then reacted with  $O_3$  as described above to give a total NO +  $NO_2$  ( $NO_x$ ) reading.

Chemiluminescence monitors are well established for the monitoring of  $NO_x$ . The method is also well established for ambient air monitoring. These monitors have very low detection limits (of around 0.1 ppm) and a wide range when equipped with dilution system (up to 10,000 ppm), plus a short response time of a few seconds. This type of system has found wide acceptance in Ambient Measurement for very low concentration levels. In North America the system is used with conventional sampling systems and also with high ratio dilution samplers. For high concentration stack gases, the system is not popular in Europe as it requires dilution technique for diluting the high concentrations in Stack gas by extractive dilution system.

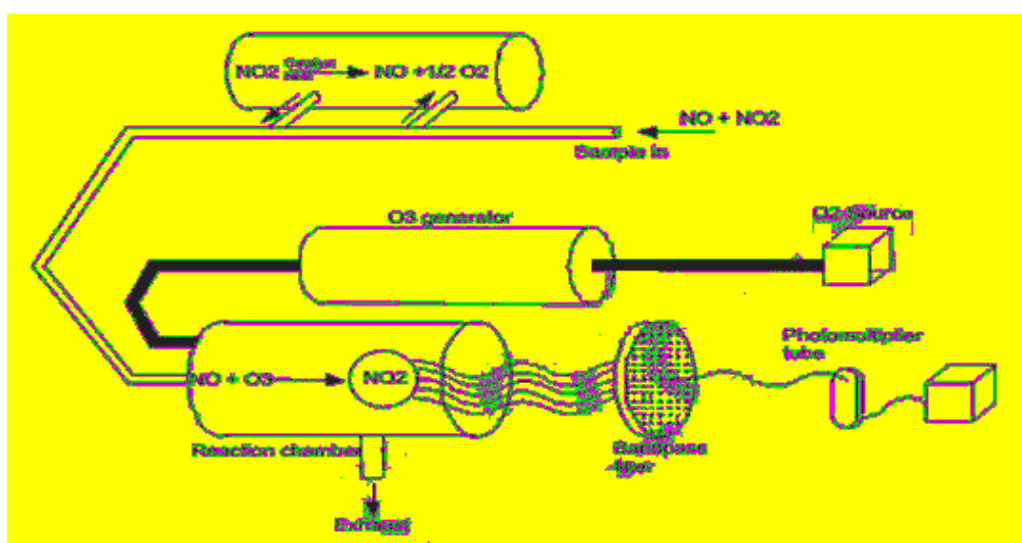


Figure 5.2.c: Chemiluminescence Analysis

## 10. Derivative/Laser Spectroscopy

Derivative/LASER spectroscopy involves scanning a spectral absorption peak and obtaining its second derivative or higher derivatives with respect to wavelength at the peak maxima. The derivative peak is measured, and this has the effect of increasing the detection sensitivity of the measurement. In analysers using this technique either the originating light from the light source is modulated or the light seen at the detector is modulated. This modulation produces a signal at the detector that is dependent on the shape of the absorption curve of the molecules.

Scanning over the absorption spectrum produces harmonics of the absorption line. The second harmonic of the signal is usually used to measure the concentration of the absorbing gas. The amplitude of the second harmonic is proportional to the second derivative of the intensity with respect to the wavelength.

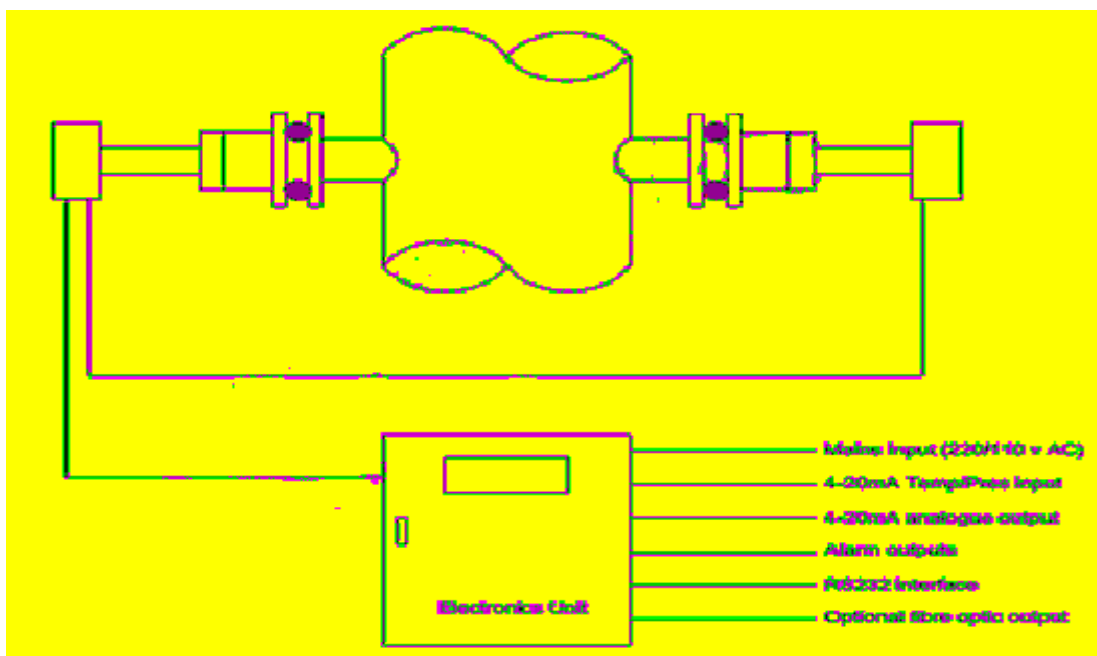
Tunable diode lasers (TDL) have been used in extractive, path in-situ, point in-situ and close-coupled monitoring designs using second derivative detection techniques. A simple diode laser system can employ the differential absorption technique, tuning the laser to different wavelengths by changing the laser temperature or its driving current.

Large interferences of gases may influence the measured concentration. This is due to line broadening effect as a result of molecular collisions. Different types of molecule may broaden the absorption line differently. Modern TDL analysers automatically compensate for this effect using digital filtering techniques.

An interesting aspect of the technique is its ability to measure oxygen concentration. As mentioned previously, homo-atomic molecules such as O<sub>2</sub> do not exhibit unique absorption characteristics in the infrared region of the spectrum. By using the derivative spectroscopic technique, the spin of electron is modified can be detected.

If oxygen is to be monitored using this technique, it is important to use pure nitrogen rather than air to purge the sensor 'windows', as the presence of oxygen in the purge gas will interfere with the measurement. Alternatively, it may be possible to correct the interference introduced by the purge air by calculation. In this technique the total path length, the path length containing

purge air, the path length containing flue gases and the temperature of the purge air and flue gases are measured, and the data are used to discriminate between oxygen present in the purge air and oxygen in the flue gases. Advance TDL techniques like CRDS (cavity ring down spectroscopy) or ICOS (Cavity Off-Axis Spectroscopy) are very stable at as low as ppb levels.



## 11. Flame Ionization Detector

The Flame Ionization Detector (FID) is the standard method for the measurement of Total Hydro Carbon (THC) / Total Organic Carbon (TOC)/ Total Volatile Organic Carbon (TVOC). The FID is capable of sensing most organic compounds and because of its relatively high sensitivity; it has become widely used in environmental applications.

In a typical FID the gas sample enters the base of a combustion chamber, where it is mixed with either hydrogen or a mixture of hydrogen or O<sub>2</sub>10% and helium. A mixture of hydrogen and helium is used in order to reduce oxygen synergistic effects; however, more fuel gas is required with this approach resulting in shortened operating times. An alternative technique employs ceramic material to construct the burner nozzle; in this case pure hydrogen may be used for the fuel gas. The mixture is burned in a jet with oxygen.

The flame produces ions and free electrons. A current is applied between the burner and a collector plate, and the ions and free electrons increase the current flow in the circuit, which is sensed by an electrometer. The current is approximately proportional to the number of carbon atoms entering the flame; as the response of the detector is slightly different for different types of organic

compounds, the detector must be calibrated for the compounds being analysed to achieve the best accuracy.

The FID is selective and convenient to use in source sampling applications, since it does not respond significantly to other gases in the sample such as N<sub>2</sub>, water vapour, CO, SO<sub>2</sub> and NO. However organic compounds that contain nitrogen, oxygen or halogen atoms may give a reduced response. The FID based system applicable for CEMS is hot- wet extractive, as a heated measurement.

## 12. Photo Ionisation Detector

In a photo ionisation detector (PID), a light in the UV region of the spectrum ionises organic molecules. The major components of the flue gas sample such as O<sub>2</sub>, CO, N<sub>2</sub>, CO<sub>2</sub> and water vapour are not ionised by the UV source. A typical PID analyser consists of a UV lamp and a pair of electrodes to measure the current proportional to the concentration.

Different molecules require different energies to photoionise, and the frequency of the light used in the PID may not ionise all of the organic species present in the sample.

PIDs are used in conjunction with gas chromatographs, or alone as portable analysers, where the technique can be used to produce extremely rugged and compact instruments. However, as the PID technique can be non-selective, analysers of this type are usually used as screening devices.

## 13. Gas Chromatography

Gas Chromatography (GC) is used to isolate the individual components of a mixture of organic and inorganic compounds from each other for subsequent identification and quantitative analysis. GC is based on the selective distribution of compounds between a stationary phase and a mobile phase (carrier gas). In the process, the moving gas phase passes over a stationary material that is selected to adsorb the organic molecules contained in the sample gas depending on polarity. The stationary phase can be either liquid or solid, and is contained in a long thin tube, commonly known as a 'column'. Columns are made from fused silica, glass or stainless steel.

In an ideal column operated under ideal conditions, each molecular species will exit the column at a different time depending upon molecular weight and

polarity. Selecting the appropriate column and operating it under the appropriate temperature with a suitable carrier gas flow rate will enable separation of the gas sample into its individual components. It should be noted that the technique is not truly continuous.

The compounds separated in a chromatographic column must be detected and quantified using appropriate detectors considering their sensitivity to the parameter being analyzed. Many types of detectors are available and the most commonly used for source monitoring applications being TCD, FID, PID, FPD, etc.

Analysers based on the principle of gas chromatography are complex and expensive. Although portable versions are available, they are not often used for the continuous measurement of organic compounds in emissions to atmosphere from LCPs and waste. Gas Chromatography techniques have been most popular technique in the Petroleum Refining/Petrochem industry for process measurements.

#### **14. Zirconium Oxide (ZrO<sub>2</sub>) Analyzer for Oxygen measurement**

Analysers using ZrO<sub>2</sub> for the measurement of oxygen concentration in flue gases can either be in-situ, i.e., the measurement cell is in the stack; extractive on-stack, i.e., the cell is mounted on the stack with a sampling probe protruding into the flue gas; or extractive with the cell mounted in an analyser some distance from the stack.

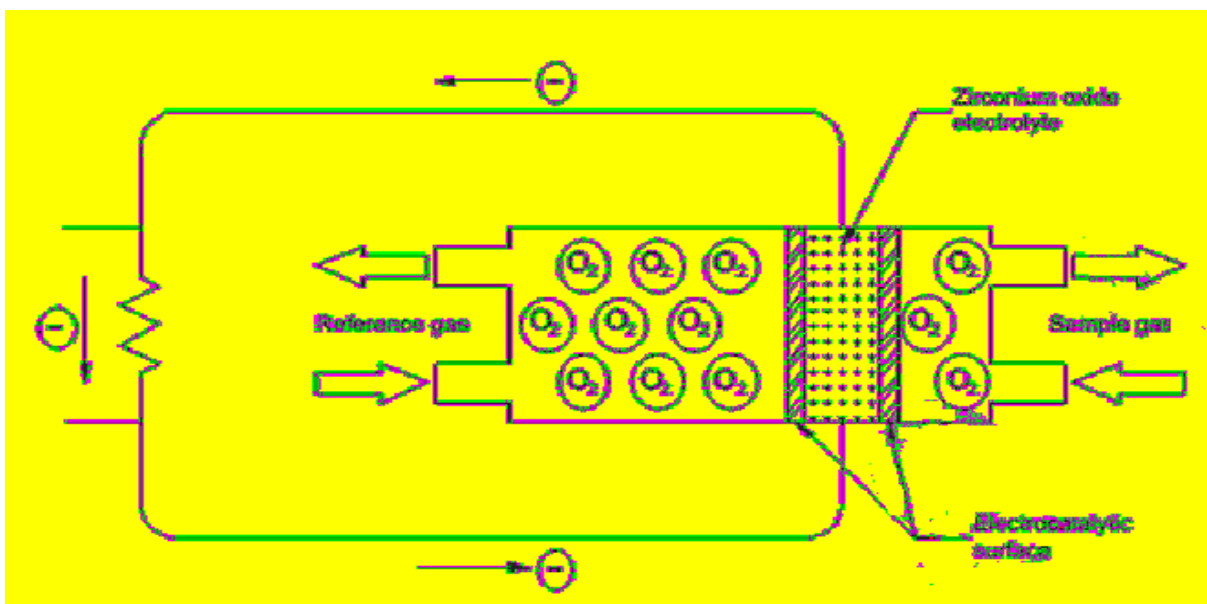
In this method ceramic material, Zirconium Oxide (ZrO<sub>2</sub>) coated with a thin layer of platinum, acts as an electrolyte to allow the transfer of oxygen from one side of the cell to the other. In the cell the oxygen concentration in the reference side is maintained at 21%. When the sample side of the cell is exposed to flue gases, the oxygen concentration in the sample side will be less than in the reference side. When ZrO<sub>2</sub> is heated to around 600°C, oxygen ions can migrate through the material, releasing electrons in the process. This results in the generation of an electromotive force, which is proportional to the difference in oxygen concentration between the two sides of the cell. If the reference oxygen concentration is known, the sample concentration can be calculated. The main characteristics of these analysers are:

- Very accurate and reliable measurement of O<sub>2</sub>;



- A fast response time (for in-situ measurement) makes it ideal for process control applications;
- It is a well-understood technology with examples at most boiler plants (for combustion control);
- It has a low capital cost and low maintenance;
- The measurement is on a wet basis. The level of water vapour must be known to calculate the concentration on a dry basis.

It should be noted that the electrical output of the  $ZrO_2$  cell is zero when both sides of the cell contain ambient air. The output of the cell increases as the oxygen content in the sample side of the cell is reduced. Thus it is normal practice to 'zero'  $ZrO_2$  analysers at the 'air point', i.e, 21% oxygen.



### 15. Paramagnetic Analysers for Oxygen measurement

These extractive type analysers make use of the paramagnetic properties of oxygen for the measurement of concentration. Oxygen has a relatively strong permanent magnetic moment, which can be used to influence flow patterns of sample gas within an analyser.

The general characteristics of the extractive paramagnetic analysers are:

- Accurate and reliable measurement;
- Measure on a dry basis as part of an extractive system, therefore providing correct reference values for other extractive systems;
- Can be installed in the same sampling train as other analysers making use of common components, e.g. coolers, filters etc. This also ensures

that sample contamination by air in-leakage to the sampling system is taken into account; and

- Usually situated adjacent to other analysers, so can be part of an integrated monitoring package.

The types of paramagnetic analysers available are:

### **15.1 Paramagnetic Thermo-magnetic (Magnetic Wind) Analysers for Oxygen measurement**

This method uses the temperature dependence of para-magnetism to generate a magnetically induced gas flow (magnetic wind), which is then measured. The sample gas to be analysed flows through a two-chamber system, consisting of sample and reference chambers. The two chambers hold temperature-dependent resistors that form part of a wheat stone bridge having thermodynamically identical conditions. The sample chamber is located in the field of a permanent magnet, while the reference chamber is not.

The bridge is connected to a constant current source. When oxygen-free gas flows through both chambers, the thermodynamic conditions in both chambers remain identical. If the gas in the sample chamber contains O<sub>2</sub>, an enhanced circulatory flow proportional to O<sub>2</sub> content is established in the sample chamber. This disturbs the temperature dependent balance of the bridge circuit creating a DC signal proportional to O<sub>2</sub> content of the sample gas.

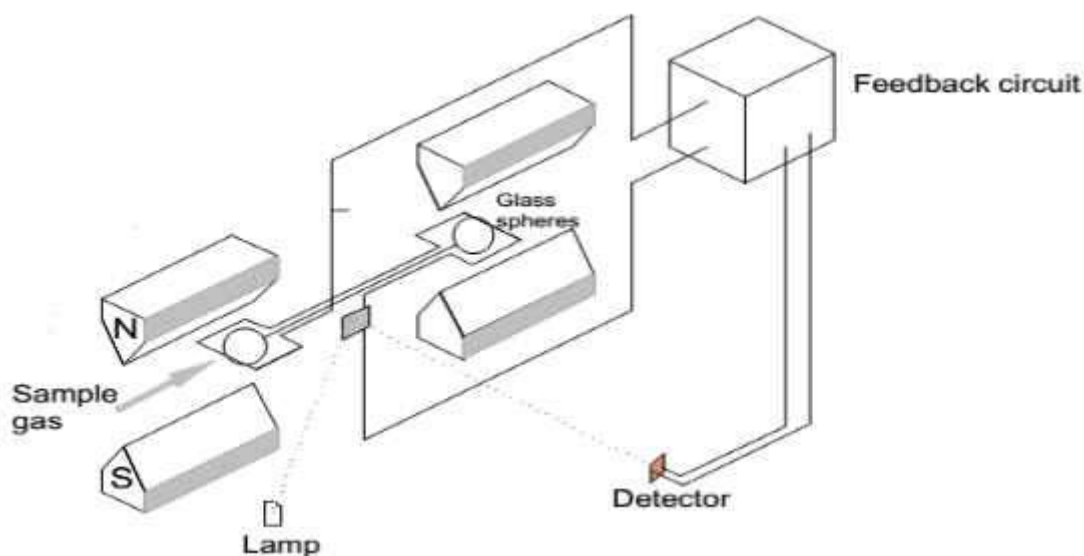
These analysers have a low maintenance requirement and are generally cheaper than other types of paramagnetic analysers. Because of the dependence of the principle on the thermal conductivity and specific heat of the sample gas, the composition of the background gas must be taken into account during calibration. The response time is also relatively slow.

### **15.2 Paramagnetic Automatic Null-Balance Analysers**

The oxygen molecules in a flowing gas sample will establish a partial pressure gradient in a magnetic field. This gradient can be used to exert a force on a small dumbbell shaped body located within the field. The torque on the dumbbell causes a displacement that is detected by a mirror and photocell assembly, which measures its angular position. Compensation current

produced as a function of this position results in an electromagnetic torque counter acting the measurement torque and tries to restore the dumbbell to its original position. This compensation current is proportional to the O<sub>2</sub> content of the sample gas.

This measurement principle can achieve high sensitivity and accuracy. Analysers of this type have become a standard for flue gas analysis and are also type approved for emission monitoring.



**Figure 5.2.d: Magnetic Null-Balance Analysis**

## 16. Electrochemical Fuel Cells for Oxygen Measurement

In recent years a wide range of portable flue gas analysers based on electrochemical fuel cell technology are available. In certain multi-component analyser applications, O<sub>2</sub> measurement is made using these cells. A typical cell used for the measurement would be of the metal air battery type comprising an anode, electrolyte and an air cathode.

Reaction takes place at the anode and cathode. During reaction, current is generated which is proportional to the oxygen content of the sample gas. The cross sensitivities of this cell are minimal and the use of gas filters, as used for CO or SO<sub>2</sub> measurement with electrochemical cells, is not normally required. Additionally, the problem of overloading (where the concentration is well above the measurement range) that causes problems for other sensors is not a problem for the O<sub>2</sub> cell due to the nature of the combustion process, as O<sub>2</sub> concentration in excess of 21 % are not possible.

Recent advances have led to O<sub>2</sub> cells designed for continuous use that have been incorporated into the continuous analysers discussed above. Measurement of O<sub>2</sub> would appear to be the most reliable and accurate measurement that can be made with flue gas analyser using fuel cell technology. This is approved technique with TUV/MCERT for O<sub>2</sub> measurement for normalization of CEMS measurement as it does not monitor pollutant but O<sub>2</sub> as a diluant for normalization.

## 6.0 FLUE GAS FLOW / VELOCITY MONITORING TECHNIQUES

Most commercially available flue gas flow monitors operate using one of the five principles for measuring velocity and volumetric flow: ultrasonic pulse detection, differential pressure, thermal detection (convective cooling), audible acoustic detection and optical scintillation. The five varieties of flow monitors are stack or duct mounted and operate as a component (including a microcomputer, pressure transmitters, and temperature transmitters) of a system. Other types of flow monitoring systems are available:

### 6.1 Ultrasonic Flow Monitors

The volumetric flow rate of stack gas is measured by transmitting ultrasonic pulses across the stack in both directions. Ultrasonic flow monitors are also available in probe design with the instrument being installed on one side of the stack only, while having a shorter measurement length to cross stack instruments; these instruments have the advantage of not needing mounting and platforms at two different heights on the stack.

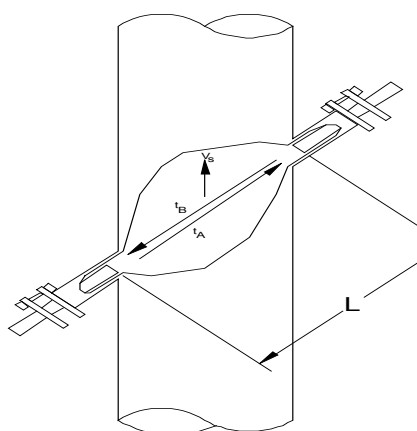


Figure 6.1: Ultrasonic Flow Monitor

The tone pulses are accelerated or retarded due to the gas velocity in the stack. The time required for traversing the distance of the stack with and against the flow is a function of the sound velocity and the effluent velocity. Stack flow can be calculated based on the difference in the time required to traverse the stack in both directions. The ultrasonic pulses must traverse the stack or duct at a minimum angle of 10 degrees; however, traverses between angles of 40 and 70 degrees tend to provide the best results, as long as the traverse path length is not so long that the ultrasonic pulses become difficult to detect.

## **6.2 Differential Pressure Flow Monitors**

The S-type Pitot tube is designed as per the design of Stausscheibe or reverse type Pitot. The probe is constructed of two in-line tubes. The sampling point of the probe consists of two opposing open faces perpendicular to the traverse axis. A side view of the probe resembles two stacked tubes with the ends tapered away from one another and the openings planed parallel to the horizontal axis. The Fechheimer Pitot probe consists of flow sensors mounted on two multipoint averaging manifolds. The probe design consists of two manifolds (tubes) welded together with a truss plate. The truss maintains a distance between the manifolds in a plane perpendicular to the flow and the stack wall. One manifold averages multiple points of impact pressure, and the other averages multiple points of wake pressure. The impact and wake pressure averages are registered by the flow transmitter. This technology is used in numerous gas flow monitoring applications other than flue gas. Other types of noncontact flow monitors are also available in market.

## **6.3 Thermal Flow Monitors**

Thermal flow monitors measure the electric power required to maintain a constant temperature of approximately 24 to 38°C above the exhaust gas temperature in a flow sensor. The monitors are available for both single-point and multipoint analysis, and non-sensing components of the systems can be constructed from various corrosion-resistant metals.

## **6.4 Infrared Correlation**

Light based noncontact devices are also suitable for velocity measurement in flue gas.

**Table 3: Flow Meter Selection Matrix**

Parameters	Types of Flow (Velocity meter)				
	Impact Differential Pressure (Pitot Tube)		Thermal anemometer <sup>1</sup>	Bi-directional ultrasonic	Infrared correlation
Irregular Flow	Single point	Multipoint			
Wet stack	×	✓	✓	✓	✓
Max Flue Gas Temperature	Up to 1200°C	Up to 12000°C	200 – 300 °C (model specific)	450° C - 850°C (model specific)	Up to 1000 °C
Low speed	×	3 m/s	×	✓	✓
High Speed	×	35 - 50 m/s	✓	✓	✓
Calibration	Factory / Site	Factory / Site	Factory / Site <sup>3</sup>	Factory / Site	Factory / Site

1. Pressure Transmitter (PT) and Temperature Transmitter (TT) are not installed with a Thermal Anemometer as it directly measures Mass Flow which is usually the required quantity. However, PT and TT are necessary to calculate density and convert mass flow calculated by the anemometer to volumetric flow.

2. Can be accounted for by using multiple probes/sensors

3. Calibration depends on physical properties (thermal conductivity, specific heat) of the gas whose flow is to be measured. Thus variation in properties of stack gas from factory calibrated values can result in inaccurate measurement.

## 7.0 ASSESSMENT OF MONITORING TECHNOLOGIES

The suitability of the technologies/instrumentation for monitoring the stack emission quality in different matrices, considering the limitations of the technologies, the varying Indian environmental conditions were assessed. Issues related to the utilities and maintenance required, operating costs, etc., wherever available were also considered. The parameters for online monitoring for various sectors of industries are specified at **Annexure-I**. The comparative chart depicting working limitations, including, specifications of above said technologies for measurement of particulate matter and gaseous pollutant is depicted in **Table-4** and **5**.

**Table-6** depicts the composition analysis of available technologies for measurement of particulate matter and gaseous pollutants.

The prevailing industry specific emission standard and stacks in industries where CEMS are to be installed along with the CEMS options available for monitoring are presented in **Table-7**.

**Table 4: PM CEMS Technology Applications and Limitations**

Measurement Technology	Technology	Stack Diameter (m)	Concentration (mg/m <sup>3</sup> )		Filter Type	Self-checks		Dry	Humid	Wet	Type of dust		Velocity Dependant	
			Min	Max		Sensor contamination check	Zero & span				Same	Changing		
Probe Electrification	Charge Induction (AC)	ElectroDynamic	0.2-4	0.05	1000	Bag,Cyclone, Drier,Scrubber <sup>(5)</sup> , None <sup>(6)</sup>	✓ (7)	✓ (7)	✓	✓	x	✓	x	No <sup>(8)</sup>
	Contact Charge Transfer (DC)	DC Triboelectric	0.2-2	1	1000	Bag,Cyclone, None <sup>(6)</sup> ,ESP <sup>(10)</sup>	x	x	✓	x	x	✓	x	Yes
	Combination AC & DC	Combination AC & DC/ Tribo	0.2-2	1	1000	Bag,Cyclone, None <sup>(6)</sup>	x	✓ (7)	✓	x	x	✓	x	Yes
Transmissometry	Ratiometric Opacity	Dynamic Opacity	1-15 <sup>(1)(2)(7)</sup>	10 <sup>(3)</sup>	1000	Bag <sup>(4)</sup> ,Cyclone,EP,None	✓	✓ (7)	✓	x	x	✓	x	No
		Dyanamic Detection Principle	1-10 <sup>(1)(2)</sup>	20	1000	Bag <sup>(4)</sup> ,Cyclone,EP,None	✓	x	✓	x	x	✓	x	No
	Opacity	Opacity	2-10 <sup>(1)(2)</sup>	30 <sup>(4)</sup>	1000	EP,None	✓	✓	✓	x	x	✓	x	No
		Non Compliance Transmittance	2-10 <sup>(1)(2)</sup>	30 <sup>(4)</sup>	1000	EP,None	x	x	✓	x	x	✓	x	No
Scattered Light	Light Scattering	Forward Scatter	1-3 <sup>(2)</sup>	0.1	200	Bag,Cyclone,EP,None	✓	✓	✓	✓	✓ <sup>(9)</sup>	✓	X	No
	Light Scattering	Backward / Side Scatter	1-4 <sup>(1)(2)</sup>	25	500	Bag <sup>(4)</sup> ,Cyclone,EP,None	✓	✓	✓	x	x	✓	X	No

- Notes: (1) Concentration dependent (5) No water droplets (9) Using extractive wet stack monitoring system  
 (2) Representative Flow dependent (6) No filter-not advised (10) Advised with Faraday Shield/edge  
 (3) Application specific (7) Model specific  
 (4) Stack diameter dependent (8) Varying velocity range 8-20 m/sec

There are a number of Opacity instruments with TUV approvals for particulate measurement. The certification ranges for opacity monitor are dependent on path length. The measuring range of 0-1000mg/m<sup>3</sup> is suggested for a path length of 0.5 to 15 mt. However, low range i.e. 0 to 10 mg/Nm<sup>3</sup> can be monitored in stack with minimum 5m path length.

This information is meant as a guide and reflects the majority of technology limitations of instruments currently commercially available, however specific models may offer decreased or increased capability the actual stack conditions will dictate instrument suitability

**Table 5: Overview on Technical Selection & Suitability for Gaseous CEMS Technology**

Technique	Type	Parameter(S) Measured	Comments& Limitations
Chimiluminescence	Dilution Extractive	NO, NO <sub>x</sub> , NO <sub>2</sub> *  (Technology not suitable for other emission parameters like SO <sub>2</sub> , CO <sub>2</sub> , CO etc.)	<ul style="list-style-type: none"> <li>- Indirect method for NO<sub>2</sub> measurement. NO and NO<sub>x</sub> (NO + converted other Nitrogen oxides) measured in two cycles *NO<sub>2</sub> estimated as calculated (NO<sub>x</sub> - NO).</li> <li>- Used for stack emission measurement with additional accessories like dilution probe, sample transfer line, dilution air, pumps and ozone generator. Advantageous in industries where heating probe and transfer lines are avoided. i.e. refinery, Petro chemicals.</li> <li>- Requires efficient purification system for dilution air.</li> <li>- Quench Effect of CO<sub>2</sub>/water vapour, etc. maintaining Low Pressure becomes important. Can be eliminated by increased O<sub>3</sub> flow and requires continuous efforts and mechanism for it.</li> </ul>
UV Fluorescence	Dilution Extractive	SO <sub>2</sub> , H <sub>2</sub> S*, TRS* (Total Reduced Sulphur)  (Technology not suitable for other emission parameters like NO <sub>x</sub> , CO <sub>2</sub> , CO etc.)	<ul style="list-style-type: none"> <li>* H<sub>2</sub>S, TRS Cannot be measured simultaneously with SO<sub>2</sub>.</li> <li>- Direct method for SO<sub>2</sub></li> <li>-Used for stack emission measurement with additional accessories like dilution probe, sample transfer line, dilution air, pumps etc.</li> <li>- Advantageous in industries where heating probe and transfer lines are avoided. i.e. refinery, Petro chemicals.</li> <li>- Quench Effect of CO<sub>2</sub>/Moisture, etc. maintaining Low Pressure becomes important.</li> </ul>
NDIR (IR GFC, CFM-NDIR and NDIR)  Basic principle follows IR (Infra-Red) spectroscopy GFC or CFM are applied techniques only.	In-Situ &Extractive	CO, CO <sub>2</sub> , SO <sub>2</sub> , NO <sub>x</sub> , CH <sub>4</sub> , HCl, H <sub>2</sub> O etc.	<ul style="list-style-type: none"> <li>- A direct method for continuous monitoring of multiple gases without any dilution.</li> <li>- Suitable for high concentrations</li> </ul> <p>The IR technology has limitation that it can measure only NO. For measurement of NO<sub>x</sub> a convertor to reduce other oxides of nitrogen to NO is required.</p>



Technique	Type	Parameter(S) Measured	Comments& Limitations
			<ul style="list-style-type: none"> <li>- In-situ NDIR analyser uses Internal optical filters (GFC) for removal of interferences of other gases.</li> <li>- In extractive NDIR Issue of dissolution and stripping of CO<sub>2</sub>/ SO<sub>2</sub> can underestimate the measured concentration, in case calibration does not follow the same system of sample transfer. Maintaining Low Pressure becomes important.</li> </ul>
NDUV	In-situ and Extractive	SO <sub>2</sub> , NO, NO <sub>2</sub> , NH <sub>3</sub> , Cl <sub>2</sub> , CS <sub>2</sub> , etc.	<ul style="list-style-type: none"> <li>- A direct method for continuous monitoring of multiple gases suitable upto 2-3 gas measurements without any dilutions.</li> <li>- Popular in harsh applications in wide spectrum of Industrial process.</li> <li>- For NH<sub>3</sub> Hot wet extractive and Dilution system are suitable.</li> </ul>
Fourier Transformed Infra-Red (FTIR)	Extractive	CO, CO <sub>2</sub> , SO <sub>2</sub> , NO, NO <sub>2</sub> , N <sub>2</sub> O, NH <sub>3</sub> , HF, HCl, CH <sub>4</sub> , Moisture (H <sub>2</sub> O), VOC, etc.	<ul style="list-style-type: none"> <li>- A direct method for continuous monitoring of multiple gases up to 5 - 12 gases using high end spectroscopy technique.</li> <li>- H<sub>2</sub>O measurement in FTIR spectroscopy is necessary for moisture correction.</li> <li>- Uses Hot Wet Preferred technique for complex stack gas matrix like waste Incinerators or waste to power plants, alternative fuels fired Cement Plants, with high moisture and soluble gases.</li> <li>- High Price, however, with multi complex gases and integrated modules like VOC, O<sub>2</sub> makes it cost effective over all solution.</li> <li>- Ideal for very low concentration of NH<sub>3</sub>, HF, HCl</li> </ul>
Differential Optical Absorption Spectroscopy (DOAS)	Open Path cross duct	NO, NO <sub>2</sub> , SO <sub>2</sub> NH <sub>3</sub> , Hg with DOAS- UV  CO, CO <sub>2</sub> , HCl, CH <sub>4</sub> , VOC, H <sub>2</sub> O, HF etc. DOAS-IR	<ul style="list-style-type: none"> <li>- Suitable of monitoring of multiple gases.</li> <li>- Suitable for trace measurements</li> <li>- Indirect measurement technique.</li> <li>- Stable, comparatively low calibration requirements.</li> <li>- Measurement of Hg requires its conversion to elemental form for UV DOAS for which the system is required to be equipped with heated gas probe, heated sample transfer line and heated measurement cell. Removal of SO<sub>2</sub></li> </ul>

Technique	Type	Parameter(S) Measured	Comments& Limitations
			interference is essential in case of UV measurement of mercury.
Flame Ionization	Extractive	Total HC (VOC), TOC, VOC	-Very selective technique for Total HC/ TOC/VOC. Requires H <sub>2</sub> gas for flame and carrier Gas. -Integrated with extractive Hot wet / cold dry techniques.
Tunable Diode Laser	Path	CO, CO <sub>2</sub> , NH <sub>3</sub> , Moisture (H <sub>2</sub> O), HCl, HF, CH <sub>4</sub> , O <sub>2</sub> & H <sub>2</sub> S etc.	Usually selective laser techniques are not cost effective for single component. - Limitation in measuring SO <sub>2</sub> and NO <sub>x</sub> due to lack of selectivity. - Measurement of H <sub>2</sub> O for moisture correction is necessary.
Electrochemical	Extractive	O <sub>2</sub> , CO/CO <sub>2</sub> , etc.	-Not accepted for online stack emission monitoring in Industries. -Electrochemical sensor is a consumable sensor, requires regular replacement and gets influenced by process stack background gas matrix. - Also gets influenced by moisture, dust, temperature, etc.
Zirconium Oxide / O <sub>2</sub> Cell	In-situ& Extractive	O <sub>2</sub>	Widely used for boiler/ Stack O <sub>2</sub> correction/ Normalisation.
Paramagnetic	Extractive	O <sub>2</sub>	Stable and accurate.
Atomic fluorescence / absorption	Hot Extractive	Hg	Total Gaseous Mercury. Always Hot extractive system A) Pre-treatment options Gold Amalgamation Followed by chemical/ thermal desorption (B) Adsorption in other media followed by Thermal desorption and measured using either atomic absorption/ atomic fluorescence / UV DOAS / UV measurement (after removal of SO <sub>2</sub> interference/ Zeeman correction) are acceptable. For atomic absorption, Mercury lamp (NOT UV LAMP) should be used as energy source

**Notes:**

- (a) **CEM Systems must have flue gas flow measurement device installed where load based standards are stipulated.**
- (b) **Direct measurement systems for O<sub>2</sub> or CO<sub>2</sub> as prescribed in respective standards shall be installed.**
- (c) **For hazardous waste incinerator and Biomedical waste incinerator O<sub>2</sub>, CO<sub>2</sub>, and CO are important parameters to be monitored online.**

**Table 6: Comparative analysis of technologies available for measurement of Gaseous pollutant**

Type of Technology	Extractive NDIR/ IR GFC/ IR CFM and NDUV	In-situ NDIR & IR GFC	DOAS (Differential Optical Absorption Spectroscopy)	DILUTION EXTRACTIVE	TDLS	FTIR
How it works	Gas is extracted from stack, transported to sampling system, gas is conditioned and analyzed with a multi-gas NDIR analyzer	Optical head is directly mounted on the stack, by measuring light absorbed the analyzer measures the gases	Emitter, Receiver mounted across the stack. Xenon lamp emits light, amount of light absorbed at receiver sent to analyser through Optic Fibre cable	Very small amount of gas Extracted (Diluted) from stack to the analyser.	Derivative Laser spectroscopy which scan the spectral absorption peak and measure the derivative peak respective to be measurable parameters. It may be path insitu, close coupled, extractive system.	This methodology is strictly hot wet extractive. FTIR is a special type of spectroscopy in which spectrum is further analysed through an interferometric algorithm.
Advantage	<ul style="list-style-type: none"> <li>-Suitable for high level of concentration.</li> <li>-Low failure rates as analyzer is not exposed to outside conditions,</li> <li>-easy to maintain when analyser is at ground,</li> <li>-addition of new analyzer at a later date is easy.</li> <li>-usually requires more calibration checks</li> <li>-widely used technique in harsh process applications</li> <li>-useful with close coupled technique</li> </ul>	<ul style="list-style-type: none"> <li>-Suitable for high levels of concentrations.</li> <li>- Proper purging system is mandatory</li> <li>-Difficult to maintain at height</li> <li>-Addition is very simple, just new parameter monitoring arrangement required.</li> <li>-Usually requires more calibration checks as the system works in harsh/rough condition.</li> </ul>	<ul style="list-style-type: none"> <li>-can measure low and high concentrations</li> <li>-No sampling requirement, except for mercury.</li> <li>-Low maintenance as there is no moving part.</li> <li>-Works well in harsh conditions like High moisture.</li> <li>-Provide High Data capture rate.</li> <li>-Single analyser can be used for multiparameter monitoring.</li> <li>-Requires less calibration because of low drift.</li> </ul>	<ul style="list-style-type: none"> <li>-can measure low and high concentrations</li> <li>-sample is easy to dry</li> <li>-Ambient analysers technologies deployed.</li> <li>-Dilution ratio can be varied to reduce the interferences.</li> </ul>	<ul style="list-style-type: none"> <li>-Multi-parameter monitoring is possible</li> <li>- Tuneable diode laser system is sensitive and can work in wet condition also.</li> <li>- Advantageous for Ammonia, HF, HCl monitoring alongwith H<sub>2</sub>O</li> </ul>	<ul style="list-style-type: none"> <li>-It is multi parameter monitoring technique suitable for most parameters except O<sub>2</sub>.</li> <li>-suitable for most of the industries except for those such as petrochemical, refineries etc. where possibility of explosion and safety is a concern.</li> </ul>

Type of Technology	Extractive NDIR/ IR GFC/ IR CFM and NDUV	In-situ NDIR & IR GFC	DOAS (Differential Optical Absorption Spectroscopy)	DILUTION EXTRACTIVE	TDLs	FTIR
Limitations	<ul style="list-style-type: none"> <li>-Installation takes more time</li> <li>-Measures NO and not NO<sub>2</sub></li> <li>-AC Rooms</li> </ul>	<ul style="list-style-type: none"> <li>-The complete analyser system along with calibration equipment needs to be installed at stack and would require adequate arrangement for maintenance and calibration</li> <li>-Cannot measure low levels,</li> <li>-No expansion possible beyond the capacity of one device (Number of filters in the system),</li> <li>-consumes comparatively more calibration gas,</li> <li>-stack gas may corrode the probe and optics,</li> <li>-water interference is observed</li> <li>-Generally Measures NO not NO<sub>2</sub>.</li> <li>-Expected life is less in comparison as system is exposed to harsh conditions</li> </ul>	<ul style="list-style-type: none"> <li>- High Initial cost</li> <li>- Requires converter for Hg for which only extractive system should be used.</li> <li>-Calibration frequency requirement is low but needs a separate calibration bench.</li> <li>-AC Rooms</li> </ul>	<ul style="list-style-type: none"> <li>-More time required for calibration as the calibration gases will pass the complete system from analyser till probe.</li> <li>- Dilution ratio</li> <li>- Operation of critical orifice</li> <li>-Maintaining dilution gas quality is challenging.</li> <li>-Individual analyser required for each parameter.</li> <li>-AC Rooms</li> </ul>	<ul style="list-style-type: none"> <li>- High cost</li> <li>-Cannot measure SO<sub>2</sub> and NO<sub>x</sub></li> <li>. AC Rooms</li> </ul>	<ul style="list-style-type: none"> <li>- High cost</li> <li>-AC Rooms</li> </ul>
List of gases that can be measured	CO, CO <sub>2</sub> , NO, SO <sub>2</sub> , CH <sub>4</sub> , etc, Moisture (number of gases limited to number of filters fitted in analyzer.	CO, CO <sub>2</sub> , NO, SO <sub>2</sub> , CH <sub>4</sub> , HCl, Moisture (Note IR based system does not measure NO <sub>2</sub> only calculates)	UV analyser- SO <sub>2</sub> , NO, NO <sub>2</sub> Phenol, Cl <sub>2</sub> , Formaldehyde, Benzene, Hg	SO <sub>2</sub> , NO, NO <sub>2</sub> (NO <sub>x</sub> ), CO	CO,CO <sub>2</sub> ,NH <sub>3</sub> ,H <sub>2</sub> O, HCL, HF,O <sub>2</sub> and H <sub>2</sub> S	SO <sub>2</sub> ,NO,NO <sub>2</sub> ,CO, CO <sub>2</sub> , NH <sub>3</sub> ,H <sub>2</sub> O, HCL, HF and O <sub>2</sub>

Type of Technology	Extractive NDIR/ IR GFC/ IR CFM and NDUV	In-situ NDIR & IR GFC	DOAS (Differential Optical Absorption Spectroscopy)	DILUTION EXTRACTIVE	TDLs	FTIR
	(Note IR based system does not measure NO <sub>2</sub> , only calculates) NO <sub>2</sub> monitoring possible when convertor is used	NO <sub>2</sub> monitoring possible when convertor is used	IR analyser- CO, CO <sub>2</sub> , HCL, HF, H <sub>2</sub> O, SO <sub>3</sub> , NH <sub>3</sub> , N <sub>2</sub> O, CH <sub>4</sub>			
Effect of dust	Higher effect but can be controlled at sampling point	Higher effect but can be controlled with inbuilt mechanism	Low	Low Dilution probe clogging to be tackled	-	-
Effect of temperature	-	Limited Temperature Works upto 500 degC	-	Less than 400°C ( Dilution probe with Quartz Orifice suitable upto 800°C	-	-
Effect of pressure	-	Limited Pressure	-	-	-	-
Effect of moisture	low as removed or Hot Wet	Very much affected, need to measure H <sub>2</sub> O online Cannot work below dew point (below 95 degC)	If moisture over 40%, instrument gets effected	Gets affected at high moisture conditions. Can be controlled through properly dried dilution air	-	-
Requirement						
Adjustment during Zero and Span Check	Not allowed Zero and span check data needs to be transferred at real time	Not allowed Zero and span check data needs to be transferred at real time	- Zero and span check data needs to be transferred at real time	Not allowed Zero and span check data needs to be transferred at real time	Not allowed Zero and span check data needs to be transferred at real time	Not allowed Zero and span check data needs to be transferred at real time
Calibration & Check frequency	-Daily ZERO Check -Fortnightly ZERO and SPAN Calibration -Six Monthly Linearity Check	- Daily ZERO Check -Fortnightly ZERO and SPAN Calibration -Six Monthly Linearity Check --After Major maintenance	-Diagnostic check in every cycle -Six monthly ZERO and SPAN Calibration -Yearly Linearity Check ---After Major maintenance multipoint	-Daily ZERO Check -Fortnightly ZERO and SPAN Calibration -Six Monthly Linearity Check --After Major maintenance multipoint	-Diagnostic check in every cycle -Six monthly ZERO and SPAN Calibration -Yearly Linearity Check	-Diagnostic check in every cycle -Six monthly ZERO and SPAN Calibration -Yearly Linearity Check

Type of Technology	Extractive NDIR/ IR GFC/ IR CFM and NDUV	In-situ NDIR & IR GFC	DOAS (Differential Optical Absorption Spectroscopy)	DILUTION EXTRACTIVE	TDLs	FTIR
	--After Major maintenance multipoint Zero and SPAN Calibration	multipoint Zero and SPAN Calibration	Zero and SPAN Calibration	Zero and SPAN Calibration	---After Major maintenance multipoint Zero and SPAN Calibration	---After Major maintenance multipoint Zero and SPAN Calibration
Approvals for analyzers	TUV / MCERT approvals and conforms to US EPA / Indian certification	MCERT/TUV however, US EPA does not recommend In-situ system. / Indian certification	TUV, MCERTS and meets USEPA calibration protocols / Indian certification	Only conforms to USEPA / Indian certification	EU-TUV/MCERT / Indian certification	EU-TUV/MCERT / Indian certification
Multiplexing possible Y/N	NOT allowed as of now	NOT allowed as of now	NOT allowed as of now	NOT allowed as of now	NOT allowed as of now	NOT allowed as of now
Remote calibration Y/N	YES	YES	YES Possible with installation of calibration bench at site	Yes Dilution mechanism has to be compatible	Yes	Yes
Manual Online calibration Y/N	YES	YES	YES	YES	Yes	Yes

Note: Guidelines for calibration are in general. Wherever there are specific issues or difficulties related to method of remote calibration in different technologies, same should be brought into the notice of CPCB & SPCBs/PCCs.

**Table 7: Parameter specific Emission Standards for industries need to install CEMS**

S. No.	Industries/ Facilities	Units of Operation	Parameters Prescribed	Emission Limits			Options available for CEMS
1	Aluminum	Raw Material Handling	PM	PM 150 mg/NM <sup>3</sup>			PM CEMS as per matrix Table no:4
		Calcination	PM, CO	PM 250 mg/NM <sup>3</sup> and CO 1% (Max)			PM CEMS as per matrix Table no:4
		Green Anode Shop	PM	PM 150 mg/NM <sup>3</sup>			PM CEMS as per matrix Table no:4
		Anode Bake Oven	PM	PM 50 mg/NM <sup>3</sup>			PM CEMS as per matrix Table no:4
			Total fluoride (F)	0.3 Kg/MT of Al			Extractive FTIR In-situ IR-DOAS,TDLS
		Pot room	PM	PM 150 mg/NM <sup>3</sup>			PM CEMS as per matrix Table no:4
			Total Fluoride (as F)	Vertical Stud Soderberg (VSS)	4.7 Kg/MT	Extractive FTIR	
				Horizontal Stud Soderberg (HSS)	6.0 Kg/MT	In-situ IR-DOAS,TDLS	
				Prebacked Side Worked (PBSW)	2.5 Kg/MT	Extractive FTIR	
Prebacked Centre Worked PBCW)	1.0 Kg/MT	In-situ IR-DOAS,TDLS					
2.	Cement Plant (without co processing), Standalone Clinker Grinding Plant or, Blending Plant	Rotary Kiln – without co processing	Parameter	Date of Commissioning	Location	Emission Limits mg/Nm <sup>3</sup>	CEMS Options
			PM	on or before or after the date of notification (25.8.2014)	anywhere in the country	30 mg/Nm <sup>3</sup>	PM CEMS as per matrix Table no:4
			SO <sub>2</sub>	Irrespective of date of commissioning	Anywhere in the country	100, 700 and 1000 mg/Nm <sup>3</sup> when pyritic sulphur in the limestone is less than 0.25%, 0.25 to 0.5% and more than 0.5% respectively	In-situ NDIR / IR GFC/UV-DOAS
							Extractive NDUV / FTIR / NDIR / IR-GFC / IR-CFM
						Dilution extractive	

S. No.	Industries/ Facilities	Units of Operation	Parameters Prescribed	Emission Limits			Options available for CEMS
			NOx	After the date of notification (25.8.2014)	Anywhere in the country	600 mg/Nm <sup>3</sup>	In-situ UV-DOAS, NDIR, IR GFC
				Extractive – NDUV / FTIR, NDIR GFC, NDIR-CFM			
			Before the date of notification (25.8.2014)	Anywhere in the country	(a) 800 for rotary kiln with In Line Calciner (ILC) technology. (b) 1000 for rotary kiln using mixed stream of ILC, Separate Line Calciner (SLC) and suspension preheater technology or SLC technology alone or without Calciner.	Dilution Extractive - Chemiluminescence	
						In-situ UV-DOAS, NDIR, IR GFC	
						Extractive – NDUV / FTIR, IR GFC, NDIR-CFM	
						Dilution Extractive - Chemiluminescence	
Cement Plant with co-processing of wastes	Rotary Kiln – with co-processing of Wastes	Parameters	Date of Commissioning	Location	Emission Limits mg/Nm <sup>3</sup>	CEMS Options	
		PM	on or after the date of notification (25.8.2014)	Anywhere in the country	30 mg/NM <sup>3</sup>	PM CEMS as per matrix Table no:4	
		SO <sub>2</sub>	before the date of notification (25.8.2014)	critically polluted area or urban centres with population above 1.0 lakh or within its periphery of 5.0 kilometer radius	100, 700 and 1000 mg/Nm <sup>3</sup> when pyritic sulphur in the limestone is less than 0.25%, 0.25 to 0.5% and more than 0.5% respectively	In-situ NDIR / IR GFC/UV-DOAS	
					Extractive NDUV / FTIR / NDIR / IR-GFC / IR-CFM		
					Dilution extractive UV-Fluorescence		



S. No.	Industries/ Facilities	Units of Operation	Parameters Prescribed	Emission Limits			Options available for CEMS
				After the date of notification (25.8.2014)	Anywhere in the country	600 mg/Nm <sup>3</sup>	
			NOx	After the date of notification (25.8.2014)	Anywhere in the country	600 mg/Nm <sup>3</sup>	In-situ UV-DOAS, NDIR, IR GFC Extractive – NDUV / FTIR, NDIR GFC, NDIR-CFM Dilution Extractive - chemiluminescence
			NOx	before the date of notification (25.8.2014)	anywhere in the country	(a) 800 mg/Nm <sup>3</sup> for rotary kiln with In Line Calciner (ILC) technology. (b) 1000 mg/Nm <sup>3</sup> for rotary kiln using mixed stream of ILC, Separate Line Calciner (SLC) and suspension preheater technology or SLC technology alone or without calciner.	In-situ UV-DOAS, NDIR, IR GFC Extractive – NDUV / FTIR, NDIR GFC, NDIR-CFM Dilution Extractive - chemiluminescence
			Parameters	Implementation Date	Location	Emission Limits	CEMS Options
			HCl (mg/NM <sup>3</sup> )	NA	Anywhere in the country	10 mg/Nm <sup>3</sup>	In-situ IR DOAS, TDLS, Hot Extractive FTIR
			HF (mg/NM <sup>3</sup> )	NA	Anywhere in the country	1 mg/Nm <sup>3</sup>	In-situ IR DOAS, TDLS, Hot Extractive FTIR
			TOC (mg/NM <sup>3</sup> )	NA	Anywhere in the country	10 mg/Nm <sup>3</sup>	Hot Ext. FID
			3	Distillery	Boiler Stack	PM	150 mg/NM <sup>3</sup>

S. No.	Industries/ Facilities	Units of Operation	Parameters Prescribed	Emission Limits		Options available for CEMS
4	ChlorAlkli	(Hyper tower) (HCl Plant)	Cl <sub>2</sub> , HCl	Cl <sub>2</sub> -15 mg/NM <sup>3</sup> HCL-35mg/NM <sup>3</sup>		IR DOAS, TDLS,
						Hot Extractive FTIR
5	Fertilizers	Phosphate	PM	PM-150 mg/NM <sup>3</sup>		PM CEMS as per matrix Table no:4
			Fluoride	Total Fluorides-25 mg/NM <sup>3</sup>		Extractive FTIR In-situ IR-DOAS, TDLS
		Urea (Old Plants) before 01/01/1982	PM	150 mg/NM <sup>3</sup>		
		Urea (New Plants) after 01/01/1982	PM	50 mg/NM <sup>3</sup>		
6	Integrated Iron & Steel Plants	Coke oven plant New Batteries at GF sites Rebuild Batteries Existing Batteries	PM	50 mg/NM <sup>3</sup>		PM CEMS as per matrix Table no:4
			SO <sub>2</sub>	800 mg/NM <sup>3</sup>		In-situ NDIR / IR GFC/UV-DOAS
						Extractive NDUV / FTIR / NDIR / IR-GFC / IR-CFM
						Dilution extractive UV-Fluorescence
		NO <sub>x</sub>	500 mg/NM <sup>3</sup>		In-situ UV-DOAS, NDIR, IR GFC	
		Extractive – NDUV / FTIR, NDIR GFC, NDIR-CFM				
		Dilution Extractive - chemiluminescence				
		Sintering Plant	PM	150 mg/NM <sup>3</sup>		PM CEMS as per matrix Table no:4
Blast Furnace		Existing Units	New Units (after 31 March 2012)			
	PM	50 mg/NM <sup>3</sup>	30 mg/NM <sup>3</sup>		PM CEMS as per matrix Table no:4	

S. No.	Industries/ Facilities	Units of Operation	Parameters Prescribed	Emission Limits		Options available for CEMS
			SO <sub>2</sub>	250 mg/NM <sup>3</sup>	200 mg/NM <sup>3</sup>	In-situ NDIR / IR GFC/UV-DOAS Extractive NDUV / FTIR / NDIR / IR-GFC / IR-CFM Dilution extractive UV-Fluorescence
			NO <sub>x</sub>	150 mg/NM <sup>3</sup>	150 mg/NM <sup>3</sup>	In-situ UV-DOAS, NDIR, IR GFC Extractive – NDUV / FTIR, NDIR GFC, NDIR-CFM Dilution Extractive - Chemiluminescence
			CO	1% (Max)	1% (Max)	NDIR Insitu Extractive FTIR
		Steel making shop-basic oxygen furnace	Parameters	Existing Units	New Units (after 31 march 2012)	
		Blowing/lancing operation	PM	300 mg/NM <sup>3</sup>	Should be with gas recovery	PM CEMS as per matrix Table no:4
		Normal operation	PM	150 mg/NM <sup>3</sup>	Should be with gas recovery	PM CEMS as per matrix Table no:4
		Dedusting of desulphurisation	PM	100 mg/NM <sup>3</sup>	50 mg/NM <sup>3</sup>	PM CEMS as per matrix Table no:4
		Rolling mill	PM	150 mg/NM <sup>3</sup>		PM CEMS as per matrix Table no:4
		Re-heating (reverberatory) furnaces	PM	Sensitive Areas 150 mg/NM <sup>3</sup>	Other Areas 250 mg/NM <sup>3</sup>	PM CEMS as per matrix Table no:4
		Arc furnaces	PM	150 mg/NM <sup>3</sup>		PM CEMS as per matrix Table no:4

S. No.	Industries/ Facilities	Units of Operation	Parameters Prescribed	Emission Limits		Options available for CEMS
		Induction Furnace	PM	150 mg/NM <sup>3</sup>		PM CEMS as per matrix Table no:4
		Cupola Foundry		< 3 MT / hr Melting capacity	> 3 MT / hr Melting capacity	
			PM	450 mg/NM <sup>3</sup>	150 mg/NM <sup>3</sup>	PM CEMS as per matrix Table no:4
			SO <sub>2</sub>	300 mg/NM <sup>3</sup> Corrected to 12 % CO <sub>2</sub>		In-situ NDIR / IR GFC/ UV-DOAS Extractive NDUV / FTIR / NDIR / IR-GFC / IR-CFM Dilution extractive UV- Fluorescence
				Capacity upto 40 Tonne / day	Capacity above 40 Tonne / day	
		Calcination plant/lime kiln / dolomite kiln	PM	500 mg/NM <sup>3</sup>	150 mg/NM <sup>3</sup>	PM CEMS as per matrix Table no:4
		Refractory unit	PM	150 mg/NM <sup>3</sup>		PM CEMS as per matrix Table no:4
	Sponge Iron Plants	Rotary Kiln	PM	100 mg/NM <sup>3</sup> (Coal based)		PM CEMS as per matrix Table no:4
				50 mg/NM <sup>3</sup> (Gas based)		PM CEMS as per matrix Table no:4
	7	Oil Refinery	Furnace boiler and captive power plant gas based		Before 2008	After 2008
PM				10 mg/NM <sup>3</sup>	5 mg/NM <sup>3</sup>	PM CEMS as pe matrix Table no:4
SO <sub>2</sub>				50 mg/NM <sup>3</sup>	50 mg/NM <sup>3</sup>	In-situ NDIR / IR GFC/ UV-DOAS Extractive NDUV / FTIR / NDIR / IR-GFC / IR-CFM Dilution extractive UV- Fluorescence

S. No.	Industries/ Facilities	Units of Operation	Parameters Prescribed	Emission Limits		Options available for CEMS
			NO <sub>x</sub>	350 mg/NM <sup>3</sup>	250 mg/NM <sup>3</sup>	In-situ UV-DOAS, NDIR, IR GFC Extractive – NDUV/ FTIR, NDIR GFC, NDIR-CFM Dilution Extractive - chemiluminescence
			CO	150 mg/NM <sup>3</sup>	100 mg/NM <sup>3</sup>	NDIR Insitu Extractive FTIR, NDIR GFC / NDIR CFM
			H <sub>2</sub> S	150 mg/NM <sup>3</sup>	150 mg/NM <sup>3</sup>	<b>TDLS/FTIR/IR DOAS However H<sub>2</sub>S and SO<sub>2</sub> can not be measured simultaneously.</b>
		Furnace boiler and captive power plant liquid Fuel based		Before 2008	After 2008	
			PM	100 mg/NM <sup>3</sup>	50 mg/NM <sup>3</sup>	PM CEMS as pe matrix Table no:4
			SO <sub>2</sub>	1700 mg/NM <sup>3</sup>	850 mg/NM <sup>3</sup>	In-situ NDIR / IR GFC/UV-DOAS Extractive NDUV / FTIR / NDIR / IR-GFC / IR-CFM Dilution extractive UV-Fluorescence
			NO <sub>x</sub>	450 mg/NM <sup>3</sup>	350 mg/NM <sup>3</sup>	In-situ UV-DOAS, NDIR, IR GFC Extractive – NDUV / FTIR, NDIR GFC, NDIR-CFM Dilution Extractive - chemiluminescence
			CO	200 mg/NM <sup>3</sup>	150 mg/NM <sup>3</sup>	NDIR In situ Extractive FTIR, NDIR GFC / NDIR CFM

S. No.	Industries/ Facilities	Units of Operation	Parameters Prescribed	Emission Limits		Options available for CEMS
				Existing SRU	New SR (after 1.1.2008)	
		Sulphur Recovery Unit (SRU)	Parameters	Existing SRU	New SR (after 1.1.2008)	
			H <sub>2</sub> S	15 mg/NM <sup>3</sup>	10 mg/NM <sup>3</sup>	TDLS/FTIR/IR DOAS However H <sub>2</sub> S and SO <sub>2</sub> cannot be measured simultaneously.
			NO <sub>x</sub>	350 mg/NM <sup>3</sup>	250 mg/NM <sup>3</sup>	In-situ UV-DOAS, NDIR, IR GFC Extractive – NDUV / FTIR, NDIR GFC, NDIR-CFM Dilution Extractive – Chemiluminescence
			CO	150 mg/NM <sup>3</sup>	150 mg/NM <sup>3</sup>	NDIR In situ Extractive FTIR, NDIR GFC / NDIR CFM
8	Petrochemical	Furnace, Boiler, Heater, Vaporizer Liquid Fuel based		Existing Plant	New / Expansion (after 9 <sup>th</sup> Nov. 2011)	
			PM	100 mg/NM <sup>3</sup>	50 mg/NM <sup>3</sup>	PM CEMS as per matrix Table no:4
			SO <sub>2</sub>	1700 mg/NM <sup>3</sup>	850 mg/NM <sup>3</sup>	In-situ NDIR / IR GFC/UV-DOAS Extractive NDUV / FTIR / NDIR / IR-GFC / IR-CFM Dilution extractive UV-Fluorescence
			NO <sub>x</sub>	450 mg/NM <sup>3</sup>	350 mg/NM <sup>3</sup>	In-situ UV-DOAS, NDIR, IR GFC Extractive – NDUV / FTIR, NDIR GFC, NDIR-CFM Dilution Extractive - Chemiluminescence
			CO	200 mg/NM <sup>3</sup>	150 mg/NM <sup>3</sup>	NDIR In situ Extractive FTIR, NDIR GFC / NDIR CFM

S. No.	Industries/ Facilities	Units of Operation	Parameters Prescribed	Emission Limits		Options available for CEMS
				Existing Plant	New / Expansion	
		Furnace, Boiler, Heater, Vaporizer Gas based	PM	10 mg/NM <sup>3</sup>	5 mg/NM <sup>3</sup>	PM CEMS as per matrix Table no:4
			SO <sub>2</sub>	50 mg/NM <sup>3</sup>	50 mg/NM <sup>3</sup>	In-situ NDIR / IR GFC/UV-DOAS Extractive NDUV / FTIR / NDIR / IR-GFC / IR-CFM Dilution extractive UV-Fluorescence
			NO <sub>x</sub>	350 mg/NM <sup>3</sup>	250 mg/NM <sup>3</sup>	In-situ UV-DOAS, NDIR, IR GFC Extractive – NDUV / FTIR, NDIR GFC, NDIR-CFM Dilution Extractive - Chemiluminescence
			CO	200 mg/NM <sup>3</sup>	150 mg/NM <sup>3</sup>	NDIR In situ Extractive FTIR, NDIR GFC / NDIR CFM
9	Power Plant **	TPP installed before 31/12/2003		Less than 500 MW	More than 500 MW	
			PM	100 mg/NM <sup>3</sup>	100 mg/NM <sup>3</sup>	PM CEMS as per matrix Table no:4
			SO <sub>2</sub>	600 mg/NM <sup>3</sup>	200 mg/NM <sup>3</sup>	In-situ NDIR / IR GFC/UV-DOAS Extractive NDUV / FTIR / NDIR / IR-GFC / IR-CFM Dilution extractive UV-Fluorescence
			NO <sub>x</sub>	600 mg/NM <sup>3</sup>	600 mg/NM <sup>3</sup>	In-situ UV-DOAS, NDIR, IR GFC Extractive – NDUV / FTIR, NDIR GFC, NDIR-CFM Dilution Extractive – Chemiluminescence

S. No.	Industries/ Facilities	Units of Operation	Parameters Prescribed	Emission Limits		Options available for CEMS
			Hg	0.03 mg/NM <sup>3</sup>	0.03 mg/NM <sup>3</sup>	Total Gaseous Mercury. Always Hot extractive system A) Pre-treatment options Gold Amalgamation Followed by chemical/ thermal desorption (B) Adsorption in other media followed by Thermal desorption and measured using either atomic absorption/ atomic fluorescence / atomic absorption / UV DOAS / UV measurement (after removal of SO <sub>2</sub> interference / Zeeman correction) are acceptable. For atomic absorption, Mercury lamp (NOT UV LAMP) should be used as energy source
		TPP Installed on & after 01/01/2004 upto 31/12/2016		Less than 500 MW	More than 500 MW	
			PM	50 mg/NM <sup>3</sup>	50 mg/NM <sup>3</sup>	PM CEMS as per matrix Table no:4
			SO <sub>2</sub>	600 mg/NM <sup>3</sup>	200 mg/NM <sup>3</sup>	In-situ NDIR / IR GFC/UV-DOAS Extractive NDUV / FTIR / NDIR / IR-GFC / IR-CFM
						Dilution extractive UV-Fluorescence
			NO <sub>x</sub>	300 mg/NM <sup>3</sup>	300 mg/NM <sup>3</sup>	In-situ UV-DOAS, NDIR, IR GFC Extractive – NDUV / FTIR, NDIR GFC, NDIR-CFM Dilution Extractive – Chemiluminescence



S. No.	Industries/ Facilities	Units of Operation	Parameters Prescribed	Emission Limits		Options available for CEMS
			Hg	0.03 mg/NM <sup>3</sup>	0.03 mg/NM <sup>3</sup>	Total Gaseous Mercury, Always Hot extractive system A) Pre-treatment options Gold amalgamation Followed by chemical/ thermal desorption (B) Adsorption in other media followed by Thermal desorption and measured by either Cold vapour atomic fluorescence / Cold Vapor atomic absorption / UV DOAS / UV measurement (after removal of SO <sub>2</sub> interference) are acceptable. For atomic absorption, Mercury lamp (NO UV LAMP) should be used as energy source
		TPP to be installed from 01/01/2017	PM	30 mg/NM <sup>3</sup>		PM CEMS as per matrix Table no:4
			SO <sub>2</sub>	100 mg/NM <sup>3</sup>		In-situ NDIR / IR GFC/UV-DOAS Extractive NDUV / FTIR / NDIR / IR-GFC / IR-CFM Dilution extractive UV-Fluorescence
			NO <sub>x</sub>	100 mg/NM <sup>3</sup>		In-situ UV-DOAS, NDIR, IR GFC Extractive – NDUV / FTIR, NDIR GFC, NDIR-CFM Dilution Extractive – Chemiluminescence

S. No.	Industries/ Facilities	Units of Operation	Parameters Prescribed	Emission Limits		Options available for CEMS
			Hg	0.03 mg/NM <sup>3</sup>		Total Gaseous Mercury, Always Hot extractive system A) Pre-treatment options Gold amalgamation, followed by chemical/ thermal desorption (B) Adsorption in other media followed by Thermal desorption and measured by either Cold vapour atomic fluorescence / Cold Vapor atomic absorption / UV DOAS / UV measurement (after removal of SO <sub>2</sub> interference) are acceptable. For atomic absorption, Mercury lamp (NO UV LAMP) should be used as energy source
10	Zinc	Smelter, SRU		Existing Units	New Units (after 2 <sup>nd</sup> May 2011)	CEMS options available
			PM	100 mg/NM <sup>3</sup>	75 mg/NM <sup>3</sup>	PM CEMS as per matrix Table no:4
			SO <sub>2</sub> (for upto 300 T /day)	1370 mg/NM <sup>3</sup>	1250 mg/NM <sup>3</sup>	In-situ NDIR / IR GFC/UV-DOAS Extractive NDUV / FTIR / NDIR / IR-GFC / IR-CFM Dilution extractive UV-Fluorescence
			SO <sub>2</sub> (for > 300 T /day)	1250 mg/NM <sup>3</sup>	950 mg/NM <sup>3</sup>	In-situ NDIR / IR GFC/UV-DOAS Extractive NDUV / FTIR / NDIR / IR-GFC / IR-CFM Dilution extractive UV-Fluorescence

S. No.	Industries/ Facilities	Units of Operation	Parameters Prescribed	Emission Limits		Options available for CEMS
				Existing Units	New Units (after 2 <sup>nd</sup> May 2011)	
11	Copper	Smelter, SRU	Parameters	Existing Units	New Units (after 2 <sup>nd</sup> May 2011)	CEMS options available
			PM	100 mg/NM <sup>3</sup>	75 mg/NM <sup>3</sup>	PM CEMS as per matrix Table no:4
			SO <sub>2</sub> (for upto 300 T /day)	1370 mg/NM <sup>3</sup>	1250 mg/NM <sup>3</sup>	In-situ NDIR / IR GFC/UV-DOAS
						Extractive NDUV / FTIR / NDIR / IR-GFC / IR-CFM
						Dilution extractive UV-Fluorescence
			SO <sub>2</sub> (for > 300 T /day)	1250 mg/NM <sup>3</sup>	950 mg/NM <sup>3</sup>	In-situ NDIR / IR GFC/UV-DOAS
			Extractive NDUV / FTIR / NDIR / IR-GFC / IR-CFM			
			Dilution extractive UV-Fluorescence			
12	Biomedical waste Incinerator	Incinerator Stack	PM	50 mg/NM <sup>3</sup>		PM CEMS as per matrix Table no:4
			NO <sub>x</sub>	400 mg/NM <sup>3</sup>		In-situ UV-DOAS
						Extractive – NDUV / FTIR, NDIR GFC, NDIR-CFM
						Dilution Extractive – Chemiluminescence
			HCl	50 mg/NM <sup>3</sup>		IR DOAS, TDLS,
			Temp. P.C.C.	800 °C		Temperature probe
			Temp. S.C.C.	1050 ± 50 °C		Suitable Temperature Probe
Combustion Efficiency CO and CO <sub>2</sub>	99%		Extractive NDIR			
13	Common Hazardous Waste Incinerator	Incinerator Stack	PM	50 mg/Nm <sup>3</sup>		PM CEMS as per matrix Table no:4
			HCl	50 mg/Nm <sup>3</sup>		In-situ IR DOAS, TDLS
						Hot Extractive FTIR, IR
			SO <sub>2</sub>	200 mg/Nm <sup>3</sup> -30 minute average		In-situ NDIR / IR GFC/UV-DOAS

S. No.	Industries/ Facilities	Units of Operation	Parameters Prescribed	Emission Limits	Options available for CEMS
					Extractive NDUV / FTIR / NDIR / IR-GFC / IR-CFM
					Dilution extractive UV-Fluorescence
			NO <sub>x</sub>	400 mg/Nm <sup>3</sup>	In-situ UV-DOAS
					Extractive – NDUV / FTIR, NDIR GFC, NDIR-CFM
					Dilution Extractive - chemiluminescence
			HF	4.0 mg/Nm <sup>3</sup>	In-situ IR DOAS, TDLS
					Hot Extractive FTIR
			TOC	20 mg/Nm <sup>3</sup>	Hot Extractive FID
			CO	100 mg/Nm <sup>3</sup> -30 minute average 50 mg/Nm <sup>3</sup> -24 Hrly average	NDIR In situ
					Extractive FTIR, NDIR GFC / NDIR CFM
14	Sugar	Boiler	PM	150 mg/NM <sup>3</sup>	PM CEMS as per matrix Table no:4
15	Sugar, Cotton Textile, Composite Woolen Mills, Synthetic Rubber, Pulp & Paper, Distilleries, Leather Industries, Calcium Carbide, Carbon Black, Natural Rubber, Asbestos, Caustic Soda, Small Boilers , Aluminium	Boiler (Other fuels)	SO <sub>2</sub>	600 mg/NM <sup>3</sup> at 6% dry O <sub>2</sub> , for solid fuel and 3% dry O <sub>2</sub> for liquid fuel	In-situ NDIR / IR GFC/UV-DOAS
					Extractive NDUV / FTIR / NDIR / IR-GFC / IR-CFM
					Dilution extractive UV-Fluorescence
			NO <sub>x</sub>	600 mg/NM <sup>3</sup> at 6% dry O <sub>2</sub> , for solid fuel and 3% dry O <sub>2</sub> for liquid fuel	In-situ UV-DOAS, NDIR, IR GFC
					Extractive – NDUV / FTIR, NDIR GFC, NDIR-CFM
					Dilution Extractive – Chemiluminescence

	Plants, Tanneries, Inorganic Chemicals & other such industries using boilers				
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**Note:**

- Temperature measurement and reporting are compulsory for all installations.
- CO<sub>2</sub> and or O<sub>2</sub> as prescribed in notified standards for respective sectors and processes to be monitored.
- All the data has to be corrected to mass/volume at STP (760mm Hg Pressure and 25 degree C temperature in dry condition).
- All In-situ and Dilution extractive and Hot Wet Extractive systems shall monitor and report Moisture to correct the results in dry condition. Waste incineration plants including Hazardous waste incinerators and Waste to Energy plants requires continuous moisture monitoring.
- Installations using dilution techniques must inform CPCB and SPCBs/PCCs in case of any change in dilution ratio.
- NDIR based NO<sub>x</sub> analyzer ideally converts all NO<sub>x</sub> to NO for measurement purpose. 5% of total converted NO represents NO<sub>2</sub>. NDIR based In-situ Analyzers without converters are measuring NO and considering upto 5% of NO values as NO<sub>2</sub> resulting under reporting of NO<sub>x</sub>. Hence, in order to correct the data special calculation as given below will be applied.  
Reported NO values will be multiplied by 1.05 and then 95% of the product will be considered as NO and 5% of the product will be considered as NO<sub>2</sub>. Final reporting shall follow the equation  $NO_x = NO + NO_2 = NO \times 1.53 + NO_2 = NO_x \text{ as } NO_2$   
In other cases, NO<sub>x</sub> values are required to be reported as NO<sub>2</sub>mg/NM<sup>3</sup>:  $NO_x = NO + NO_2 = NO \times 1.53 + NO_2 = NO_x \text{ as } NO_2$   
For the IR based instrument without converter the reported NO values will be multiplied by 1.05 and then 95% of the product will be considered as NO and 5% of the product will be considered as NO<sub>2</sub>. Final reporting shall follow the equation  $NO_x = NO + NO_2 = NO \times 1.53 + NO_2 = NO_x \text{ as } NO_2$   
In other cases NO<sub>x</sub> values are required to be reported as NO<sub>2</sub>mg/NM<sup>3</sup>:  $NO_x = NO + NO_2 = NO \times 1.53 + NO_2 = NO_x \text{ as } NO_2$
- Recommended to go for NO + NO<sub>2</sub> measurement for correct reporting as NO<sub>2</sub>
- Hg CEMS requirement is applicable for thermal power plants only in case such condition is specified in Environmental Clearance granted by MoEF&CC / SEIAA
- Formulae for data reporting are given in **Annexure-II**.

\*\* CEMS requirement applicable with the time period specified for compliance with the new emission norms for thermal power plants & as per Environmental Clearance Conditions specified by MoEF&CC.

\*\*\* Parameters for CEMS shall be as prescribed by SPCB/PCCs under Schedule II of Biomedical Waste Management Rules, 2016

## 8.0 SITE REQUIREMENT AND PREPARATION FOR MOUNTING OF CONTINUOUS EMISSION MONITORING SYSTEM

### 1. Infrastructure and mounting

- a. All measurement ports in the stack / duct, etc. will have to be made available as per CEMs system requirement and confirming the regulatory requirement
- b. CEMs analyser mounting flanges needs to be welded/grouted as per the mounting guidelines furnished by the vendor.
- c. Industry to ensure availability of permanent, strong & reliable platforms at CEMs analyser mounting location with safe approach ladders or stair case (spiral) or elevator. Vertical ladders if provided, should have back guard, stair case if provided, should be with proper hand rail, steps should be evenly distributed with adequate height, length & width. Monkey ladder is not preferred in case the height of platform is more than 30 meter from the ground.
- d. For ease of maintenance work, the stack platform width for metallic stacks should be 800mm minimum & for concrete stack platform width should be minimum of 1000mm. All platforms should have hand rails.
- e. All the power cables, signal cables, instrument air tubing's should be properly laid & clamped so that should not be an obstacle for personnel movements.

### 2. Utilities

- a. Uninterrupted power supply - single phase, 110/ 230 VAC as applicable should be supplied up to the analyser mounting location
- b. Power supply should be properly earthed; lightning arrestor wire line & earthing cable wire line should be separate.
- c. Instrument air connection – Clean and dry compressed air will have to be supplied by end user upto the analyser probe mounting location.
- d. Quality of instrument air shall depend upon the specific demand of parameter being measured.

### 3. Safety

With respect to instrument safety, all the instructions in the vendor specific CEMs manual shall be followed. All flanges, ports must be well supported

and welded as per required standards. Mounting bolts, etc. must be fully tight before commissioning. All personnel safety standards and procedures for working at height must be adhered to at site.

- a. If the approach to platform is by using vertical ladder's, then at every 10-12 mtrs landing platform should be provided. The entire length of ladder must have protective back guard/cage.
- b. Ladder must continue through platform approach to some distance above such that landing on platform is easy.
- c. Ladder must be well maintained with all fasteners rigidly fixed in the stack wall.
- d. The completed ladder network and stack has to be regularly inspected for corrosion and must be painted periodically.
- e. Platform railing must be rigid at least reach 1.2 mtr in height from platform surface.
- f. If analyser mounting location is above 45meter elevation then for ease of maintenance and personnel safety, proper stair case or lift/elevator should be provided
- g. Industry to ensure removal of bee hive from stack or stack nearby location before proceeding for any CEMS mounting/maintenance work on stack platform.

## 9.0 CALIBRATION, PERFORMANCE EVALUATION AND AUDIT OF CEMS

### 9.1 Practices in other Countries

The calibration process for CEMS is well established in European Union and USA. The European Union follow EN 14181 which specifies procedures for establishing Quality Assurance level in terms of QAL 2, QAL 3 and Annual Surveillance Test (AST) for **CEMS (CEMS is also called Automated Measurement Systems (AMS) in Europe)** installed at industrial plants for flue gas parameters. In the UK QAL 1 procedures are covered by certification under MCERTS Scheme for Continuous Monitoring System. The suitability evaluation of CEMS and its measuring procedures are described in EN ISO 14956 (QAL 1), which subsequently became EN 15267-1.

The USEPA follows a different route by using Relative Accuracy Test Audit (RATA) for gases and Relative Response Assessment (RRA) for Particulate. The difference between the European System and that followed in USA for Quality Assurance of CEMS is given in **Table 8**.

**Table 8: Difference between the two QA systems followed in European Union & USA**

	<b>Selection of CEM</b>	<b>Installation</b>	<b>Stability before calibration</b>	<b>Valid calibration</b>	<b>Ongoing instrumental stability</b>	<b>Ongoing calibration stability</b>
<b>EU</b>	QAL1 (EN15267 parts 1 to 3) with appropriate certification range	EN15259	QAL3	Functional test and QAL2	QAL3 plus annual linearity	Functional test and annual surveillance tests (AST)
<b>USA</b>	None but legal onus on the operator to provide valid data	Field Performance Test	7-day drift test	Correlation tests over 3 days	Zero and Span plus, quarterly linearity test	Annual correlation test and Relative Accuracy Test Audits (RATA) for gases and Relative Response Assessment (RRA) for particulate

The system for Quality Assurance followed in European Union as well as in EPA requires a well-established infrastructure for calibration of the systems, for uncertainty calculations and performance evaluation besides requiring skills and expertise to support each CEM, since the CEM is specifically characterized and calibrated for the individual application.

**9.2 Recommended Instrumentation/Methodology for Monitoring**

- a. The USEPA TUV & MCERTS certified analysers *for emissions* are recognized for use as CEMS. Any alteration invites invalidation of the certificate.
- b. All indigenous and foreign Manufacturers of analysers/ instruments for real time monitoring of industrial emissions shall obtain certificate for their system within twelve months after the Indian certification system is in place.
- c. The analysers/ instruments will not be considered for installation; in case their manufacturer fails to obtain the required certification from the Indian Certification Agency/ agencies within 12 months of the establishment of Indian Certification System.



### 9.3 Acceptance of CEMS Until Indigenous Certification System is Placed

A CEMS to be used at installations covered by CPCB direction shall have to be proven suitable for its measuring task (parameter and composition of the flue gas) by use of the procedure equivalent to international standards (EPA PS or EN QAL Standards). It shall prove performance in accordance to the set performance characteristics during the field-testing.

The performance testing procedures involve all concerned including plant operator, vendor and testing laboratories. The industries shall submit details of the CEMS installed and operationalized as per in CPCB's Compliance Reporting Protocol (CRP) for OCEMS.

Field-testing is a procedure for the determination of the calibration function and its variability. In this process, variability of the measured values of the CEMS compared with the data quality objectives specified.

A calibration function is established from the results of a number of parallel measurements performed with a Standard Reference Method (SRM). The variability of the measured values obtained with the CEMS is then evaluated against the required criteria to satisfy the Data Quality Objective. The ranges/values mentioned in Tables below are technology specified and may slightly deviate from those specified.

**Table 9: Performance Specification for SO<sub>2</sub>, NO<sub>x</sub> and CO**

S.No.	Specification	Tolerance ranges/values
1	Zero Drift/Weekly	$\leq \pm 1$ % of Span
2	Span Drift /Weekly	$\leq \pm 1$ % of Span
3	Analyzer's Linearity	$\leq \pm 1$ % of Span from calibration curve
4	Performance Accuracy	$\leq \pm 10$ % of compared Reference measurement

**Table 10: Performance Specification for O<sub>2</sub>, and CO<sub>2</sub>**

S.No.	Specification	Tolerance ranges/values
1	Zero Drift /Weekly	$\leq \pm 1$ % of O <sub>2</sub>
2	Span Drift /Weekly	$\leq \pm 1$ % of O <sub>2</sub>
3	Analyzer's Linearity	$\leq \pm 1$ % of O <sub>2</sub>
4	Performance Accuracy	$\leq \pm 10$ % of compared Reference measurement or within 1% of O <sub>2</sub>

**Table 11: Performance Specification for PM CEMS**

S.No.	Specification	Tolerance ranges/values
1	Zero Drift between two servicing intervals	$\leq \pm 2 \%$ of Full Scale range
2	Reference point Drift between two servicing intervals	$\leq \pm 2 \%$ of Reference value range
3	Analyzer's Linearity	The difference between the actual value and the reference value must not exceed $\pm 2$ percent of full scale (for a 5 point check).
4	Performance Accuracy	$\leq \pm 10 \%$ of compared Reference measurement

**Table 12: Specification for Analyser**

S. No.	Specification	Tolerance ranges or values
1	Zero Drift /Weekly	$\leq 1 \%$
2	Span Drift /Weekly	$\leq 1 \%$
3	Analyzer's Linearity	$< 1 \%$ of full scale
4	Performance accuracy	$\leq \pm 10 \%$ of compared reference measurement

The performance test procedures are repeated periodically, after a major change of plant operation, after a failure of the CEMS or as demanded by regulators.

#### 9.4 Calibration of Air Analysers (Gaseous Parameter)

- a. The instruments/analysers for real time monitoring of gaseous emissions shall be calibrated with respect to their functioning, drift, linearity, detection limit, output, operating temperature and other relevant parameters before installation.
- b. Demonstration of performance specifications as outlined in section 9.3 for both indigenous as well as certified analysers.
- c. After six months of operation, the system shall be rechecked for its health and data accuracy and reliability, following multi point calibration (at least 03 span concentrations) using standard methods and certified reference materials.
- d. The data comparison and calibration verification shall be done once in 06 months by empaneled laboratories following standard procedures and using certified reference standards.

- e. The health of the instruments/analysers shall be assessed on daily basis by checking the zero drift.
- f. In case the daily zero drift is more than the acceptable limit as specified in the catalogue/brochure of the instrument/analyser manufacturer and persists continuously for five days, the instrument/ analyser shall be recalibrated following procedure laid down at point (c) above.
- g. The instruments/analysers shall be checked for zero and span on fortnightly basis i.e. second Friday of the fortnight at fixed time (10:00 a.m.) using standard methods and standard reference materials including certified calibration gases. The drift needs to be recorded and suitably incorporated in the data collected over the period.
- h. For Differential Optical Absorption Spectroscopy (DOAS), Non Dispersive Ultra Violet (NDUV)/Non Dispersive Infra-Red lamp/laser based systems / FTIR based systems, the calibration shall be revalidated once in 06 months, and after replacement of lamp.
- i. The instrument/ analyser shall be recalibrated after any major repair/replacement of parts/lamps or readjustment of the alignment using standard methods and certified reference materials.
- j. The instrument/analyser system shall have provision of remote calibration, for verification of the system performance by SPCBs/PCCs whenever, felt necessary.
- k. The intensity of the lamp shall be checked once every fortnight.
- l. Data capture rate of more than 85% shall be ensured.
- m. Using Ambient Air for Zero/Span calibration is not acceptable, Zero air, instrument air, Span Gas/Gas filled Cuvette can be used with required certifications.

### **9.5 Calibration of Air Analysers (Particulate Matter)**

The PM CEMS device is ready for calibration only after performing all of the required installation, registration, and configuration steps. Details of Particulate Matter CEMS calibration are given below.

- a. The continuous Particulate Matter monitoring system (PM-CEMS) shall ideally be calibrated at three operational loads against isokinetic sampling method (triplicate samples at each load) nine samples in three loads at the

- time of installation and thereafter, every twelve months of its operation or after any change in solid fuels.
- b. The results from the Particulate Matter monitoring system shall be compared on monthly basis i.e. last Friday of the month, at fixed time (replicate sample) starting 10.00 am. with standard isokinetic sampling method.
  - c. In case, deviation of the comparison values (dust factor) for 02(two) consecutive monitoring is more than 10%, the system shall be recalibrated against isokinetic sampling method (triplicate samples), if possible at three variable loads.
  - d. Adjustment of Calibrated Dust Factor (CDF) allowed only after full-scale calibration of PM CEMS. Change of CDF permitted only after approval by SPCB/ PCC or after one week of submission of request to SPCB/PCC whichever is earlier.
  - e. After any major repair to the system, change of lamp, readjustment of the alignment, change in fuel quality, the system shall be recalibrated against isokinetic sampling method. (triplicate samples at each load)
  - f. The data capture rate of more than 85% shall be ensured.
  - g. The intensity of lamp shall be checked once every fortnight.
  - h. The data comparison (calibration verification) shall be done by laboratories empaneled by CPCB using standard reference methods and at a frequency specified.

## 9.6 Emission Monitoring

- a. To ensure laminar flow the Particulate Matter monitoring systems (CEMS) shall be installed at a distance at least at Eight times the stack diameter downstream and Two times stack diameter upstream from any flow disturbance.  

In rare cases, when the PM CEMS analyzers are installed at a distance atleast four times the stack diameter downstream from any flow disturbance; however, correction for stratification (pl. refer para 4.1.1) shall be made. The full scale calibration shall cover atleast 03(three) working loads and atleast 09(nine) (triplicate sample at variable load) sampling shall be carried out for dust factor.
- b. CEMS devices shall be installed at minimum 500mm below from the port hole designed for manual sampling.

- c. All measurement ports into the stack shall be as per CEMS system requirement.
- d. Particulate CEMS devices (Cross Duct) or probe shall be installed in horizontal plane;
- e. Probe / sampling device for gaseous CEMS shall be installed protruding downwards with suction system facing the direction of flow of flue gases.
- f. The construction of chimney shall adhere to CPCB publication, "Emission Regulation Part III" (COINDS/20/1984-85) unless otherwise specified by CPCB or SPCB/ PCC.
- g. The monitoring of PM parameter at different loads is to be conducted at least once at the time of initial installation. It is advised to carry out PM emission monitoring on the day when plant operates, under capacity due to any reason besides the routine monitoring. The data obtained can be used for linearity verification and CDF should be calculated and informed to CPCB.
- h. Similarly, when ESP or APCC device is operating under capacity, or its fields are under maintenance, the emission monitoring should be practiced to carryout linearity check of the particulate monitoring beside routine monitoring, CDF should be calculated and informed to CPCB.
- i. The parameters like flow if not installed requiring changes in the stack/duct may be monitored within a period of four months from the date of issue of the 1<sup>st</sup> revision guidelines or immediately after scheduled shutdown whichever is earlier.
- j. Other parameters like temperature which do not require an modification in the structure of the stack shall be installed within a month from the date of issue of 1<sup>st</sup> Revision of Guidelines.

## 9.7 Data Consideration/Exceedance

- a. Any exceedance of values over the prescribed standards or norms shall be considered as alarm for exceedance. However, time average value (as decided by CPCB) will be used for compliance check.
- b. Instantaneous elevated data i.e. spikes with duration less than one minute shall be dealt separately and not considered for data averaging.

- c. In case of loss of data for more than 10 minutes per half hour it will be considered as loss of half hourly value. In case more than 5 half hourly data is lost per day, it will be considered as data loss for a day.
- d. Any day in which more than three hourly average values are invalid due to malfunction or maintenance of the automated measuring system shall be considered lost date for the day 85% data capture in based on available daily average.
- e. In the case of a breakdown of the RTMS, the operator shall reduce or close down operation if the problem is not rectified within 72 hours, subject to information to SPCBs/PCCs and CPCB.
- f. Operating hours – means the time expressed in hours during which the plant in whole or in part is operating and discharging emission into the air, excluding start up and shut down periods.
- g. Any Exceedance of the monitored values against the standards shall invite SMS & email to the industry from SPCBs/PCCs, requiring immediate feedback on the corrective action initiated/taken.
- h. The values recorded during calibration or during preventive maintenance shall not be considered for Exceedance and assessing the data capture rate.
- i. Plant start-up or batch process starting emissions shall not be considered for averaging for the initial, 30 minutes' period in case of batch processes or small furnaces/ boilers not operating continuously as per the schedule specified in the Compliance Reporting Protocol.
- j. Plant shut down period shall be excluded while calculating data capture rate.

## 9.8 Data Acquisition System (DAS)

- a. DAS (Data Acquisition System) defines the logging of digital data from the analysers.
- b. The data shall be transferred directly from Data Acquisition and Handling System at the analyser end to a cloud server of a technology provider (with no in between logic), who ensures seamless transmission of data from analysers to central server located at SPCB/CPCB. In this context technology provider is an agency who provides data transmission service in transparent manner ensuring high degree of integrity.

- c. Technology provider may be a manufacturer of analyzers or any technology service provider having capability of building such system.
- d. The cloud server of Technology Provider (TP) to meet the needs of local SPCBs, Industry and CPCB in implementation of CEMS.
- e. It shall be the responsibility of industry to choose appropriate technology provider to ensure seamless transmission of data to Central Server
- f. Central Server at SPCBs/PCC / CPCB to accept the data from Cloud Server of TP only if their system has requisite features to transfer direct data and also facilitate remote calibration.
- g. Data should be in encrypted format (tamper proof)
- h. The system shall operate on Open Application Programme Interface (API) protocol based on REST based technology.
- i. The system shall record all the monitored values and transfer 15 minutes average value to DAHS. The system shall have provision to assess the momentarily values as and when required.
- j. Data validation protocol inbuilt with data quality codes to defined specification in DAS/DATA LOGGER.
- k. Cloud Sever of TP to meet the needs of local SPCBs, industry and CPCB

## **10.0 DATA ACQUISITION, MANAGEMENT AND REPORTING**

Considering the heterogeneity of real time monitoring systems industries are required to submit real time data through their respective instrument suppliers. This mechanism shall help in consolidating the data avoiding the complexity of different technologies and availability of monitored data in different data formats while involving the instrument suppliers in data transferring mechanism. The system enables two ways communication required to manage such real time systems.

The functional capabilities of such software systems shall include:

- a. The system should be capable of collecting data on real time basis without any human intervention.
- b. The data generation, data pick up, data transmission, data integration at all servers end should be automatic.
- c. The submitted data shall be available to SPCBs/PCCs and CPCB for immediate corrective action.

- d. Raw data should be transmitted simultaneously to SPCBs /PCCs and CPCB.
- e. In case of delay in collection of data due to any reason, the data transmission should be marked delayed data and reports of delayed data should be displayed on the portal
- f. At no point of time, manual data handling shall be permitted. Data validation should be permitted only through the administrator and data changes recorded with date and time stampings.
- g. Configurations of the systems once set up (through remote procedure) and verified, should not be changed. In case any setting change is required it should be notified and recorded through the authorized representatives only.
- h. The data submitted electronically shall be available to the data generator through internet, so that corrective action if any required due to submission of erroneous data can be initiated by the industry.
- i. The software should be capable to verify the data correctness which means at any given point of time the regulatory authorities/data generator should be able to visualize the current data of any location's specific parameter.
- j. A system for data validation shall be incorporated in the software with fixed responsibilities of stakeholders;
  - Data Generator
  - SPCBs/ PCCs
  - CPCB
- k. Change Request Management: window for requesting data changes due to actual field conditions shall be provided by the industry in line to SPCBs/ PCCs to consider the request or not. The data validation/ changes can be incorporated after approval respective SPCBs/PCC or after one week of submission of request to SPCB/PCC. The environmental conditions around the site surrounding shall also be recorded along with other environmental parameters, as these have the potential to affect the monitoring system adversely and corrupt the data generated.
- l. System should have capability to depict data at the actual location of industry over the map. CPCB and or SPCBs/ PCCs shall develop a map based system for data integration at a single location.
- m. The software should be capable of analyzing the data with statistical tools



and shall have the following capabilities:

- Statistical data analysis (customizable) for average, min., max., diurnal variation, RSD, correlation, covariance, etc.
  - Comparison of parameters of different locations in user selectable time formats i.e. in graphical and tabular formats compatible to MS Excel, MS Word, \*.txt etc.
  - Capability of comparison of data with respect to standards/threshold values.
  - Auto report and auto mail generation etc.
  - Providing calibration database for further validation/correction of data.
  - Transmitting data to different locations as per EC, CTE/CTO, and other directives in force.
  - Channel configuration for range, units, etc. as required for specific parameters and facility.
  - Providing data in export format on continuous basis through central/station computer system to other system.
- n. Data transmission through Leased Line (1Mbps) and Broadband with two medias supported which can be alternately used for data submission without fail.
- o. Data Storage for next five years.
- p. System should be connected to a backup power source with adequate capacity to avoid any power disruption.
- q. In case of dilution extractive systems, a mechanism to report dilution ratio maintained in the system should be reported alongwith data as a separate parameter to ensure dilution all the time.

## 11.0 SUMMARY

- a. The industries falling in 17 categories of highly polluting industries, Common Bio Medical waste and Common Hazardous waste incinerators have to install Continuous Emission Monitoring System.
- b. Industries other than 17 categories should consider installation of CEMS system as a tool of self-regulation.

- c. The G.S.R. 96(E) January 29, 2018 Notified by MoEF&CC under Environment (Protection) Act, 1986 mandates installation of CEMS with the Boilers used in the Industries namely Sugar, Cotton Textile, Composite Woolen Mills, Synthetic Rubber, Pulp & Paper, Distilleries, Leather Industries, Calcium Carbide, Carbon Black, Natural Rubber, Asbestos, Caustic Soda, Small Boilers, Aluminium Plants, Tanneries, Inorganic Chemicals & other such industries using boilers.
- d. The responsibility of data submission lies with the Individual units. The instrument supplier or manufacturer may facilitate data transmission on behalf of industries. Industry will ensure at least 85% data availability from the system installed.
- e. The Technology providers shall install their server in cloud and should send the real time data to CPCB, SPCBs servers or any Govt. bodies servers in consultation.
- f. The vendor/instrument supplier shall make provisions to provide data continuously at least at 04 locations in SPCBs/PCCs, RO/DO of SPCBs, CPCB, and industry directly from the analyzers.
- g. The plausibility control of data received shall be done. The team members will be responsible for validating, interpreting and interpolation of data on periodic basis.
- h. The vendor/instrument supplier will regularly cross check the data obtained from CEM system with that of the samples collected manually and analyze using approved laboratory techniques and revalidate the calibration factor essential for generating better quality data.
- i. The industries shall ensure that the monitoring systems are covered under Maintenance Contract with the vendors/ authorized Indian service partners of the instrument manufacturer after installation.
- j. The authorized Indian service partner/instrument manufacturer shall ensure that any problem in monitoring system/data acquisition and transfer system does not persist beyond 72 hours else it should be notified to SPCB & CPCB.
- k. The Technology Provider /instrument manufacturers shall ensure availability of spare parts for atleast 07 years after installation of the system.

- I. Role of manufacturers/supplier authorized Indian Service Partner:
  - Supply and install equipment suitable to monitor the emission in the available matrix
  - Supply all the supporting equipment, analyzers and software
  - Supply equipment/instruments capable of monitoring/measuring the parameters identified in the range of occurrence in the industrial unit
  - Supplied software should establish two-way communication sending diagnostics of instruments on demand, with central servers at SPCBs/PCCs and CPCB
  - The software should be capable of transmitting the data along with diagnostics of the instrument
- m. CPCB empaneled laboratories shall only be engaged as third party agency for all activities related to assessment of installation, calibration of CEMS, validation of data, etc However, till the time such empanelment is done, industries can use their own laboratories if these are EPA approved or NABL accredited (respective parameters shall be included in scope for accreditation) else may engage an EPA approved or NABL accredited (respective parameters shall be included in scope for accreditation) external lab.
- n. Industries shall not carry out the performance audit of OCEMS on their own or through the labs engaged for the routine calibration and data verification activities.
- o. Performance audit shall necessarily be carried out by the empaneled third party independent laboratory other than already engaged for routine calibration and OCEMS data verification.
- p. Industries have to inform SPCBs/PCCs and CPCB through online system at [cems.cpcb@nic.in](mailto:cems.cpcb@nic.in) via email providing date and time of visits of the lab engaged for the calibration, data verification, performance audit and other activities every time before starting the work.

**12. Parameters for online monitoring as per Guidelines**

Sl. No	Category	Emission Parameters
1	Aluminium	PM, Fluoride
2	Cement	PM,NOx,SO <sub>2</sub>
3	Distillery	PM
4	Dye and dye Intermediate	-
5	Chlor Alkali	Cl <sub>2</sub> , HCl
6	Fertilizers	PM, HF, Ammonia
7	Iron & steel	PM,SO <sub>2</sub> , NOx
8	Oil refinery	PM,CO,NOx,SO <sub>2</sub>
9	Petro chemical	PM,CO,NOx,SO <sub>2</sub>
10	Pesticides	-
11	Pharmaceuticals	-
12	Power Plants	PM, NOx, SO <sub>2</sub>
	Thermal Power Plants	PM, NOx, SO <sub>2</sub> , Total Mercury(Gaseous)**
13	Pulp & paper	-
14	Sugar	-
15	Tannery	-
16	Zinc	PM, SO <sub>2</sub>
17	Copper	PM, SO <sub>2</sub>
18	Textile (GPI)	-
19	Dairy (GPI)	-
20	Slaughter House	-
21	Boiler	SO <sub>2</sub> , NOx, PM

\*\* Online CEMS for Mercury may be applicable in case such condition is stipulated in EC issued by MoEF&CC / SEIAA

## 13. Formulae for Data Reporting

## ANNEXURE II

SN	Parameters	Units of Expression	Standard values	Algorithm	Remarks
01	Barometric Pressure ( $P_{bar}$ )	mm of Hg			
02	Standard Pressure ( $P_{std}$ )	mm of Hg	760		
03	Actual Pressure ( $P_{actual}$ )	mm Hg			
04	Stack Temperature ( $T_s$ )	Kelvin		$x^{\circ} C + 273.15$	x = temperature in stack
05	Temperature at Analyser ( $T_m$ )	Kelvin		$x^{\circ} C + 273.15$	x = temperature in stack
06	Standard Temperature ( $T_{std}$ )	Kelvin	298	$25^{\circ} C + 273.15 = 298$	
07	Moisture (M)	%			
08	Moisture Fraction (Mw)	Ratio		(M) /100	
09	Wet m <sup>3</sup> to Wet Nm <sup>3</sup>	Wet Nm <sup>3</sup>		$x m^3 * \{(P_{actual}) / (P_{std})\} \{ T_m / (T_{std}) \}$	x=volume measured by analyser
10	Wet Nm <sup>3</sup> to Dry Nm <sup>3</sup>	Dry Nm <sup>3</sup>		$x m^3 * \{(P_{actual}) / (P_{std})\} * \{ T_m / (T_{std}) \} * \{ 1 / (1 - Mw) \}$	x=volume measured by analyser
11	Conversion of ppmw of any gas to mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>		$(x \text{ ppmw}) * (\text{molecular weight}) / 24.45$  x=value measured by analyser in Nm <sup>3</sup>	All the instantaneous values required to be corrected in CEMS
12	Conversion of ppmv of any gas to mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>		$\{ (x \text{ ppmv}) * \{ (12.187) * \{ (MW) \} / \{ (273.15 + 25^{\circ} C) \} \}$ x=value measured by analyser in Nm <sup>3</sup>	This is not applicable for CEMS as Pressure correction is not applied
13	CO <sub>2</sub> Correction		12 % or as specified	$C_f = \{ x \text{ mg/Nm}^3 \} * \{ (12 / \text{Measured CO}_2) \}$  <b><u>Correction not needed wherever CO<sub>2</sub> is &gt; 12%</u></b> <i>C<sub>f</sub>=correction factor</i>	All the instantaneous values required to be corrected in CEMS wherever mandated as per standard
14	O <sub>2</sub> Correction		11%	$C_f = \{ x \text{ mg/Nm}^3 \} * \{ (20.9 - 11) / (20.9 - \text{Measured O}_2) \}$  <b><u>Correction not needed wherever O<sub>2</sub> is &lt; 11%</u></b>	All the instantaneous values required to be corrected in CEMS wherever mandated as per standard

				<u><i>C<sub>f</sub></i>=correction factor</u>	
15	O <sub>2</sub> Correction		3 %	$C_f = \{x \text{ mg/Nm}^3 * (20.9 - 3)\} / \{(20.9 - \text{Measured O}_2)\}$ <b><u>Correction not needed wherever O<sub>2</sub> is &lt; 3%</u></b> <u><i>C<sub>f</sub></i>=correction factor</u>	Applicable for gas and liquid fuel in Petrochemical industries
16	Combustion Efficiency			$\{(\% \text{CO}_2) * 100\} / \{(\% \text{CO}_2 + \% \text{CO})\}$	Applicable for Biomedical Waste Incinerator

S. No.	References
1.0	<p><b>CPCB's CEMS related Documents</b></p> <ul style="list-style-type: none"> <li>i) Direction for installation of CEMS and CWQMS in 17 Categories Industries, CETP, HWI, BMWI</li> <li>ii) Draft Notification on CEMS and CWQMS</li> <li>iii) Minutes of Meeting with Industries on Online Monitoring</li> <li>iv) List of Parameters for CEMS and CWQMS</li> <li>v) First hand information on list of suppliers</li> <li>vi) CPCB/e-PUBLICATION/2013-14 on "Specifications and Guidelines for Continuous Emissions Monitoring Systems (CEMS) for PM Measurement With Special Reference to Emission Trading Programs"</li> </ul>
2.0	<p><b>USEPA Documents related to CEMS</b></p> <ul style="list-style-type: none"> <li>a) Continuous Monitoring Manual</li> <li>b) 40 CFR Part 75: CEMS Field Audit Manual</li> <li>c) USEPA CEMS Performance Specification                             <ul style="list-style-type: none"> <li>i) PS – 2 : Performance Specification for SO<sub>2</sub> and NO<sub>x</sub></li> <li>ii) PS – 3 : Performance Specification for O<sub>2</sub> and CO<sub>2</sub></li> <li>iii) PS – 4 : Performance Specification for CO</li> <li>iv) PS – 4A: Performance Specification and Test Procedure for CO</li> <li>v) PS – 4B: Performance Specification and Test Procedure for CO and O<sub>2</sub></li> <li>vi) PS – 6: Performance Specification and Test Procedure for Emission Rate</li> <li>vii) PS – 8A: Performance Specification and Test Procedure for Hydrocarbon (TOC)</li> <li>viii) PS – 11: Performance Specification and Test Procedure for PM CEMS</li> <li>ix) PS – 15: Performance Specification for Extractive FTIR CEMS</li> <li>x) PS – 18: Performance Specification for HCl – CEMS</li> </ul> </li> <li>d) Quality Assurance (QA) Documents                             <ul style="list-style-type: none"> <li>i) Procedure 1: QA Requirement for Gaseous CEMS</li> <li>ii) Procedure 2: QA Requirement for PM CEMS</li> <li>iii) Procedure 5: QA Requirement for Total Gaseous Mercury (TGM) CEMS and Sorbent Trap</li> </ul> </li> <li>e) 40 CFR part 180</li> <li>f) COMS (Continuous Opacity Monitoring System)</li> </ul>
3.0	<p>EN Documents</p> <ul style="list-style-type: none"> <li>i) EN 15267 – Part 1: Certification of AMS (CEMS)</li> <li>ii) EN 15267 – Part 2: Certification of AMS (CEMS)</li> <li>iii) EN 15267 – Part 3: Certification of AMS (CEMS)</li> <li>iv) EN 14181 – Quality Assurance of AMS (CEMS)</li> <li>v) EN 14884 – Test Method AMS (CEMS) for TGM</li> </ul>
4.0	<p>UK Documents</p> <ul style="list-style-type: none"> <li>a) RM:QG-06: Calibration of PM CEMS ( Low Concentration)</li> <li>b) MCERTS : BS EN 13284: PM CEMS</li> </ul>
5.0	<p>Standard Operating Procedure for Compliance Monitoring using CEMS – Abu Dhabi</p>

Record note of discussions of the meeting taken by Hon'ble Minister of Energy, U.P. at Lucknow on 03.04.1999

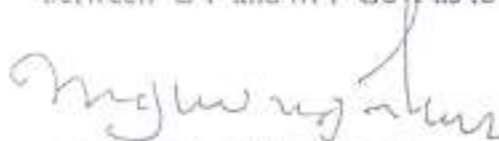
**FOLLOWING WERE PRESENT :**

1. Shri Naresh Agarwal, Hon'ble Minister of Energy, U.P.
2. Shri Atul Chaturvedi, Secretary (Energy), Govt. of U.P.
3. Shri G P Singh, Chairman, UPSEB
4. Shri Rajendra Singh, CMD, NTPC

**PRINCIPLES FOR CONSUMPTIVE WATER CHARGES FOR FUTURE**

Following principles for calculation of consumptive water charges for Rihand and Singrauli STPS to be adopted in future will be as under :-

- i) Water level may be taken on theoretical basis i.e. minimum of 830 feet and maximum of 880 feet.
- ii) T&D losses to be taken @ 12 % (Twelve percent).
- iii) Aux. Power consumption of UPSEB hydro stations viz Rihand and Obra will be taken as 0.5 %.
- iv) The energy loss will be calculated taking into consideration the actual availability of Rihand hydro station of UPSEB for the year 1998.
- v) Water charges will be payable from the date of synchronization of the units.
- vi) The per Kilowatt hour charges to be applied will be the highest average annual rate during 1998 amongst Northern Region coal based stations of NTPC and will be applicable w.e.f. 1.1.1999 for next five years. This will be revised upwards by 10% after every five years.
- vii) To provide for generation loss on account of spillover of water, the charges for consumptive use will be worked out on the basis of 3.0 ( Three ) times of the above rate in place of 2 ( Two ) times as earlier proposed. No separate payments towards spillover water will be admissible.
- viii) Water charges will be pass-through in the tariff.
- ix) M P Govt have demanded water charges from NTPC for Vindhyachal Super Thermal Power Station. It was agreed that water charges for Vindhyachal Super Thermal Power Station of NTPC located in M P will not be billed to NTPC till the matter is settled between U P and M P Govt as to who would be beneficiary of water charges.

  
( ATUL CHATURVEDI )  
Secretary ( Energy )  
Govt. of U.P.

  
( RAJENDRA SINGH )  
CMD  
NTPC

  
( G P SINGH )  
Chairman  
UPSEB



**Month wise availability of Rihand Hydro Station for year 1998**

Month	Availability as Intimated by UPSEB(as recorded In IOM ref No: NTPC:NRHQ :Comm1: 2 Dated 26/05/99 From DGM (Comm1) NRHQ Allahbad to GM (F&A).CC		No of days	Available hours
		%		
Jan-98		88.46	31	73254.24
Feb-98		96.46	28	64821.12
Mar-98		89.86	31	66855.84
Apr-98		84.02	30	60494.4
May-98		97.09	31	72234.96
Jun-98		87.84	30	63244.8
Jul-98		77.81	31	57890.64
Aug-98		79.14	31	58880.16
Sep-98		71.95	30	51804
Oct-98		88.57	31	65896.08
Nov-98		80.26	30	57787.2
Dec-98		86.6	31	64430.4
<b>Year 1998</b>		<b>86.48</b>	<b>365</b>	<b>757593.8</b>



केन्द्रीय विद्युत विनियामक आयोग  
CENTRAL ELECTRICITY REGULATORY COMMISSION



नई दिल्ली  
NEW DELHI

./Petition No.: 319/RC/2018

/Coram:

. के. पुजारी, /Shri P. K. Pujari, Chairperson  
डॉ. एम. के. अय्यर, / Dr. M.K. Iyer, Member  
आई. एस. झा, / Sh. I.S. Jha, Member

आद दिनांक /Date of Order: 28<sup>th</sup> of August, 2019

**IN THE MATTER OF**

Automatic Generation Control (AGC) implementation in India

**AND**

**IN THE MATTER OF**

National Load Despatch Centre  
Power System Operation Corporation Ltd.  
(A Government of India Enterprise) B-9,  
Qutab Institutional Area, Katwaria Sarai  
New Delhi-110016

...Petitioner

**VERSUS**

1. NTPC Limited,  
Plot No A-8A,  
Sector-24, Noida,  
Uttar Pradesh, India- 201301
2. NHPC Limited,  
N.H.P.C Office Complex,  
Sector-33, Faridabad – 121003, Haryana

3. Central Transmission Utility,  
Saudamini, Plot No. 2,  
Sector-29, Gurgaon-122 001 (Haryana)
4. SJVN, Shakti Sadan,  
SJVN Corporate Office Complex, Shanan-171006
5. THDC INDIA LIMITED, Corporate Office,  
Rishikesh, Pragatipuram, By Pass Road,  
Rishikesh – 249201, Utrakhand
6. Aravali Power Company Private Ltd.,  
Indira Gandhi Super Thermal Power Station (IGSTPS),  
Jharli, District Jhajjar, Haryana-124141
7. N T E C L Vallur Thermal Power Project,  
P.O.: Vellivoyal Chavadi,  
Ponneri Taluk, Tiruvallur Dist, Chennai- 600 103
8. NLC India Limited,  
Block - 1, Neyveli - 607 801,  
Cuddalore District, Tamilnadu
9. NTPC-SAIL Power Company Limited –  
Corporate Centre, 4th Floor, Nbcc Tower,  
15 Bhikaiji Cama Place, New Delhi, Delhi – 110066
10. Coastal Gujarat Power Ltd,  
Tata Power Co. Ltd., Backbay Rec Station,  
148, Lt. Gen. J.Bhonsle Marg,  
Nariman Point, Mumbai 400 021
11. Sasan Power Limited,  
Reliance Centre, Near Prabhat Colony,  
Off Western Express Highway,  
Santacruz East, Mumbai – 400055, Mumbai
12. Ratnagiri Gas and Power Pvt. Ltd.,  
Registered Office, NTPC Bhawan,  
Core-7, SCOPE Complex,  
7, Institutional Area, Lodi Road,  
New Delhi-110003, India
13. North Eastern Electric Power Corporation Ltd,  
Brookland Compound, Lower New Colony,  
Shillong-793003, Meghalaya, India.

14. ONGC Tripura Power Company Ltd.  
6th Floor, A Wing, IFCI Towers, 61,  
Nehru Place, New Delhi – 110019
15. Bharatiya Rail Bijlee Company Ltd.  
Nabinagar, Khera Police Station  
Dist.-Aurangabad, Bihar-824303

**Northern Region**

16. Delhi Transco Limited,  
33kV, Sub Station Building,  
Minto Road, New Delhi -110002.
17. Haryana Vidyut Prasaran Nigam Limited,  
XEN/LD & PC, SLDC Complex,  
Sewah Panipat -132103.
18. Himachal Pradesh State Electricity Board,  
HP Load Despatch Society,  
SLDC complex, Totu,  
Shimla -171011.
19. Jammu & Kashmir Power Development Department,  
SLDC Building,  
220 kV Grid Station Narwal,  
Jammu -180007.
20. Punjab State Transmission Corporation Limited,  
Ablowal, Patiala, SLDC Building,  
Near 220KV Grid Substation,  
PSTCL, Ablowal,  
Patiala -147001
21. Rajasthan Rajya Vidyut Prasaran Nigam Limited,  
State Load Despatch Centre,  
Rajasthan Rajya Vidyut Prasaran Nigam Limited,  
Ajmer Road, Heerapura,  
Jaipur -302024
22. Uttar Pradesh Power Transmission Corporation Limited,  
Power System, 5th Floor,  
Shakti Bhawan, 14 Ashok Marg,  
Lucknow -226001
23. Power Transmission Corporation of Uttarakhand Limited,  
400 KV Substation,  
Veerbhadra, Rishikesh -249202

24. General Manager,  
Singrauli Super Thermal Power Station,  
Shakti Nagar, UP-231222
25. General Manager,  
Singrauli Solar PV Power Project,  
Shakti Nagar, UP-231222
26. General Manager,  
Singrauli Small Hydro Power Project,  
Shakti Nagar, UP-231222
27. General Manager,  
Rihand Super Thermal Power Station-I,  
Rihand Nagar, UP-231223
28. General Manager,  
Rihand Super Thermal Power Station-II,  
Rihand Nagar, UP-231223
29. General Manager,  
Rihand Super Thermal Power Station-III,  
NTPC Rihand, Dist-Sonbhadra,  
UP - 231223
30. General Manager,  
Dadri, National Capital Power Project,  
Dadri Dhaulana Road,  
Distt. Gautam Buddh Nagar,  
UP-201008
31. General Manager,  
Dadri – Stage - II,  
National Capital Power Project,  
Dadri Dhaulana Road,  
Distt. Gautam Buddh Nagar,  
UP-201008
32. General Manager,  
Firoz Gandhi Unchahar Thermal Power Project-I,  
Unchahar, Distt. Rai bareilly,  
UP
33. General Manager,  
Firoz Gandhi Unchahar Thermal Power Project-II,  
Unchahar, Distt. Raibareilly,  
UP

34. General Manager,  
Firoz Gandhi Unchahar Thermal Power Project-III,  
Unchahar, Distt. Raibareilly,  
UP
35. General Manager,  
Firoz Gandhi Unchahar Thermal Power Project-IV,  
P.O. Unchahar, Dist. : Raibareilly (U.P.) Pin-229406
36. General Manager,  
Firoz Gandhi Unchahar Solar PV Power Project,  
Unchahar, Distt. Raibareilly, UP
37. General Manager,  
Dadri Gas Power Project,  
Dhaulana Road, Distt.  
Gautam Buddh Nagar,  
UP-201008
38. General Manager,  
Dadri Solar PV Power Project,  
Dhaulana Road, Distt.  
Gautam Buddh Nagar,  
UP-201008
39. General Manager,  
Auraiya Gas Power Project( Gas Fired, RLNG Fired, Liquid Fired),  
Dibiyapur, Distt Etawah,  
UP-206244
40. General Manager,  
Anta Gas Power Project (Gas Fired, RLNG Fired, Liquid Fired),  
Distt. Baran,  
Rajasthan-325209
41. General Manager, Koldam HPP, NTPC,  
Post- Barman, Dist- Bilaspur,  
Himachal Pradesh 174013
42. Station Director,  
Narora Atomic Power Station,  
Narora, Distt. Bulandshahar,  
UP-202389
43. Station Director,  
Rajasthan Atomic Power Station-B,  
Anu Shakti Vihar, Kota,  
Rajasthan-323303

44. Station Director,  
Rajasthan Atomic Power Station-C, (RAPS-5&6)  
PO-Anushakti, Kota,  
Rajasthan-323304
45. General Manager,  
Bairasiul Hydro Electric Project,  
NHPC Ltd., Surangini,  
Distt. Chamba, HP-176317
46. General Manager,  
Salal Hydro Electric Project,  
NHPC Ltd,  
Jyotipuram, Distt. Udhampur,  
J&K-182312
47. General Manager,  
Tanakpur Hydro Electric Project,  
NHPC Ltd.,  
Banbassa, Distt. Champawa,  
Uttarakhand-262310
48. General Manager,  
Chamera-I Hydro Electric Project,  
NHPC Ltd.,  
Khairi, Distt.  
Chamba, HP-176310
49. General Manager,  
Uri Hydro Electric Project,  
NHPC Ltd.,  
Mohra, Distt. Baramulla,  
J&K-193122
50. General Manager,  
Chamera-II Hydro Electric Project,  
NHPC Ltd.,  
Karian, Distt. Chamba,  
HP-176310
51. General Manager,  
Chamera-III Hydro Electric Project,  
NHPC Ltd., Dharwala, Distt.- Chamba,  
HP-176311
52. General Manager,  
Dhauliganga Hydro Electric Project,  
NHPC Ltd., Tapovan, Dharchula, Pithoragarh,  
Uttarakhand-262545

53. General Manager,  
Dulhasti Hydro Electric Project,  
NHPC Ltd.,  
Chenab Nagar, Distt. Kishtwar,  
J&K-182206
54. General Manager,  
Uri 2 Hydro Electric Project, NHPC Ltd.,  
Nowpora, Distt. Baramulla, J&K-193123
55. General Manager,  
Parbati HE Project Stage-III Behali,  
P.O- Larji Kullu 175122 Himachal Pradesh
56. Chief Engineer,  
Sewa-II Power Station,  
NHPC Ltd. Mashke, post Bag no-2,  
P.O-Khari, Dist: Kathua, Jammu and Kashmir -176325
57. The Chief Engineer (Electrical),  
Kishanganga HEP,  
Office cum Residential colony, Kralpora,  
Distt: Bandipora, Jammu and Kashmir-193502
58. Chief Engineer (Elect.),  
Parbati-II HEP, Electrical & Mechanical complex,  
Sainj, Distt. Kullu, Himachal Pradesh -175134
59. General Manager,  
Napha Jhakhri HEP,  
Satluj Jal Vidyut Nigam Ltd. Power Project,  
Jhakri, Rampur, Distt. Shimla, HP-172201
60. General Manager,  
Rampur HEP,  
Satluj Jal Vidyut Nigam Ltd. Power Project,  
Jhakri, Rampur, Distt. Shimla, HP-172201
61. General Manager,  
Tehri Hydro Development Corporation Ltd.,  
Pragatipuram, Rishikesh,  
Uttarakhand-249201
62. General Manager,  
Koteshwar HEP, THDCIL, Koteshwerpuram,  
Post Office- Pokhari Tehri Garwal, Uttarakhand - 249146



63. Director (Power Regulation),  
Bhakra Power House, SLDC Complex,  
66 KV Substation, Industrial Area Phase-I,  
Madhya Marg, BBMB Chandigarh
64. General Manager, ADHPL,  
Village- Prini, PO -Jagat Sukh,  
Tehsil - Manali, Distt- Kullu (H.P) India.
65. General Manager,  
Indra Gandhi Super Thermal Power Project,  
PO -Jharli, Tahsil Matanhail, Dist – Jhajjar, (Haryana)-124125
66. General Manager,  
Karcham Wangtoo HEP,  
Himachal Baspa Power Company Limited,  
Sholtu Colony, PO- Tapti, Dist-Kinnaur, -172104 (HP)
67. Director,  
Malana - II Everest Power Pvt. Ltd,  
Hall-A/ First Floor Plot No-143-144,  
Udyog Vihar, Phase -4, Gurgaon, Haryana 122015
68. Company Secretary,  
Shree Cement Thermal Power Project Bangurnagar,  
Beawar , Dist Ajmer, Rajasthan -305901
69. Company Secretary,  
Greenco Budhil HPS Ltd,  
Plot No. 1367 Road No- 45,  
Jubilee Hills, Hyderabad- 500033
70. Project General Manager,  
Himachal Sorang Power Limited, D-7,  
Lane-I, Sector-I, New Shimla, Shimla, H.P.-171009.
71. General Manager,  
Sainj HEP, HPPCL, Larji,  
Distric - Kullu, Himachal Pradesh, 175122

### **Western Region**

72. MSLDC,  
Airoli, Navi Mumbai, Airoli,  
Thane - Belapur Road, Navi Mumbai-400708.
73. State Load Despatch Centre,  
MPPTCL, Jabalpur,  
O/o Chief Engineer (SLDC), MPPTCL, Nayagaon, Jabalpur

74. SLDC Gotri Vadodara,  
Gujarat, 132kV Gotri s/s compound,  
Opposite Kalpvruk Complex,  
Gotri Road,  
Vadodara
75. Chhattisgarh State Load Despatch Centre,  
C.E(LD), State Load Despatch Centre,  
CSPTCL, Daganiya-HQ,  
Raipur, Chhattisgarh
76. General Manager, Korba STPS STG (I& II),  
National Thermal Power Corporation,  
P.O. Vikas Bhavan, Jamnipali,  
Korba(Distt.),  
Chhattisgarh- 495 450.
77. General Manager,  
Korba STPS STG (III),  
National Thermal Power Corporation,  
P.O. Vikas Bhavan, Jamnipali,  
Korba(Dist),  
Chhattisgarh- 495 450.
78. General Manager,  
STAGE-I, Vindhyachal STPS,  
National Thermal Power Corporation of India Ltd,  
P.O Vindhyanagar, Sidhi(Dist),  
Madhya Pradesh – 486 885
79. General Manager,  
STAGE-II, Vindhyachal STPS,  
National Thermal Power Corporation of India Ltd,  
P.O Vindhyanagar, Sidhi(Dist),  
Madhya Pradesh – 486 885
80. General Manager,  
STAGE-III, Vindhyachal STPS,  
National Thermal Power Corporation of India Ltd,  
P.O Vindhyanagar, Sidhi(Dist),  
Madhya Pradesh – 486 885
81. General Manager,  
STAGE-IV, Vindhyachal STPS,  
National Thermal Power Corporation of India Ltd,  
P.O Vindhyanagar, Sidhi(Distt.),  
Madhya Pradesh – 486 885

82. General Manager,  
Kawas Gas Power Project,  
National Thermal Power Corporation of India Ltd,  
P.O. Aditya Nagar,  
Surat- 394 516
83. General Manager,  
Gandhar Gas Power Project,  
National Thermal Power Corporation of India Ltd,  
P.O. NTPC Township, Bharuch(Distt.),  
Gujarat- 392 215
84. General Manager,  
SIPAT TPS Stg-I,  
National Thermal Power Corporation of India Ltd,  
SIPAT, Chhattisgarh.
85. General Manager,  
SIPAT TPS Stg-II,  
National Thermal Power Corporation of India Ltd,  
SIPAT, Chhattisgarh.
86. General Manager,  
Mouda STPP,  
NTPC Ltd,  
Mouda Ramtek Road,  
P.O.Mouda, Nagpur (Dist),  
Maharashtra
87. General Manager ,  
2 X 135 MW Kasaipali Thermal Power Project,  
ACB (India) Ltd.  
District - Korba  
Chhattisgarh Chakabura 495445
88. General Manager,  
Bharat Aluminium Co. Ltd,  
Captive Power plant-II,  
BALCO Nagar Chhattisgarh, Korba 495 684
89. Executive Director,  
Costal Gujarat Power Ltd,  
Tunda Vandh Road, Tunda Village, Mundra,  
Gujarat Kutch 370435
90. Executive Director,  
DB Power,  
Village - Baradarha, Post - Kanwali,  
Dist - Janjgir, Champa, Chhattisgarh Baradarha 495695

91. Executive Director,  
Jindal Power Ltd. Stg-I,  
OP Jindal STPP, PO-Tamnar,  
Gjarghoda Tehsil,  
Chhattisgarh District - Raigarh, 496107
92. Executive Director,  
Jindal Power Ltd. Stg-II,  
OP Jindal STPP,  
PO-Tamnar,  
Gjarghoda Tehsil,  
Chhattisgarh District - Raigarh, 496107
93. Executive Director,  
Plot No Z-9,  
Dahej SEZ Area (Eastern side),  
Dahej, Taluka-Vagra, Gujarat Dist-Bharuch, 392130
94. Executive Director,  
EMCO Power Ltd,  
Plot No B-1, Mohabala MIDC Growth Center  
Post Tehsil - Warora, Dist Chandrapur-Maharashtra 442907
95. Executive Director,  
ESSAR POWER MP LTD.  
Village Bandhora,  
Post Karsualal, Tehsil Mada,  
Distt. Singrauli, Madhya Pradesh-486886
96. General Manager,  
GMR CHHATTISGARH ENERGY LTD  
Skip House, 25/1, Museum Road  
Karnataka Banglore 560025
97. Managing Director,  
Jaypee Nigri Super Thermal Power Project,  
Nigri District, Madhya Pradesh  
Singrauli 486668
98. Executive Director,  
DCPP, OP Jindal STPP,  
PO-Tamnar, Gjarghoda Tehsil,  
Chhattisgarh District - Raigarh, 496107
99. Station Director,  
Nuclear Power Corporation of India ltd,  
Kakrapara Atomic Power Station,  
PO - via Vyara, Gujarat Dist - Surat 395651

100. Station Director,  
Tarapur Atomic Power Station 1&2,  
Nuclear Power Corporation of India Ltd,  
P.O. TAPP, Thane(Dist),  
Maharashtra- 401 504
101. Station Director,  
Tarapur Atomic Power Station 3&4,  
Nuclear Power Corporation of India Ltd,  
P.O. TAPP, Thane (Distt.),  
Maharashtra- 401 504
102. Managing Director,  
Korba West Power Co. Ltd.,  
Village – Chhote Bhandar,  
P.O. - Bade Bhnadar,  
Tehsil - Pussore,  
District - Raigarh,  
Chhattisgarh Raigarh 496100
103. Managing Director,  
KSK Mahanadhi,  
8-2-293/82/A/431/A, Road No 22 Jubilee Hills  
Andhra Pradesh Hyderabad 500033
104. General Manager,  
LANCO Power Ltd,  
Plot No - 397, Phase -III, Udyog Vihar, Haryana  
Gurgaon 122016
105. General Manager,  
NTPC-SAIL Power Company Private Ltd,  
Puranena Village, Chhattisgarh Dist - Durg,  
Bhilai 490021
106. General Manager,  
Ratnagiri Gas & Power Pvt Ltd,  
2nd Floor, Block-2, IGL Complex,  
Sector-126, Expressway, Uttar Pradesh  
Noida 201304
107. Managing Director,  
Sasan Power Ltd,  
DAKC, I Block, 2nd Floor, North Wing,  
Thane Belapur Road, Koparkhairana Maharashtra  
New Mumbai 400710

108. Managing Director,  
Vandana Vidyut Bhavan,  
M. G. Road  
Chhattisgarh Raipur 492001
109. Managing Director,  
RAPP Transmission Company Limited,  
Mira Corporate Suites,  
1&2 Ishwar Nagar,  
Okhla crossing,  
Mathura road,  
New Delhi, 110065
110. General Manager,  
LARA,  
National Thermal Power Corporation of India Ltd,  
Chappora, PO-Pussora,  
Raigarh, Chhattisgarh.
111. General Manager,  
Solapur,  
National Thermal Power Corporation of India Ltd,  
Western Region HQ,  
Samruddhi Venture Park,  
2<sup>nd</sup> Floor, MIDC Marol,  
Andheri East, Mumbai,  
Maharashtra.

**Eastern Region**

112. State Load Despatch Center,  
GRIDCO Colony  
PO-Mancheswar Railway Colony,  
BBSR Bhubaneshwar -751070
113. State Load Despatch Center,  
Jharkhand State Electricity Board (JSEB)  
Kushai Colony, Doranda,  
Ranchi-834002
114. SLDC-BSEB,  
Patna, Bihar State Electricity Board,  
Vidyut Bhawan, Jawaharlal Nehru Marg,  
Patna-800021
115. SLDC-W.Bengal,  
P.O. Danesh Seikh Lane,  
Andul Road  
Howrah – 711109

116. Damodar Valley Corporation,  
DVC Tower,  
VIP Road, Kolkata,  
WB 700054
117. Energy and Power Deptt.,  
Govt. of Sikkim  
Kazi Road,  
Gangtok 737 201
118. General Manager,  
Farakka Super Thermal Power Plant-I&II,  
NTPC Ltd.,  
Farakka, WB 742236
119. General Manager,  
Farakka Super Thermal Power Plant-III,  
NTPC Ltd.,  
Farakka, WB 742236
120. General Manager,  
Kahalgaon Super Thermal Power Plant-I NTPC Ltd,  
Bhagalpur Bihar 813214
121. General Manager,  
Kahalgaon Super Thermal Power Plant-II NTPC Ltd,  
Bhagalpur Bihar 813214
122. Executive Director,  
Talcher Super Thermal Power Stn-I NTPC Ltd,  
Nayapalli, Odisha 751012
123. Addl. General Manager,  
National Thermal Power Corporation Limited,  
BARH Thermal Power Station, Patna, Bihar 803213
124. GM(O&M),  
Kanti Bijlee Utpadan Nigam Limited  
Muzaffarpur Thermal Power Station Bihar Muzaffarpur 843130.
125. The General Manager(O&M),  
Bharatiya Rail Bijlee Company Ltd.  
Nabinagar,Khera Police Station Dist.-Aurangabad, Bihar-824303
126. General Manager (O&M),  
Darlipali Super Thermal Power Project NTPC Ltd.  
Odisha Darlipali,Sundergarh 770072.(upcoming)

127. Chairman, Damodar Valley Corporation  
DVC Tower, VIP Road West Bengal Kolkata 700054  
(Not an ISGS but have many generating units)
128. Chief Engineer (Elect),  
Teesta V HEP,  
NHPC,  
Singtam, East Sikkim 737134
129. Chief Engineer,  
Rangit Hydro Electric Project NHPC,  
P.O. Rangit Nagar  
South Sikkim 737111
130. CEO,  
Maithon Power Limited  
MA-5 Gogna Colony,  
P.O: Maithon, Dhanbad,  
Jharkhand 828027
131. DGM (Electrical), Adhunik Power & Natural Resource Limited  
Village: Padampur, PS: Kandra Tata-Seraikela Road,  
Jharkhand 832105
132. GM (Power Sales & Regulatory),  
GMR Kamalanga Energy Ltd,  
Plot No.-29, Satyanagar,  
Bhubaneswar, Odissa-751007
133. Head Power & Sales,  
Jindal India Thermal Power Ltd.,  
Plot No.12, Local Shopping Complex,  
Sector-B1, Vasant Kunj, New Delhi- 110070
134. Advisor(Power),  
Ind-Barath Energy Utkal Ltd ,  
Sahajbahal, PO CgarpaliBarpali,  
Dist - Jharsuguda, Odisha , Pin – 768211
135. GM(C & RA),  
Odisha Power Generation Corporation Ltd.,  
Zone-A, 7th Floor, Fortuna Towers,  
Chandrashekharpur, Odisha Bhubaneswar 751023. (Upcoming)
136. Sr. Vice President(O&M),  
Teesta Urja Ltd.(Teesta -III HEP)  
Vijaya Building, 2nd Floor, 17 Barakhamba Road  
New Delhi New Delhi 110001



137. Asst. General Manager ,  
DANS ENERGY PVT. LTD.  
5th Floor, DLF Building No. 8,  
Tower C, DLF Cyber City, Phase – II,  
Gurgaon- 122002, Haryana
138. Chairman,  
GATI Infrastructure Ltd,  
268, UdyogVihar,  
Phase-IV, Gurgaon,  
Haryana 122001
139. President –Technical,  
Shiga Energy Private Ltd.  
5th Floor, DLF Building No.8,  
Tower C, Phase-II, Haryana Gurgaon 122002
140. VP (Commercial),  
Sneha Kinetic Power Project Private Ltd  
1366, Road no. 45, Jubilee Hills  
Telangana Hyderabad 500033

**Southern Region**

141. Andhra Pradesh State Load Dispatch Centre,  
Room No. 611, 6th Floor, A Block APTRANSCO,  
Vidyut Soudha, Khairatabad
142. State Load Despatch Centre,  
KPTCL, 28, Race course Cross Road,  
Bangalore -560009
143. State Load Despatch Centre, Kalamassery,  
Executive Engineer O/o Chief Engineer, (Transmission),  
System Operation, Kalamassery-683503
144. System Control Centre,  
Electricity Department, Puducherry,  
137, Nethaji Subhash Chandra Bose Salai,  
Electricity Department-605001
145. TANTRANSCO, SLDC, MLDC  
Block, 144 Anna Salai, Chennai-600002
146. Telangana SLDC, Chief Engineer,  
Room No 611 A Block,  
SLDC of the State of Telangana (TSSLDC),  
TSTRANSCO, Vidyut Soudha,  
Khairatabad, Hyderabad-500082

147. General Manager,  
National Thermal Power Corporation Ltd.,  
SR Headquarters II & V Floors,  
MCH Complex,  
R.P. Road, Secunderabad-500 003,
148. General Manager,  
National Thermal Power Corporation Ltd.,  
SR Headquarters II & V Floors,  
MCH Complex,  
R.P.Road, Secunderabad-500 003,
149. General Manager,  
Neyveli Lignite Corporation Ltd.,  
Corporate Office, Block-01,  
P.O. Neyveli, PIN: 607 801,  
Cuddalore Distt., Tamil Nadu State.
150. The Deputy General Manager,  
Neyveli Lignite Corporation Ltd.,  
Corporate Office, Block-01,  
P.O. Neyveli, PIN: 607 801,  
Cuddalore Dist., Tamil Nadu State.
151. The Deputy General Manager,  
Neyveli Lignite Corporation Ltd.,  
Corporate Office, Block-01,  
P.O.Neyveli, PIN: 607 801,  
Cuddalore Dist., Tamil Nadu State.
152. The Deputy General Manager,  
Neyveli Lignite Corporation Ltd.,  
Corporate Office, Block-01,  
P.O.Neyveli, PIN: 607 801,  
Cuddalore Dist., Tamil Nadu State.
153. The Station Director,  
Madras Atomic Power Station,  
Nuclear Power Corpn. Of India Ltd.,  
Kalpakkam – 603 102, Tamil Nadu State
154. The Deputy General Manager,  
Kaiga Generating Station,  
Nuclear Power Corpn. of India Ltd.,  
P.O.Kaiga, Via Karwar,  
Karnataka - 581400 , Karnataka State.

155. The Station Director,  
Kudankulam Nuclear Power Project, Unit -1  
Nuclear Power Corporation of India Ltd.,  
P.O. Kudankulam, Radhapuram Taluk Tirunelveli District,  
Tamil Nadu - 627 106
156. The Station Director,  
Kudankulam Nuclear Power Project, Unit -2  
Nuclear Power Corporation of India Ltd.,  
P.O. Kudankulam, Radhapuram Taluk Tirunelveli District,  
Tamil Nadu - 627 106
157. The Chief Operating Officer,  
LANCO- Kondapalli Power Ltd., Stage-II  
Plot No.4, Software Units Layout,  
Hitech City, Madhapur,  
Hyderabad-500 081. Andhra Pradesh State
158. The Chief Operating Officer,  
LANCO- Kondapalli Power Ltd., Stage-III  
Plot No.4, Software Units Layout,  
Hitech City, Madhapur,  
Hyderabad-500 081. Andhra Pradesh State
159. General Manager (O&M),  
NTPC Tamilnadu Energy Company Ltd.,  
Vallur Thermal Power Project,  
Vellivoyalchavadi P.O.,  
Ponneri Taluk, Tiruvallur Dist.,  
Chennai – 600103, Tamil Nadu State.
160. Sr. Vice President,  
Meenakshi Energy Pvt. Ltd.,  
Meenakshi, Plot No: 119,  
Road No: 10, Jubilee Hills,  
Hyderabad-500 033.
161. The Chief Executive Officer,  
NLC Tamil nadu Limited,  
2\*500, MW JV Thermal Power Project,  
Harbour Estate,  
Tuticorin, PIN: 628004, Tamil Nadu State.
162. Thermal Power Tech Corporation India Limited,  
SPSR Nellore, 6-3-1090,  
A-Block, 5<sup>th</sup> Floor, TSR Towers,  
Raj Bhavan Road, Somajiguda,  
Hyderabad, 5000082.

163. Sr. Vice President,  
Meenakshi Energy Pvt. Ltd.,  
Meenakshi, Plot No: 119,  
Road No: 10, Jubilee Hills,  
Hyderabad-500 033.
164. The General Manager (Projects),  
Simhapuri Energy Pvt. Ltd.,  
Madhucon Greenlands, 6-3-866/2,  
3rd Floor, Begumpet,  
Hyderabad-500016.
165. Managing Director,  
Coastal Energen Pvt. Ltd,  
7th Floor, Buhari Towers,  
4 ,Moores Road,  
Chennai, PIN: 600006, Tamil Nadu State
166. The Chief Commercial Officer (CCO)  
SEMBCORP Energy India Ltd.,  
6-3-1090, A-Block, 5th Floor,  
T.S.R Towers, Raj Bhavan Road,  
Somajiguda, Hyderabad 500082, Telangana
167. Senior General Manager,  
IL & FS Tamilnadu Power Company limited,  
C. Pudhupettai post,  
Parangipettai (via), Chidambaram(tk.),  
Cuddalore-608502, Tamil Nadu.
168. General Manager,  
Sembcorp Gayatri Power Ltd.,  
TP Gudur Mandal,  
Nellore-524344, Andhra Pradesh.

**North Eastern Region**

169. State Load Despatch Centre,  
Agartala, 79 Tilla, Kunjaban, Agartala,  
Tripura (West)
170. Department of Power,  
Government of Nagaland, SLDC Nagaland,  
Electricity Colony,  
Full Nagarjan Dimapur, Nagaland
171. Mizoram State Load Despatch Centre,  
Tuikhuahtlang, Aizawl -796001

172. State Load Despatch Centre,  
Assam, SLDC, AEGCL,  
Near 132kv Grid Sub Station,  
Kahilipara, Guwahati
173. General Manager,  
Doyang HEP, NEEPCO,  
Wokha, Nagaland
174. General Manager,  
Ranganadi HEP, NEEPCO,  
P.O. Ranganadi Proj. Dist. Subansiri,  
Ar. Pradesh-791121
175. General Manager,  
AGBPP, NEEPCO,  
Kathalguri, Tinsukia, Assam
176. General Manager,  
AGTPP, NEEPCO,  
Ramchandranagar, Agartala, Tripura
177. General Manager,  
KHANDONG HEP, NEEPCO,  
Umrangsoo, N.C.Hills, Assam
178. General Manager,  
KOPI LI HEP, NEEPCO,  
Umrangsoo, N.C.Hills, Assam
179. General Manager,  
KOPI LI-2 HEP, NEEPCO,  
Umrangsoo, N.C.Hills, Assam
180. Chief Engineer,  
NHPC  
Loktak HEP Leimatak-795124, Manipur
181. Ranganadi HEP (NEEPCO)  
Ranganadi HEP, NEEPCO Ltd.,  
Yazali, Dist. Lower Subansiri,  
Andhra Pradesh-791119
182. Managing Director,  
ONGC Tripura Power Company Ltd,  
6th Floor, A Wing, IFCI Tower-61,  
Nehru Place, New Delhi, 110019

183. General Manager,  
Bongaigaon TPP, NTPC Ltd.,  
P.O.-Salakati, Kokrajhar Dist.  
Assam-783369
184. Kameng HEP (NEEPCO),  
EMG, Kameng HEP, NEEPCO, Kimi,  
P.O.- Bhalukpong, Post Box-2, West Kameng  
Dist., Arunachal Pradesh, PIN – 790114
185. Pare HEP (NEEPCO),  
Pare HEP, NEEPCO Ltd, Sopo,  
P.O- Doimukh, Dist- Papumpare,  
Arunachal Pradesh, PIN – 791112
186. State Load Despatch Centre,  
Agartala, 79 tilla, Kunjaban,  
Agartala, Tripura (West)
187. Department of Power,  
Government of Nagalnd,  
SLDC Nagaland, Electricity Colony,  
Full Nagarjan Dimapur, Nagaland.
188. Mizoram State Load Despatch Centre,  
Tuikhuahtlang, Aizawl -796001
189. State Load Despatch Centre,  
Assam, SLDC, AEGCL,  
Near 132kv Grid Sub Station,  
Kahilipara, Guwahati

**...Respondents**

190. Member Secretary,  
Northern Regional Power Committee  
18-A, Shaheed Jeet Singh Sasanwal Marg,  
Katwaria Sarai,  
New Delhi-110 016
191. Member Secretary,  
Southern Regional Power Committee  
29, Race Course Cross Road,  
Bangalore-560 009.
192. Member Secretary,  
Eastern Regional Power Committee  
14, Golf Club Road,  
Kolkata-700 033

193. Member Secretary,  
Western Regional Power Committee  
F-3, MIDC Area,  
Andheri (East),  
Mumbai-400 093
194. Member Secretary,  
North Eastern Regional Power Committee  
NERPC Complex,  
Dong Parmaw,  
Lapalang,  
Shillong-6
195. Chief Engineer (Grid Management),  
Central Electricity Authority Sewa Bhawan,  
R.K.Puram,  
New Delhi-110 022.
196. Chief Engineer  
(National Power Committee),  
Central Electricity Authority,  
18-A, Shaheed Jeet Singh Sasanwal Marg,  
Katwaria Sarai, New Delhi-110 016

...Proforma Respondents

**Parties Present:** Shri S.R. Narasimhan, NLDC  
Shri N. Nallarasan, NLDC  
Shri Phanisankar Chilakuri, NLDC

### ORDER

The Petitioner, National Load Dispatch Centre (NLDC) is the system operator at the national level and has made the following prayers:

- a) *Direct all ISGS stations whose tariff is regulated / determined by CERC to install equipment as per the requirement mentioned in the Petition at the unit control rooms for transferring the required data for AGC by 30th June 2019.*
- b) *Direct all ISGS stations whose tariff is regulated / determined by CERC to ensure communication from nearest wide band node to the RTU in the unit control room by 30th June 2019.*
- c) *Direct Central Transmission Utility (CTU) to ensure communication availability*

*from NLDC/RLDCs to nearest wide band node/switchyard for the generating stations in a redundant and alternate path ensuring route diversity and dual communication by 30th June 2019.*

- d) Decide the mark up price for secondary regulation service through AGC.*
- e) Allow NLDC/RLDCs to test, tune and operate the AGC system for providing the signals to the power plants as and when they comply with the directions above.*
- f) Allow any variation in the generation during testing phase to be settled under DSM.*
- g) Allow NLDC/RLDCs to put all the Phase-I plants under continuous operation on AGC before 31st December 2019.*
- h) Direct Phase-II plants in the detailed modus operandi to provide infrastructure at RTU/internal communication.*
- i) Road map for implementation of AGC at RLDCs in future may be accepted.*
- j) Pass any other orders as this Commission may deem fit and proper under the given facts and circumstances.*

## **SUBMISSIONS OF THE PETITIONER**

2. The Petitioner has submitted that vide Order dated 13.10.2015 in petition no 11/SM/2015, the Commission gave the roadmap for ‘Operationalization of Generation Reserves in the Country’. The Order mandated that each region should maintain primary, secondary and tertiary reserves. The objective of the Order was to introduce ‘Spinning Reserves’ in the country, which is one of the important components for ensuring grid security, quality and reliability by achieving adequacy of supply and maintaining load-generation balance. All generating stations that are regional entities were directed to ‘must plan’ operationalization of Automatic Generation Control (AGC) along with reliable telemetry and communication by 01.04.2017. The Commission noted that this would entail a one-time expense for the generators to install requisite software and firmware, which could be compensated for and that the communication infrastructure must be planned by the Central Transmission Utility (CTU) and developed in parallel, in a cost-effective manner.

3. The Commission directed the Petitioner to upload the detailed modus operandi on ‘Operationalization of Spinning Reserves’ on NLDC website and seek comments from the



stakeholders by 11.08.2017 and file the comments received from stakeholders within two weeks thereafter. Accordingly, the report was also uploaded on the NLDC website.

4. The Petitioner has submitted that the detailed implementation plan was also discussed in the National Power Committee (NPC) meeting held at Indore on 08.09.2017. An agenda on 'secondary frequency control' was sent to NPC for discussion in the respective Regional Power Committees (RPC). The Expert Group constituted (in May 2017) by the Commission to review and suggest measures for bringing power system operation closer to National Reference Frequency, recommended that the frequency control continuum as given in their report may be adopted and included as part of the Grid Code (hereinafter referred to as 'IEGC') through an amendment to Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010. Further, it was recommended that AGC must be implemented throughout the country at the earliest in line with the Commission's recommendation of treating a region as a balancing area and that the Performance Metrics for AGC payments may be introduced once sufficient experience is gained through the pilot project (carried out at Dadri generating station of NTPC). AGC at the intra-State level, particularly for large states, was to be implemented in line with directions by the Appropriate Commission(s).

5. The Petitioner has submitted that the Commission in its order dated 06.12.2017 in Petition No. 79/RC/2017 approved the Commissioning of the AGC Pilot Project between NLDC and NTPC Dadri Stage-II and various developments in the AGC Pilot were acknowledged by the Commission. Vide the above order, the Commission also directed that similar pilot projects may be replicated by NLDC, in at least one other regional grid of the country. Dadri Stage-II was successfully taken under remote as a part of AGC pilot project from NLDC from 1225 Hrs. of 04.01.2018 and is under continuous operation. Further, data is being submitted by NLDC to NRPC in the agreed format on a weekly basis.

6. The Petitioner has submitted that Karnataka Power Transmission Corporation Limited (KPTCL) together with (United States Agency for International Development (USAID) has proposed AGC pilot project on Varahi and Sharavathi Hydro Power Plants. On 10.02.2018, SRLDC, USAID and NLDC visited NP Kunta solar park in Andhra Pradesh for understanding the feasibility of AGC implementation. USAID agreed to take the AGC implementation at NP Kunta Solar power project under 'Greening the Grid' (GtG)-RISE

project. The matter was also discussed in the 33<sup>rd</sup> meeting of SRPC held on 17.02.2018 at Puducherry. A workshop was organised by USAID and NLDC on 15.05.2018 at Andhra Pradesh SLDC, Vijayawada to explain the basic architecture of the AGC project and the proposed project at NP Kunta to stakeholders.

7. On 18.05.2018, Letter of Award was issued by NTPC Simhadri to M/S Siemens for the supply, testing and commissioning of software and hardware and implementation of the AGC pilot project at NTPC-Simhadri. AGC on Barh (Eastern Region), Bongaigaon (North Eastern Region) and Mauda (Western Region) are power plants of NTPC under contracting phase of implementation.

8. The Petitioner has submitted that it has started up-gradation of SCADA from October 2017. AGC set up is envisaged to be capable of sending and receiving AGC signals to all Regional Entity generating stations to start with for the first time in India. The RLDCs' SCADA/EMS system was recently upgraded before AGC was notified through the Commission's Order. Hence, considering a region as a balancing area, AGC is being implemented through NLDC, which is a unique experiment as five (5) AGCs are being operated from a single control center at NLDC. Further, as a next step, discussion could start on the roadmap to progressively shift AGC control to RLDCs over the next 3-5 years. At the intra-regional level, discussion at RPC level is on for introducing AGC at least in the few intra-State generators in RE-rich States.

9. The Petitioner has submitted that the CERC (Communication System for inter-State transmission of electricity) Regulations, 2017 has provided detailed roles and responsibilities of various organizations with respect to communication. NLDC was given the responsibility for preparation and issuance of guidelines with the approval of the Commission on the interfacing requirements in respect of terminal equipment, RTUs, SCADA, PMUs, Automatic Generation Control (AGC), Automatic Meter Reading (AMR), Advanced Metering Infrastructure (AMI), etc. and for data communication to the respective control centres. The Generic Technical Specifications for AGC connecting equipment that has to be procured by the power plants were prepared by the Petitioner based on the experience of the AGC pilot project (at Dadri) for full scale implementation of AGC. Generating stations have to install AGC connecting equipment at the unit control rooms for transferring the required set of data for AGC.

10. The Petitioner has submitted that Regional Secondary Reserves quantum, mandated by the Commission are given as below:

Secondary Reserves quantum needed in MW (Region wise)	
NR	800
ER	660
WR	800
SR	1000
NER	363
Total	3623

11. The Petitioner has suggested that the detailed implementation plan pan-India for AGC implementation is proposed in the following manner:

Phase-I

(a) Inter-State Generating Stations (ISGS) generators, whose tariff is regulated/ adopted by the Commission, are proposed to be made capable of participating in ‘Secondary Control’ since the tariff for these generators is already available and there are fewer communication issues. This is also because in case of these generating stations, Ancillary Services/ AGC Pilot Project Framework is available for settlement (without the refund of fixed charges as mentioned in the Half Yearly Feedback on Ancillary Services and CERC Order on AGC Pilot Project) and, therefore, its implementation is expected to be dispute free. However, limiting AGC implementation to only these generating stations may not be sufficient to ensure availability of the full quantum of reserves as mandated by the Commission.

Phase-II

(b) All Regional Entity generating stations scheduled by RLDCs (over and above the Phase-I power stations mentioned above) can be made capable of participating in secondary control. However, Declared Capability (DC) at present is not taken from these generating stations by RLDCs. Some Independent Power Producers (IPP) have part Power Purchase Agreements with discoms/ traders while part capacity is untied, and power is sold under merchant contracts. Tariff for these generators has to be

decided and agreed upon *a priori* for secondary control participation of these generators. DC and Schedule have to be obtained from these generators similar to Central Sector generating stations for reserve estimation. Many of these regional entity generating stations operate in the day-ahead energy market and the day-ahead prices may have a significant role in respect of these generating stations as far as availability to the grid at any instant is concerned. Low prices in the Day-Ahead Market (DAM) on a sustained basis may lead to many of these units remaining off the grid. The following, inter-alia, may be the requirements for the Regional entity generating stations equipped under Secondary Control:

- The generating stations shall bear the cost of secondary control hardware at the generating station end including the cost of the fibre optic cable from the generating station control room to the nearest communication node.
- Share DC and Schedule like ISGS generators on day ahead basis and subsequent revisions with RLDCs.
- Payment for energy and incentive will be as decided by the Commission.
- The generating stations shall have working control systems for turbine, boiler and governor. Governor response plots/ graphs of past incidents have to be submitted to concerned RLDC.
- Existing wide band communication node to be established within a radius below 30-40 km from the plant to communicate with the nearest RLDC. Distance need not be a binding limitation and the connectivity of the generating station with the communication node can be seen on case to case basis based on merit.

12. The Petitioner has submitted that Primary, secondary and tertiary generation reserves are required for frequency control and ensuring reliable operation of the grid, particularly under high Renewable Energy (RE) penetration. Primary control provision has been existing in the IEGC but its enforcement has been an issue that has been highlighted before the Commission. Secondary control had been absent in the system so far while tertiary frequency control was introduced only in April 2016 through the Central Electricity Regulatory Commission (Reserves Regulation Ancillary Services) Regulations, 2016 (or for short, RRAS Regulations). Through Order dated 16<sup>th</sup> July 2018 in Petition No. 07/SM/2018, Fast Response Ancillary Services or FRAS was ordered by the Commission for central sector hydro stations and is under implementation phase.

13. The Petitioner has submitted that the following issues become important when one looks at the entire continuum of frequency control:

- i. Ensuring accurate load forecasting and Renewable Energy (RE) forecasting: This is the first step towards reliability as generating units need to get committed based on the forecasts. Starting from Discom level, the forecasts need to be aggregated for the State at SLDCs level, at RLDCs for the regional level and at NLDC for the All-India level.
- ii. Evaluating Area Control Error (ACE) of each control area: Bias may be taken as equal to Frequency Response Characteristics (FRC) of the State in past ten events. For ACE, high quality measurement of line flows and frequency at 10 seconds or better periodicity at LDCs is a must. Further, seamless transfer of schedule data from off-line systems to SCADA must be ensured. RLDCs are already bringing forth the non-availability of real time data in the RPC forums and this needs to be addressed promptly.
- iii. Primary Response: The SLDCs must also monitor the primary response from the generating units within the State and report to the respective SERCs as directed by CERC vide its order dated 31<sup>st</sup> July 2017 in Petition No. 84/MP/2015.
- iv. Measurements: For AGC, high quality measurements are needed for inter-regional tie lines and generating stations under AGC. As stated above, periodic monitoring of the data quality needs to be done at the RPC forums and chronic problems of non-availability of data are addressed promptly so that real time operation is smooth.
- v. Fiber Optic Communication: Fiber optic communication from Regional Entity generating station to nearest CTU node and from there on to RLDCs/ NLDC is a must and it could be closely monitored through the RPC forums. This is required irrespective of whether we have a regulated system of secondary reserves procurement or a market based one.
- vi. Participation: ACE is allocated to the generating stations under AGC based on the selected participation factor mode in the AGC software. The participation of each generating station will be calculated by the AGC software based on the weightage assigned to different attributes of the plant and the grid. Spinning reserve availability, ramp rate and variable cost of the generating station are the important attributes that are typically considered. In case of inter-/ intra-regional transmission constraints during

outages, certain plants may not be able to participate in AGC till normalization of transmission system.

14. The Petitioner has submitted that ‘Spinning Reserves’ viz. DC on bar minus schedules available in real time in ISGS is currently used for rescheduling/ tertiary reserves by States, tertiary frequency control through Reserves Regulation Ancillary Services and now being envisaged for secondary control through AGC. It is also available for primary control though the IEGC clearly specifies that the schedules should not exceed capacity on bar less Normative Auxiliary Consumption. This ensures that even if the power plant is fully scheduled, the overload capacity and margins in auxiliary consumption is able to provide primary response.

15. The Petitioner has submitted that after the forecast of load and RE generation, the scheduling of conventional generation resources by the States assumes importance. Here, apart from scheduling, the States also need to indicate the amount of hot spinning reserves it is holding. The reserves could be held either within the State or at the ISGS where the State has a share but it should be replenished whenever there is a contingency such as a generating unit tripping within the State. Unless such a mechanism is in place, the secondary control would not work as all the reserves would get depleted quickly. DC on bar less the schedules equals the hot spinning reserves. It was observed that hot spinning reserve gets depleted daily during the morning and evening peak hours when States requisition their full entitlement. Under this situation, the State utilities ought to have reserves elsewhere within the State.

16. The Petitioner has submitted that on 06.09.2018, the Commission has issued a discussion paper on ‘*Redesigning Ancillary Services Mechanism in India*’ and comments were invited from stakeholders. The Petitioner is of the view that the physical infrastructure in terms of communication and suitable hardware/ software at the power plants is sine qua non for secondary control through AGC irrespective of whether the same is regulated or market-based. The only variable is the quantum of secondary reserves required on day to day basis.

### **PROCEEDINGS DURING HEARING**

17. The Petition was admitted on 25.10.2018. During the hearing on 31.1.2019, the

Petitioner submitted that the present petition has been filed for implementation of AGC in India.

18. The Petitioner further submitted that the Commission in its Order dated 06.12.2017 in Petition No. 79/RC/2017 approved the commissioning of AGC pilot project between NLDC and NTPC Dadri Stage-II and the Commission also directed that similar pilot projects may be replicated by NLDC, in at least one other regional grid of the country. Accordingly, one plant in each region has been identified and AGC has also been commissioned in Simhadri and Mauda generating station.

19. The Petitioner requested the Commission to direct ISGS to install the equipment in power plants for accepting signals from NLDC. After hearing, the Commission directed the Petitioner to furnish the Minutes of Meeting held with RPCs wherein RPCs have given their consent to the AGC pilot project. The Commission further directed the Petitioner to submit the feedback report on the operation of AGC at NTPC Dadri Stage-II along with the summary of findings of this pilot project.

20. The Petitioner has complied with the directions and submitted the minutes of the special meetings on AGC pilot project which were held with all RPCs. The Petitioner has also submitted the feedback report before the Commission on 15<sup>th</sup> February 2019, highlighting the learning from the pilot project. Several learning including those on the implementation aspects, communication protocols, generator regulation and load following capabilities, metering, monitoring, visualisation, accounting etc. were gathered via pilot project and explained in the feedback report. The Pilot projects have also provided capacity building in the field of AGC which will be useful during implementation of secondary control on a large scale.

### **ANALYSIS & DECISION**

21. We have heard the Learned Counsels for the Petitioner and have carefully perused the records.

22. The Commission is of the view that the most important responsibility of the Power System operators is to maintain reliability of the Power System by maintenance of Load -

Generation balance. For a large complex grid such as the Indian grid, primary, secondary and tertiary frequency controls are must-have tools to ensure reliability. With the objective of ensuring grid security, quality and reliability, the Commission vide Order dated 13.10.2015 in Petition no 11/SM/2015 had laid down a roadmap for '*Operationalization of Generation Reserves in the Country*'. It was envisaged that apart from the primary reserve at the national level, secondary reserve should be maintained by each region and tertiary reserve by each State. All the generating stations that are regional entities were directed to plan to operationalize AGC along with reliable telemetry and communication by 01.04.2017. The NLDC was directed to submit a detailed procedure to operationalize reserves in the country vide Order dated 13.10.2015.

23. The Commission notes that an 'outline procedure' was submitted by NLDC vide letter dated 15.12.2015 in which it was proposed to take up a pilot project with one of the NTPC plants in a region based on which further activities could be taken up. On 05.02.2016, NLDC was advised to submit the draft detailed procedure and implementation plan for operationalization of Reserves within three months of implementation of Ancillary Services Regulations. After various brainstorming sessions and meetings, NLDC submitted the detailed procedure on Operationalization of Spinning Reserves on 14.07.2017 and recommended that secondary control should be added as an Ancillary Service.

24. The Commission observes that the 'National Electricity Policy' also mandates that adequate reserves may be maintained to ensure secure grid operation. The Commission is of the view that collective efforts of the stakeholders in implementation of the AGC are a step forward and will go a long way in development of the secondary reserves in the country leading to stable frequency operation and grid security and reliability.

25. The Commission observes that the feedback on implementation of AGC submitted by NLDC highlights the need for enhancing adequacy of reserves in the country. It has been stated that valuable experience has been gained in terms of implementation aspects, communication protocols, generator regulation and load following capabilities, cyber security etc. which is useful during implementation of secondary control on a large scale. The Petitioner has submitted that from the interactions with national and international experts on power systems and experience with Ancillary Services till date, the general understanding was that different solutions as a package like load and Renewable Energy (RE) generation



forecast, proper portfolio management by the States, primary response from the generators, secondary control in the form of AGC, Ancillary Service products in different timeframes etc. are needed for stable frequency operation of the power system. No unique solution existed. NLDC report emphasised that a bad or no forecast of load/ RE generation and poor portfolio management by the State utilities would lead to heavy deviations from schedule and grid indiscipline exhausting all reserves in the system and making the system insecure. AGC effectiveness would have to be seen in this overall context. It was further highlighted in the feedback report that deployment of two-three plants under AGC with 200 MW-300 MW reserve might not be sufficient for a grid size like that of India. The Commission observes that the Expert Group on 'National Reference Frequency' in its report submitted to the Commission in November 2017 recommended that AGC must be implemented throughout the country at the earliest and Performance Metrics for such AGC payments may be introduced once sufficient experience is gained through the pilot project.

26. The Petitioner has suggested that implementation of AGC be undertaken in Phases. Under Phase-I, ISGS generators, whose tariff is regulated/ adopted by the Commission, are proposed to be made capable of participating in 'Secondary Control'. Dadri Stage-II NTPC in Northern Region was the first AGC pilot project of the country which was approved by the Commission vide Order in Petition No.79/RC/2017 on 06.12.2017 and is in continuous operation from 1225 Hrs. of 04.01.2018. The Commission also directed that similar pilot projects may be replicated by NLDC, in at least one other regional grid of the country. Accordingly, four more AGC pilot projects have been/are being implemented viz. Simhadri Stage-II in Southern Region, Mauda Stage-II in Western Region, Barh Stage-II in Eastern Region and Bongaigaon in North-Eastern Region.

27. The Commission observes that there is one-time expense involved for the generators to install requisite software and firmware. The Commission has been informed that the implementation cost i.e. placing of order for the equipment and integration cost of the four AGC pilot projects which have been commissioned viz. Dadri Stage-II NTPC in Northern Region Simhadri Stage-II in Southern Region, Mauda Stage-II in Western Region and Barh Stage-II in Eastern Region, is in the range of Rs. 30.00 lakhs to Rs. 50 lakhs per generating station. The Commission accepts the Petitioner's proposition that the cost of such equipment at generating stations for AGC implementation is not significant and ideally all ISGS stations should be AGC enabled. The Commission notes that majority of the thermal stations

regulated by the Commission have station capacity of 200 MW and above and the AGC support is mainly expected from these facilities apart from the hydro generating stations other than Run-of-River projects. It will therefore be prudent, also from the point of view of cost effectiveness to ensure that the thermal generating stations with installed capacity of 200 MW and above and all hydro stations with capacity exceeding 25 MW necessarily have the capability to provide AGC support. Further, the Commission is of the view that with due regard to the nature of the Run-of-River Hydro projects it may not be advisable to mandate such plants to provide AGC support, as this might lead to spillage/ under-utilization of water, which should be avoided. Accordingly, the Commission directs all thermal Inter State Generating Stations (ISGS) that are regional entities with installed capacity of 200 MW and above and all hydro stations with capacity exceeding 25 MW excluding the Run-of-River Hydro Projects irrespective of size of the generating station and whose tariff is determined or adopted by the Commission, to install the required software and firmware for implementation of AGC at the unit control rooms for transferring the required set of data for AGC. These regional entity generators may approach the Commission under relevant regulations and provisions of PPA for compensation of this one-time cost. The Commission also directs the Central Transmission Utility and the NLDC to commission the required communication system in parallel.

28. Once the aforesaid generating stations are AGC enabled, NLDC/ RLDCs shall be allowed to test, tune and operate the AGC system for providing the signals to the power plants. With this decision to make the ISGS stations AGC compliant, the Commission is of the view that any other pilot beyond the five pilots already initiated by NLDC, may not be needed.

29. As regards compensation for AGC support and deviation charges, it is clarified that the framework in this regard as stipulated in the Commission's Order in Petition no. 79/RC/2017 dated 06.12.2017 shall apply to the five pilot projects as also to other ISGS as and when they are AGC enabled. This arrangement shall remain in place till further Orders or till relevant regulations inter-alia on compensation for AGC services are framed by the Commission.

30. The Commission has noted the suggestions of the Petitioner for covering under Phase-II, other regional entity generators (other than those whose tariff is determined or adopted by

the Commission). The Commission is of the view that decision on this issue cannot be taken in the present petition. It needs wider consideration.

31. The Commission observes that NLDC in its report on implementation of RRAS, has recommended moving towards market-based procurement of ancillary service for a more robust design. The relevant excerpt is reproduced below:

*“Once the scope of present implementation of ancillary services is enlarged from the regulated generation stations at inter-state level to include state-level generators also, a critical mass would be achieved. Moreover as more and more generators start participating in regulation services, closer monitoring of the performance of generating stations would also be needed. The implementation would also be more robust by design and subsequently, based on the experience gained, market based procurement of ancillary services could also be thought of.”*

32. The Commission is of the view that the experience gained under RRAS underlines the need for a calibrated approach to transform the extant administered Ancillary Services mechanism to a market-based mechanism with the objective of increasing the ambit of potential providers of such services at efficient costs and enhanced reliability of the grid. The Staff Paper on *‘Redesigning Ancillary Services Mechanism in India’* issued by staff of the Commission on 06.09.2018 has highlighted that the physical infrastructure in terms of communication and suitable hardware/ software at the power plants is sine qua non for secondary control through AGC irrespective of the fact whether the same is regulated or market-based. The only variable is the quantum of secondary reserves required on day to day basis.

33. The Commission observes that given the changes in technology, generation mix and increasing decentralized generation, and locational ancillary requirements, long term bilateral contracts for ancillary support should be avoided. Same resource can provide multiple flexibility services. For example, a generator that can provide fast tertiary response can also provide slow tertiary response. An arrangement which bundles multiple flexibility services has some advantages – by allowing such generators to utilize their capabilities to serve various system requirements thereby reducing the cost of providing individual services. Accordingly, the Commission directs the staff of the Commission to initiate a comprehensive review of Ancillary services framework based on these principles, and present to the Commission for suitable decision.

## SUMMARY

34. In the interest of reliable and safe grid operation, the Commission directs that all the ISGS stations whose tariff is determined or adopted by CERC shall be AGC-enabled and the ancillary services including secondary control through AGC be implemented as per the following direction:

- i. All thermal ISGS stations with installed capacity of 200 MW and above and all hydro stations having capacity exceeding 25 MW excluding the Run-of-River Hydro Projects irrespective of size of the generating station and whose tariff is determined or adopted by CERC are directed to install equipment at the unit control rooms for transferring the required data for AGC as per the requirement to be notified by NLDC. NLDC shall notify the said requirements within one month of this order.*
- ii. All such ISGS stations whose tariff is determined or adopted by CERC shall have communication from the nearest wide band node to the RTU in the unit control room.*
- iii. The Central Transmission Utility (CTU) is directed to have communication availability from NLDC/ RLDCs to the nearest wide band node/ switchyard for the generating stations in a redundant and alternate path ensuring route diversity and dual communication.*
- iv. The NLDC is also directed to commission the required communication infrastructure.*
- v. The expenditure as a result of compliance of the above directions may be claimed as per relevant regulations or provisions of the PPA.*
- vi. The NLDC is directed to monitor implementation of the above directions so that all the ISGS stations whose tariff is determined or adopted by CERC are AGC-enabled within six months of this order.*
- vii. The framework regarding compensation for AGC support and deviation charges as stipulated in the Commission's Order in Petition no. 79/RC/2017 dated 06.12.2017 shall apply to the five pilot projects as also to other ISGS as and when they are AGC enabled. This arrangement shall remain in place till the relevant regulations inter alia on compensation for AGC services are framed by the Commission.*
- viii. NLDC/RLDCs are allowed to operate the AGC system for enabling the signals to the power plants at the earliest.*

ix. All new thermal ISGS stations with installed capacity of 200 MW and above and hydro stations having capacity exceeding 25 MW excluding the Run-of-River Hydro Projects irrespective of size of the generating station and whose tariff is determined or adopted by CERC shall mandatorily have the capability to provide AGC support.

35. With the above directions, Petition No. 319/RC/2018 stands disposed of.

Sd/-  
आई. एस. झा  
सदस्य

Sd/-  
डॉ एम. के. अय्यर  
सदस्य

Sd/-  
पी. के. पुजारी  
अध्यक्ष



ಭಾರತ ಹೆವಿ ಎಲೆಕ್ಟ್ರಿಕಲ್ಸ್ ಲಿಮಿಟೆಡ್  
 भारत हेवी इलेक्ट्रिकल्स लिमिटेड  
**Bharat Heavy Electricals Limited**

(A Government of India Undertaking)  
 ELECTRONICS DIVISION

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Ref: GM-NTPC/404/CE-HMI-02

Dated 21/09/2022

Sub: Recommendation for HMI Upgrade

The Windows XP/ Windows 7 based workstation hardware and Microsoft Operating System available at sites (projects listed in annexure-1) is out of mainstream support from OEM and Microsoft respectively. Also the support for Symantec Antivirus version 10.0 has been withdrawn by the OEM and no more security updates / virus definitions are available for that version. Hence the HMIs-maxStations are prone to vulnerabilities which can tamper the operation of plant.

HMI Upgrade for the projects mentioned in Annexure-1 is proposed due to various obsolescence in the DCS components as detailed below.

DCS Component		Existing version / model / Specification	Obsolescence
Workstation / Engineering server / Historian server	Hardware	<b>Workstation:</b> Intel Core 2 Duo processor, 1GB RAM, 146 GB SAS disk, 10 Mbps Ethernet port. <b>Server:</b> Intel Xeon dual core processor, 2 GB RAM, 3x76GB HDD, 10 Mbps Ethernet port.	Lower Processor cores and speed, lower HDD capacity and RAM requirements incompatible for latest software requirements; Lower network bandwidth of 10Mbps restricting communication speed capability of latest DCS components and attributing to latency.
	Operating System	Windows 7 SP1 / Windows XP / Windows Server 2008 R2	Operating Systems were declared End of Support by the OEM- Microsoft as mentioned below: Windows XP - April' 2014 Windows 7 - Jan' 2020 Windows Server 2008 R2 - Jan' 2020
	maxDNA software	maxDNA 4.2.1 / 4.5 / 4.5.1 / 6.0.x	These versions are not compatible with latest Operating Systems; more improved version of maxDNA- release 7.x is available suiting the latest OS.
	Antivirus Software	Symantec 10.x / Symantec 11.x / Symantec 12.x	Declared obsolete by the OEM- Broadcom and no longer updates or virus definitions are available.



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भारत हेवी इलेक्ट्रिकल्स लिमिटेड

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Network	Switch	10 Mbps backbone	Lower network bandwidth of 10Mbps restricting communication speed capability of latest DCS components.
	Network Hardening settings	No validated Network hardening settings	Not suitable for latest network requirements with hardening features.

Prakash D  
AGM (CE-Engg-I)

**Annexure-1 List of upgrade projects**

Sl No	Project Name
1	Barauni_Stage-2
2	Bongaigaon_Stage-1
3	Dadri-Thermal_Stage-1
4	Dadri-Thermal_Stage-2
5	Darlipalli_Stage-1
6	Farakka_Stage-2
7	Farakka_Stage-3
8	Gadarwara_Stage-1
9	KoldamHydro
10	Korba_Stage-1
11	Korba_Stage-3
12	Mauda_Stage-1
13	Mauda_Stage-2
14	NorthKaranpura_Stage-1
15	Rihand_Stage-2
16	Rihand_Stage-3
17	Simhadri_Stage-2
18	TANDA_Stage-1
19	TANDA_Stage-2
20	Unchahar_Stage-4
21	Vindhyachal_Stage-4
22	Vindhyachal_Stage-5
23	BRBCL Stage-I
24	Jhajjar Stage-I
25	KBUNL Stage-I
26	KBUNL Stage-II
27	NPGCL Stage-I
28	NSPCL Bhilai Stage-I
29	NTECL Stage-I





भारत सरकार  
Government of India  
विद्युत मंत्रालय  
Ministry of Power  
केन्द्रीय विद्युत प्राधिकरण  
Central Electricity Authority  
सूचना प्रौद्योगिकी एवं साइबर सुरक्षा प्रभाग  
Information Technology & Cyber Security Division  
\*\*\*\*\*

**विषय :** CEA (Cyber Security in Power Sector) Guidelines, 2021.

CEA is mandated to prepare 'Guidelines on Cyber Security' in Power Sector under the provision of regulation (10) of the Central Electricity Authority (Technical Standards for Connectivity to the Grid) (Amendment) Regulations, 2019. Guidelines on Cyber Security in Power Sector incorporating the cardinal principles has been prepared by CEA. In compliance to the provision of the above regulation, CEA (Cyber Security in Power Sector) Guidelines, 2021 are issued for compliance by all entities listed in the clause 2.3 (Applicability of the Guidelines) of the guidelines.

**Encl:** Guidelines on Cyber Security

  
07/10/21  
(V.K. Mishra)  
Secretary CEA

## CEA (Cyber Security in Power Sector) Guidelines, 2021

### 1.0 Background

- 1.1 Cyber intrusion attempts and Cyber-attacks in any critical sector are carried out with a malicious intent. In Power Sector it's either to compromise the Power Supply System or to render the grid operation in-secure. Any such compromise, may result in mal-operations of equipments, equipment damages or even in a cascading grid brownout/blackout. The much hyped air gap myth between IT and OT Systems now stands shattered. The artificial air gap created by deploying firewalls between any IT and OT System can be jumped by any insider or an outsider through social engineering. Cyber-attacks are staged through tactics & techniques of Initial Access, Execution, Persistence, Privilege Escalation, Defence Evasion, Command and Control, Exfiltration. After gaining the entry inside the system through privilege escalation, the control of IT network and operations of OT systems can be taken over even remotely by any cyber adversary. The gain of sensitive operational data through such intrusions may help the Nation/State sponsored or non-sponsored adversaries and cyber attackers to design more sinister and advanced cyber-attacks.
- 1.2 Government of India has set up the Indian Computer Emergency Response Team (CERT-In) for Early Warning and Response to cyber security incidents and to have collaboration at National and International level for information sharing on mitigation of cyber threats. CERT-In regularly issues advisories on safeguarding computer systems and publishes Security Guidelines which are widely circulated for compliances. All Central Government Ministries/ Departments and State/Union Territory Governments have been advised to conduct cyber security audit of their entire Cyber Infrastructure including websites at regular interval through CERT-In empanelled Auditors so as to identify gaps and appropriate corrective actions to be taken in cyber security practices. CERT-In extends supports to enable Responsible Entity in conducting cyber security mock drills and in assessment of their preparation to withstand cyber-attacks. The Responsible Entity must submit Reports of Cyber Audit of cyber security controls, architecture, vulnerability management, network security and periodic cyber security drills to sectoral CERT as well as CERT-In. Team of experts shall review these reports and shortcomings if any in the compliances shall be flagged by them. CERT-In on regular basis also conducts workshops and training programs to enhance Cyber awareness of all Stakeholders.
- 1.3 Ministry of Power has created 6(six) sectoral CERTs namely Thermal, Hydro, Transmission, Grid Operation, RE and Distribution for ensuring cyber security in Indian Power Sector. Each Sectoral CERT has prepared their sub-sector specific model Cyber Crisis Management Plan(C-CMP) for countering cyber-attacks and cyber terrorism. Each Sectoral CERT has circulated their model C-CMPs for preparation and implementation of organization specific C-CMP by each of their Constituent Utility.
- 1.4 All Responsible Entities, Service Providers, Equipment Suppliers/Vendors and Consultants engaged in Power Sector are equally responsible for ensuring cyber security of the Indian Power Supply System. They are to act timely upon each threat intelligence,

advisories and other inputs received from authenticated sources, for continuous improvement in their cyber security posture.

- 1.5 In the current Indian scenario though many cyber security directives and guidelines exists, but none of them are power sector specific. Ministry of Power has directed CEA to prepare Regulation on Cyber Security in Power Sector. And as an interim measures CEA has been directed to issue Guideline on Cyber Security in Power Sector, under the provision of Regulation 10 on Cyber Security in the “Central Electricity Authority (Technical Standards for Connectivity to the Grid) (Amendment) Regulations, 2019”.
- 1.6 The Guidelines on Cyber Security, in the form of Articles written below, requires mandatory Compliance by all Responsible Entities. The Guidelines shall come into effect from the date of issue by Central Electricity Authority, New Delhi.
- 2.0 Hereby the Guidelines on Cyber Security are drawn in the form of Articles for compliance by the Requester as well as User under the following provision of Regulation 10 on Cyber Security, in the “Central Electricity Authority (Technical Standards for Connectivity to the Grid) (Amendment) Regulations, 2019”.

***“The requester and the user shall comply with cyber security guidelines issued by the Central Government, from time to time, and the technical standards for communication system in Power Sector laid down by the Authority.”***

2.1 **Objective of issuing Guideline:**

- a) Creating cyber security awareness
- b) Creating a secure cyber ecosystem,
- c) Creating a cyber-assurance framework,
- d) Strengthening the regulatory framework,
- e) Creating mechanisms for security threat early warning, vulnerability management and response to security threats,
- f) Securing remote operations and services,
- g) Protection and resilience of critical information infrastructure,
- h) Reducing cyber supply chain risks,
- i) Encouraging use of open standards,
- j) Promotion of research and development in cyber security,
- k) Human resource development in the domain of Cyber Security,
- l) Developing effective public private partnerships,
- m) Information sharing and cooperation
- n) Operationalization of the National Cyber Security Policy

2.2 Within the text of these Articles, ‘**Responsible Entity**’ shall mean all:

- a) Transmission Utilities as well as Transmission Licensees,
- b) Load despatch centres (State, Regional and National),
- c) Generation utilities (Hydro, Thermal, Nuclear, RE),
- d) Distribution Utilities
- e) Generation Aggregators,
- f) Trading Exchanges,
- g) Regional Power Committees, and
- h) Regulatory Commissions.

### 2.3 Applicability:

All Responsible Entities as well as System Integrators, Equipment Manufacturers, Suppliers/Vendors, Service Providers, IT Hardware and Software OEMs engaged in the Indian Power Supply System.

### 2.4 Scope:

#### 2.4.1 Control Systems for System Operation and Operation Management.

- a) Grid Control and Management Systems,
- b) Power Plant Control Systems,
- c) Central Systems used to monitor and control of distributed generation and loads e.g. virtual power plants, storage management, central control rooms for hydroelectric plants, photovoltaic/wind power installations,
- d) Systems for fault management and work force management,
- e) Metering and measurement management systems,
- f) Data archiving systems,
- g) Parameterisation, configuration and programming systems,
- h) Supporting systems required for operation of the above mentioned systems,

#### 2.4.2 Communication System.

- a) Routers switches and firewalls,
- b) Communication technology-related network components,
- c) Wireless digital systems.
- d) Control Centre to Control Centre Communications for data exchange on ICCP. (IEC 61850/60850-5/TASE.2/)

#### 2.4.3 Secondary, Automation and Tele control technologies

- a) Control and Automation components,
- b) Control and field devices,
- c) Tele control devices,
- d) Programmable logic controllers / Remote Terminal Units, including digital sensor and actuators elements,
- e) Protection devices,
- f) Safety components,
- g) Digital measurement and metering installations,
- h) Synchronisation devices,
- i) Excitation Systems,

### 3.0 Definition of Terms:

1. **Access Management:** shall mean set of policies and procedures of the Responsible Entity for allowing Personnel, devices and IoT to securely perform a broad range of operational, maintenance, and asset management tasks either on site or remotely as laid down in Clause 5.2.5 of IS 16335.
2. **Accreditation:** shall mean the process of verifying that an organisation is capable of conducting the tests and assessments against a product/process that are required to be certified.

3. **Accreditation Body:** shall mean an organisation that has been accredited to verify the credentials and capabilities of the organisations that wish to become a certification body.
4. **Act:** shall mean the Information Technology Act, 2000 (21 of 2000)
5. **Asset:** shall mean anything that has value to the organization.
6. **Certification:** shall mean the process of verifying that a product has been manufactured in conformance with a set of predefined standards and/or regulations by an organisation, that is accredited to conduct the certification process
7. **Certification Body:** shall mean an organisation that has been accredited by an accreditation body to certify products / process against a certification scheme.
8. **Certification Scheme:** shall mean the processes, paperwork, tools, and documentation that define how a product or manufacturer is certified
9. **Chief Information Security Officer:** shall means the designated employee of Senior management level directly reporting to Managing Director/Chief Executive Officer/Secretary of the Responsible Entity, having knowledge of Information Security and related issues, responsible for cyber security efforts and initiatives including planning, developing, maintaining, reviewing and implementation of Information Security Policies
10. **Critical Assets:** shall mean the facilities, systems and equipment which, if destroyed, degraded or otherwise declared unavailable, would affect the reliability or operability of the Power Supply System.
11. **Critical System:** shall mean cyber assets essential to the reliable operation of critical asset. Critical System consists of those cyber assets that have at least one of the following characteristics:
  - a) The cyber asset uses a routable protocol to communicate outside the electronic security perimeter.
  - b) The cyber asset uses a routable protocol within a control centre.
  - c) The cyber asset is dial-up accessible.
12. **Critical Information Infrastructure:** shall mean Critical Information Infrastructure as defined in explanation of sub-section (1) of Section 70 of the Act.
13. **Cyber Assets:** shall mean the programmable electronic devices, including the hardware, software and data in those devices that are connected over a network, such as LAN, WAN and HAN.
14. **Cyber Crisis Management Plan:** shall mean a framework for dealing with cyber related incidents for a coordinated, multi-disciplinary and broad-based approach for rapid identification, information exchange, swift response and remedial actions to mitigate and recover from malicious cyber related incidents impacting critical processes.
15. **Cyber Security Breach:** shall mean any cyber incident or cyber security violation that results in unauthorized or illegitimate access or use by a person as well as an entity, of data, applications, services, networks and/or devices through bypass of the underlying cyber security protocols, policies and mechanisms resulting in the compromise of the confidentiality, integrity or availability of data/information maintained in a computer resource or cyber asset.
16. **Cyber Security Incident:** shall mean any real or suspected adverse cyber security event that violates, explicitly or implicitly, cyber security policy of Responsible Entity resulting in unauthorized access, denial of service or disruption, unauthorized use of computer resource for processing or storage of information or changes to data or information

without authorization, leading to harm to the power grid or its critical sub-sectoral elements Generation, Transmission and Distribution.

17. **Cyber Security Policy:** shall mean documented set of business rules and processes for protecting information, computer resources, networks, devices, Industrial Control Systems and other OT resources.
18. **Electronic Security Perimeter:** shall mean the logical border surrounding a network to which the Cyber Systems of Power Supply System are connected using a routable protocol.
19. **Information Security Division:** shall mean a division accountable for cyber security and protection of the Critical System of the Responsible Entity.
20. **Protected System:** shall mean any computer, computer system or computer network of the Responsible Entity notified under section 70 of the Act, in the official gazette by appropriate Government.
21. **Security Architecture:** shall mean a framework and guidance to implement and operate a system using the appropriate security controls with the goal to maintain the system's quality attributes like confidentiality, integrity, availability, accountability and assurance.
22. **Vulnerability:** shall mean intrinsic properties of something resulting in susceptibility to a risk source that can lead to an event with a consequence
23. **Vulnerability Assessment:** shall mean a process of identifying and quantifying vulnerabilities

#### 4.0 Standards

Reference	Description
ISO/IEC 15408	Common Criteria Certification Standard
ISO/IEC 17011	General requirements for accreditation bodies accrediting conformity assessment bodies
ISO/IEC 17025	General requirements for the competence of testing and calibration laboratories
ISO/IEC 21827	Systems Security Engineering - Capability Maturity Model (SSE-CMM)
ISO/IEC 24748-1	Systems and software engineering — Life cycle management — Part 1: Guidelines for life cycle management.
ISO 27001/2	Information Security Management
ISO/ IEC 27019	Information technology — Security techniques — Information Security controls for the energy utility industry
ISO/IEC 61508	Functional Safety of Electrical / Electronic / Programmable Electronic Safety-related Systems
IEC 61850	Communication networks and systems for power utility automation
IEC 62351	Standards for Securing Power System Communications
IEC 62443	Cyber Security for Industrial Control Systems
IS 16335	Power Control Systems – Security Requirements.

#### 5.0 Abbreviations

Abbreviations	Description
a) BES	Bulk Electric System

b)	CDAC	Centre for Development of Advanced Computing
c)	CEA	Central Electricity Authority
d)	CERC	Central Electricity Regulatory Commission
e)	CERT	Computer Emergency Response Team
f)	CERT-In	Indian Computer Emergency Response Team
g)	CII	Critical Information Infrastructure
h)	CISO	Chief Information Security Officer
i)	CSK	Cyber Swachhta Kendra
j)	COTS	Commercial off-the Shelf
k)	ESP	Electronic Security perimeter
l)	ICS	Industrial Control Systems
m)	ICT	Information and Communications Technology
n)	IEC	International Electro Technical Commission
o)	ISAC	Information Sharing and Analysis Centre
p)	ISD	Information Security Division
q)	ISO	International Organization for Standardization
r)	ISMS	Information Security Management System
s)	IT	Information Technology
t)	FAT	Factory Acceptance Test
u)	NABL	National Accreditation Board for Testing and Calibration Laboratories
v)	NCIIPC	National Critical Information Infrastructure Protection Centre
w)	NLDC	National Load Dispatch Centre
x)	NPTI	National Power Training Institute
y)	NSCS	National Security Council Secretariat
z)	OEM	Original Equipment Manufacturer
aa)	OT	Operational Technology
bb)	RLDC	Regional Load Dispatch Centres
cc)	SAT	Site Acceptance Test
dd)	SERC	State Electricity Regulatory Commission
ee)	SCADA	Supervisory Control and Data Acquisition Systems
ff)	SIEM	Security Information and Event Management
gg)	SLA	Service Level Agreement
hh)	SLDC	State Load Dispatch Centre
ii)	QCI	Quality Council of India

## CEA (Cyber Security in Power Sector) Guidelines, 2021

### Article 1. Cyber Security Policy.

#### **a. Cardinal Principles: The Responsible entity will strictly adhere to following cardinal principles while framing cyber security policy:**

- i. There is hard isolation of their OT Systems from any internet facing IT system.
  - ii. May keep only one of their IT systems with internet facing at any of their site/location if required which is isolated from all OT zones and kept in a separate room under the security and control of CISO.
  - iii. Downloading/Uploading of any data/information from their internet facing IT system is done only through an identifiable whitelisted device followed by scanning of both for any vulnerability/malware as per the SOP laid down and for all such activities digital logs are maintained and retained under the custody of CISO for at least 6 months. The log shall be readily to carry out the forensic analysis if asked by investigation agency.
  - iv. List of whitelisted IP addresses for each firewall is maintained by CISO and each firewall is configured for allowing communication with the whitelisted IP addresses only.
  - v. Communication between OT equipment/systems is done through the secure channel preferably of POWERTEL through the fibre optic cable. Security configuration of the communication channel is also to be ensured.
  - vi. All ICT based equipment/system deployed in infrastructure/system mandatorily CII are sourced from the list of the “Trusted Sources” as and when drawn by MoP/CEA.
- b. The Responsible Entity shall be ISO/IEC 27001 certified (including sector specific controls as per ISO/IEC 27019).
  - c. The Responsible Entity shall have a Cyber Security Policy drawn upon the guidelines issued by NCIIPC.
  - d. The Responsible Entity shall ensure annual review of their Cyber Security Policy by subject matter expert and changes shall be made therein only after obtaining the due approval from Board of Directors.
  - e. The process of Access Management for all Cyber Assets owned or under control of the Responsible Entity shall be detailed in the Cyber Security Policy.
  - f. The Cyber Security Policy shall leverage state-of-art cyber security technologies and relevant processes at multiple layers to mitigate the cyber security risks.
  - g. The Responsible Entity shall be solely responsible to get Cyber Security Policy implemented through its Information Security Division (ISD).
  - h. The CISO shall record the reason(s) for exemption required, if any, in case, unable to comply with any of the provision(s) of the Cyber Security Policy. Any exception shall be allowed only after an approval of provisions of compensatory control(s) to mitigate residual cyber security risks.



- i. The CISO shall record the exemptions sought in statement of applicability controls, while getting the ISO 27001 certified. All exemptions and its justification need to be in conformance with Cyber Security Policy of the Responsible Entity.
- j. The Responsible Entity shall allocate sufficient Annual budget for enhancing cyber security posture, enhanced year over year.
- k. The Responsible Entity shall work in collaboration with other Industry Stakeholders as well as Academia to promote R&D activity in the domain of cyber security.
- l. The Responsible Entity shall ensure that cyber security issues are taken up as agenda items in their Board meetings once in every three months.

## **Article 2 Appointment of CISO.**

- a) The Responsible Entity shall mandatorily appoint a CISO and shall confirm to qualification, if any, **laid** by Quality Council of India (QCI). In absence, the work of CISO shall be looked upon by Alternate CISO. In case qualification for appointment of Alternate CISO has been relaxed for reasons recorded thereof, Alternate CISO has to mandatorily acquire the minimum required cyber security skill sets within six months from the date of his appointment.
- b) The Responsible Entity shall regularly update details of CISO and Alternate CISO, with the Sectoral CERT, as well as on ISAC-Power Portal.
- c) Roles and Responsibility of CISOs shall be as laid by CERT-In and ring-fenced to ensure cyber security of the Cyber Assets of the Responsible Entity.

## **Article 3: Identification of Critical Information Infrastructure (CII).**

- a) The Responsible Entity shall submit to NCIIPC through Sectoral CERT, details of Cyber Assets which uses a routable protocol to communicate outside the Electronic Security Perimeter drawn by the Responsible Entity or a routable protocol within a control centre and dial-up accessible Cyber Assets, within 30 days from the date of their commissioning in the System.
- b) The Responsible Entity shall submit details of Critical Business Processes and underlying information infrastructure along with mapped impact and Risk Profile to NCIIPC and shall get their CIIs identified in consultation with NCIIPC. The process of the notification/declaration by Appropriate Government shall follow thereafter.
- c) The Responsible Entity shall review their declared/notified CIIs at least once a year to examine changes if any in the functional dependencies, protocols and technologies or upon any change in security architecture. The Responsible Entity shall review their declared/notified CIIs once in every 6 months, in case if NCIIPC has directed them to constitute an Information Security Steering Committee.
- d) The Responsible Entity shall ensure that all cyber assets of their identified/notified CIIs are recorded in the asset register and considered for risk assessment as well as for finalization of controls in statement of applicability.

## **Article 4. Electronic Security Perimeter**

- a) The Responsible Entity shall identify and document the Electronic Security Perimeter(s) and all Access Points to the perimeter(s).

- b) The Responsible Entity shall follow procedure of identifying “Electronic Security Perimeter” in case of distributed and/or hybrid information infrastructure, as per IEC 62443 / IS16335 (as amended from time to time).
- c) The Responsible Entity shall ensure that every Critical System resides within an Electronic Security Perimeter.
- d) The Responsible Entity shall perform a cyber-Vulnerability Assessment of each electronic Access Points to the Electronic Security Perimeter(s) at least once in every 6 (six) months and/or after any change in Security Architecture.
- e) The Responsible Entity shall ensure that all critical, high and medium vulnerabilities identified as a result of cyber Vulnerability Assessment shall be closed and verified for the effective closure.

#### **Article 5. Cyber Security Requirements**

- a) The Responsible Entity shall have an Information Security Division (ISD), headed by CISO.
- b) The Responsible Entity shall ensure that the ISD must be functional on 24x7x365 basis and is manned by sufficient numbers of Engineers having valid certificate of successful completion of course on cyber security of Power Sector from the Training Institutes designated by CEA.
- c) The Responsible Entity shall ensure that ISD
  - 1) has on-boarded Cyber Swachhta Kendra(CSK) of CERT-In, if they have public IPs.
  - 2) has timely acted upon the advisories, guidelines and directive of NCIIPC, CSK, CERT-In and Sectoral CERTs,
  - 3) has deployed an Intrusion Detection System and Intrusion Prevention System capable of identifying behavioural anomaly in both IT as well as OT Systems.
  - 4) shares reports on incident response and targeted malware samples with CERT-In,
  - 5) updates the firmware/software with the digitally signed OEM validated patches only.
  - 6) enables only those ports and services that are required for normal operations. In case of any emergency the procedure as laid in Access management be followed.
  - 7) maintains firewall logs for the last 6 months duration. Firewall logs shall be analysed and all critical and high severity comments shall be addressed for effective closure.
  - 8) retains document of FAT, SAT test results and report/ certificate of cyber tests carried out for compliance of Government Orders and Cyber Security Audit.\*
  - 9) maintains all cyber logs and cyber forensic records of any incident for at least\*\* 90 days.

\* FAT, SAT must include comprehensive cyber security tests of the component/equipment/system to be delivered/delivered at site.

\*\* 90 days from date of the commissioning of the system/recovery from any incident, whichever is later.

- d) The Responsible Entity shall routinely audit and test security properties of the Critical System and must act upon, in case if any new vulnerabilities is identified through testing or by the equipment manufacturer.

- e) The Responsible Entity shall design a secure architecture for control system appropriate for their process control environment\*.
- f) All State Load Dispatch Centres(SLDCs) shall comply with the directions issued by the National Load Dispatch Centre(NLDC) as well as Regional Load Dispatch Centres(RLDCs) U/s 29 (1) of the Electricity Act, 2003 to ensure stability and cyber security of grid operation and achieve efficiency in the grid operation. In case of any non-compliance, the Head of SLDC shall be responsible and shall be liable for Penalty as per the provision of CERC/SERC.

\*There are so many different types of systems in existence and so many possible solutions, it is important that the selection process ensures that the level of protection is commensurate with the business risk and the Responsible Entity shall not rely on one single security measure for its defence. (Reference IEC/TR62351-10 Edition1.0 2012-10 *Power systems management and associated information exchange –Data and communications security – Part 10: Security architecture guidelines*).

## Article 6 Cyber Risk Assessment and Mitigation Plan

- a) The Responsible Entity shall document in their Cyber Security Policy a Cyber Risk Assessment and Mitigation Plans drawn upon the best practises being followed in the Power Sector, and the same shall be approved by Board of Directors.
- b) The Cyber Risk Assessment and Mitigation Plans shall clearly define the matrix for assessing the cyber risk of both IT and OT environment and risk acceptance criteria.
- c) The Cyber Risk Assessment Plan shall be capable to demonstrate that repeated cyber security risk assessment delivers consistent, valid and comparable results.
- d) The review of cyber risk assessment shall be carried out at least once in a Quarter. The actionable of risk treatment and mitigation shall be tracked in this review for their effectiveness.
- e) The CISO shall be responsible for implementation and regular review, on the basis of internal and external feedbacks, of the Cyber Risk Assessment and Mitigation Plans.

## Article 7 Phasing out of Legacy System

- a) As the life cycle of the Power System Equipment/System is longer than that of IT Systems deployed therein, the Responsible Entity shall ensure that all IT technologies in the Power System Equipment/System should have the ability to be upgraded.
- b) The Responsible Entity shall ensure that the Information Security Division shall draw the list of all communicable equipments/systems nearing end life or are left without support from OEM. Thereafter CISO shall identify equipment/systems to be phased out from the list drawn, firm up their replacement plan and put up the replacement plan for approval before the Board of Directors.
- c) The CISO shall ensure that till equipments/systems nearing end life or left without support from OEM are not replaced, their cyber security is hardened and ensured through additional controls provisioned in consultation with the OEM or alternate Supplier(s)\*.  
\*e.g. Use of CDAC developed AppSamvid and whitelisting of applications installed may be explored across all legacy systems.
- d) The Responsible Entity shall document in their Cyber Security Policy a Standard Operating Procedure for safe and secure disposal of outlived or legacy devices.

## Article 8. Cyber Security Training.

- a) The Responsible Entity shall establish, document, implement, and maintain an annual cyber security training program for personnel having authorized cyber or authorized physical access (unescorted or escorted) to their Critical Systems.
- b) The Responsible Entity shall review annually their cyber security training program and shall update it whenever necessary. Annual Review shall record evaluation of the effectiveness of the trainings held.
- c) The Responsible Entity shall ensure that Cyber Security training program designed for their IT as well as OT O&M Personnel must include following topics and as per their functional requirements and security concerns additional topics shall be added:
  - 1) User authentication and authorization.
  - 2) Cyber Security and Protection mechanisms of IT/OT/ICS Systems.
  - 3) Introduction to various standards i.e. ISO/IEC:15408, ISO/IEC:24748-1, ISO: 27001, ISO: 27002, ISO 27019, IS 16335, IEC/ISO:62443.
  - 4) Training on implementation of ISO/IEC 27001 and awareness on IEC 62443.
  - 5) Vulnerability Assessment in the Critical System.
  - 6) Monitoring and preserving of electronic logs of access of Critical Assets.
  - 7) Detecting cyber-attacks on SCADA and ICS systems
  - 8) The handling of Critical System during cyber crisis.
  - 9) Action plans and procedures to recover or re-establish normal functioning of Critical Assets and access thereto following a Cyber Security Incident.
  - 10) Hands on SCADA operation at any of the Regional Load Dispatch Centre.
  - 11) Handling of risks involved in the procurement of COTS Products.
- d) All Personnel engaged in O&M of IT & OT Systems shall mandatorily undergo courses on cyber security of Power Sector from any of the training institute designated by CEA, immediately within 90 days from the notification of CEA Guidelines on Cyber Security in Power Sector.
- e) The Responsible Entity shall ensure that none of their newly hired or the current Personnel have access to the Critical System, prior to the satisfactory completion of cyber security training programme from the Training Institutes designated in India, except in specified circumstances such as cyber crisis or an emergency.
- f) NPTI in consultation with CEA shall identify and design domain specific courses on Cyber Security for different target groups. The “Governing Board for PSO Training and Certification” shall approve the content, duration etc of these courses and shall review it Annually. NPTI shall conduct these courses at all of their branches on regular basis and shall maintain the list of the Participants successfully completing the course.

## Article 9 Cyber Supply Chain Risk Management

- a) The Responsible Entity shall ensure that, as and when Ministry of Power, Government of India notifies the Model Contractual Clauses on cyber security, these clauses are included in their every Bid invited for procurement of any ICT based components/equipments/System to be used for Power System.
- b) The Responsible Entity shall ensure that all the Communicable Intelligent Equipments and the Service Level Agreements (SLAs) for their Critical Systems shall be sourced from the list of the “Trusted Sources” as and when drawn by MoP/CEA.

- c) The Responsible Entity shall ensure that, in case, for the any Communicable Intelligent Devices, if no Trusted Source has been identified, then the successful bidder in compliance with the provisions made in MoP order dated 2.7.2020 and any other relevant MoP order has got the product cyber tested for any kind of embedded malware/Trojan/cyber threat and for adherence to Indian Standards at the designated lab.
- d) The Responsible Entity shall ensure that the essential cyber security tests are carried out successfully during FAT, SAT as detailed in **Annexure A**. The equipment/System besides for functionality shall also be tested in the factory for vulnerabilities, design flaws, parts being counterfeit or tainted, so as to minimize problems during on-site-testing and installation. Cyber Security Conformance Testing are to be carried out in the designated Lab as listed in **Annexure-I of MoP Order No. 12/13/2020-T&R dt. 8<sup>th</sup> June, 2021(Order at Annexure-B)**.
- e) The Responsible Entity shall ensure that the Equipment/System supplied by the successful bidder shall accompany with a certificate<sup>\$, #</sup> obtained by OEM from a certification body accredited to assess devices and process for conformance to IEC 62443-4 standards during design and manufacture. The Responsible Entity shall accept the certificate submitted along with the supplied Equipment/System only if it's in line with the Testing Protocol as notified by Ministry of Power, Government of India, from time to time.
- f) The Responsible Entity in compliance to the requirement of Article 9(e) shall also accept, till the setting up of an adequate certification facility in the India, a digitally signed self-declaration of conformance to the IEC 62443-4 standards during design and manufacture of the equipment/system, if submitted by the OEM.
- g) The Responsible Entity shall dispose all unserviceable or obsolete Communicable Intelligent Devices as per the procedure laid in their Cyber Risk Assessment and Mitigation Plans which shall be in line with the prevailing best practices.

\$ The National & International certification may be specified in the tender for critical systems/sub-systems being procured by the Responsible Entity.

# Certification Schemes:

**Embedded Device Security Assurance Certification** is for an individual product,  
**System Security Assurance Certification** is for a set of products in a system (possibly from different vendors)

**Security Development Lifecycle Assurance Certification** is for the development processes that a manufacturer uses for developing products.

## Article 10 Cyber Security Incident Report and Response Plan

- a) The CISO of the Responsible Entity shall report in the formats prescribed by CERT-In, all Cyber Security Incidents, classified as reportable events.
- b) Root cause analysis for all reportable events shall be carried out and corrective action taken, so as to ensure that any re-occurrence of such event can be managed with ease.
- c) The Responsible Entity shall mandatorily define in their Cyber Security Policy, criteria(s) identified on the basis of impact analysis, for declaring the occurrence of

Cyber Security Incident(s) as a Cyber Crisis in the System owned or controlled by them.

- d) The Responsible Entity shall mandatorily designate an Officer along with his/her standby by name and designation and empower them to declare an occurrence of the incident(s) as “Cyber Crisis”. The contact details of these Officers shall be updated in the C-CMP within 15 days of changes if any due to transfer or superannuation etc.
- e) The CISO shall ensure that during any Cyber Security Incident, ISD monitors and minutely records every details of cyber security events and incidents in both IT as well as the OT System owned or controlled by the Responsible Entity.
- f) The CISO shall ensure that each cyber incident is handled strictly as per Cyber Security Incident Response Plan detailed in the latest C-CMP approved by the Board of Directors.
- g) The Responsible Entity shall ensure that the efficacy of the Cyber Security Incident Response Plan is tested annually through mock drill(s) carried out, if feasible, as simulation exercise(s) or as table top exercise(s) with wider participation of their employees, in consultation with CERT-In and sectoral CERT. In case if any shortcoming is observed in the Cyber Security Incident Response Plan suitable changes shall be made in it.
- h) The Responsible Entity shall ensure that the CISO compiles details of incident detection, incident handling, learnings from each incident and damage claims made if any and shall report to CERT-In as well as upload information on ISAC-Power Portal.

#### **Article 11 Cyber Crisis Management Plan(C-CMP)**

- a) The Responsible Entity shall prepare a Cyber Crisis Management Plan and submit to their sectoral-CERT for review with intimation to Ministry of Power/CISO-MoP. Responsible Entity shall update their C-CMP on the basis of comments made by sectoral-CERT and then submit for vetting to CERT-In. The C-CMP shall be updated once again to include the observations made by CERT-In before seeking approval of Board of Directors for implementation of C-CMP.
- b) The Responsible Entity shall ensure that the C-CMP is reviewed at least annually. The CISO shall ensure that all changes are made in C-CMP only with the due approval of Board of Directors and the changes made in C-CMP have been communicated through a verifiable means to all the concerned Personnel of the Responsible Entity.
- c) The CISOs shall be the custodian of all the cyber security related documents including Cyber Crisis Management Plan, Risk Treatment Plan, Statement of Applicability of controls, and compliance to regulator’s requirement.
- d) The CISO shall be accountable for ensuring enforcement of C-CMP by Information Security Division of the Responsible Entity, during a cyber-crisis, as and when declared by the designated Officer. (refer Article 10(d))

#### **Article 12: Sabotage Reporting%**

- a) The Responsible Entity shall incorporate procedure for identifying and reporting of sabotage in their Cyber Security Policy within 30 days from issue of the Guidelines, or grant of licence under the appropriate legal provisions to the Responsible Entity.
- b) The CISO shall be held liable for non-reporting of identified sabotage(s) as per procedure laid for identifying and reporting of sabotage in the Cyber Security Policy of the Responsible Entity.

- c) The CISO shall prepare a detailed report on disturbances or unusual occurrences, identified, suspected or determined to be caused by sabotage in the Critical System of the Responsible Entity, and shall submit the report to the Sectoral CERT as well as to CERT-In within 24 hours of its occurrence.
- d) The CISO shall submit to NCIIPC within 24 hours of occurrence the report on every sabotage classified as cyber incidents(s) on "Protected System".
- e) The CISO upon occurrence on every sabotage shall take custody of all log records as well as digital forensic records of affected Cyber Assets, Intrusion Detection System, Intrusion Protection System, SIEM and shall preserve them for at least 90 days and shall make them available as and when called upon for investigation by the concerned Agencies.

*%Disturbances or unusual occurrences, suspected or determined to be caused by sabotage.*

*Sabotage e.g. can be a forced intrusion in un-manned/manned facility and taking control of operation of Critical System through a communicating device.*

### **Article 13 Security and Testing of Cyber Assets**

- a) The Responsible Entity shall ensure security of all in-service phase as well as standby Cyber Assets through regular firmware/Software updates and patching, Vulnerability management, Penetration testing (of combined installations), securing configuration, supplementing security controls. CISO shall maintain details of update version of each firmware and software and their certification if received from OEMs.
- b) The Responsible Entity shall carry out regularly Vulnerability Assessment of all Cyber Assets owned or under their control. If a Cyber Asset is found vulnerable to any exploits or upon any patch updates or major configuration changes, then further Penetration Testing may be carried out offline or in a suitably configured laboratory test-bed to determine other vulnerabilities that may have not been identified so far.
- c) The Responsible Entity shall specify security requirement and evaluation criteria during each phase of their procurement Process.
- d) The Responsible Entity shall ensure that all Cyber Assets being procured shall conform to the type tests as mentioned in the specification for type testing listed in the bid document. Type test reports of tests conducted in NABL accredited Labs or internationally accredited labs (with in last 5 years from the date of bid opening) shall be mandated to be submitted along with bid. In case, the submitted Type Test reports are not as per specification, the re-tests shall be conducted without any cost implication to the Responsible Entity.
- e) The Responsible Entity shall ensure that all Communicable devices are tested for communication protocol as per the ISO/IEC/IS standards listed in **MoP Order No. 12/13/2020-T&R dated 8<sup>th</sup> June, 2021(Annexure-B).**
- f) The Responsible Entity shall ensure that all Critical Systems designed with Open Source Software are adequately cyber secured.
- g) The Responsible Entity as a best practise upon any incidence of Cyber Security Breach shall carry out cyber security tests at any lab designated for cyber testing by Ministry of Power. These tests shall be similar to Pre Commissioning Security Test and those essential for carrying out Post Incident Forensics Analysis.

### **Article 14 Cyber Security Audit**

- a) The Responsible Entity shall implement Information Security Management System (ISMS) covering all its Critical Systems.
- b) The Responsible Entity shall through a CERT-In Empanelled Cyber Security OT Auditor shall get their IT as well as OT System audited at least once in every 6 (six) months and shall close all critical and high vulnerabilities within a period of one month and medium as well as low non-conformity before the next audit. Effective closure of all non-conformities shall be verified during the next audit.
- c) The Cyber Security Audit shall be as per ISO/IEC 27001 along with sector specific standard ISO/IEC 27019, IS 16335 and other guidelines issued by appropriate Authority if any. These mentioned standards shall be current with all amendments if any and in case if any standard is superseded, the new standard shall be applicable. CISO shall ensure immediate closure of non-conformance, based on the criticality and by means all non-conformances are to be closed before the next audit.
- d) The Responsible Entity shall ensure that CISO has all the required systems and documents in place, as mandated by NSCS for base line cyber security audit.



## FAT & SAT

1. During FAT stage, the customer has to verify all types test reports / certificates including Communication protocol and security conformance tests of the devices offered for FAT.
2. FAT of SCADA involves testing as a whole system in the integrated scale down set up. For SCADA, Indian standard IS 15953: 2011 “SCADA System for Power System Applications” provides definition and guidelines for the specification, performance analysis and application of SCADA systems for use in electrical utilities (for transmission & Distribution) including guidance on Tests and inspections.
3. The SAT will be done at customer site as per the SAT document mutually agreed by buyer and supplier. For SAT also, guidance from IS 15953: 2011 need to be applied.
4. IEC 61850-10-3 Communication Networks and Systems For Power Utility Automation- Functional testing of IEC 61850 systems (in draft stage - CDTR) covers testing of applications within substations covering
  - a. A methodical approach to the verification and validation of a substation solution
  - b. The use of IEC 61850 resources for testing in Edition 2.1
  - c. Recommended testing practices for different use cases
  - d. Definition of the process for testing of IEC 61850 based devices and systems using communications instead of hard wired system interfaces (ex. GOOSE and SV instead of hardwired interfaces)
  - e. Use cases related to protection and control functions verification and testing.

This standard may be used as a guidelines for FAT & SAT for Substation Automation System (SAS) based on IEC 61850.

## Annexure - B

### Annexure – 1

#### List of designated laboratories for cyber security conformance testing

**Table -A. Field Equipment /Operational Technology (OT)**

Sl. No.	Equipment	Communication Protocol Conformance Standards	Protocol Security Conformance Standards	Designated Laboratories
1	Remote Terminal Units (RTUs) & PLCs with IEC communications protocols	IEC 60870-5 -101 / IEC 60870-5 -104 (Test Details Annexure 2)	IEC 60870-5- 7 Security extension & IEC 62351 series (specifically IEC 62351-100 parts 1 & 3) ( Test Details Annexure-2	Central Power Research Institute (CPRI), Prof Sir C V Raman Road, Sadashivanagar P O, Bengaluru – 560080, Karnataka
2	Intelligent Electronic Equipment / Numerical Protection Relays / Bay Control Units / Bay Protection Units, Gateways, Transformer Tap controller/ changer, etc. with IEC 61850 communication protocol	IEC 61850 – 5 to IEC 61850 – 10  ( Test Details Annexure 2)		CPRI
3	Smart meters with IEC 62056 communication protocols	IEC 62056 series / DLMS & IS 15959 series and IS 16444 series ( Test details Annexure 2)	IEC 62056 series / DLMS & IS 15959 series and IS 16444 series (Test Details Annexure 2)	1. CPRI 2. Electrical Research and Development Association (ERDA), ERDA Road, GIDC, Makarpura, Vadodara - 390 010 Gujarat 3. Yadav Measurements Pvt. Ltd. (YMPL) 373-375, RIICO Bhamashah Industrial Area Kaladwas 313003 Udaipur – Rajasthan

**Information Technology (IT) Equipment (Main / Backup / Disaster recovery (DR) Control Centre / Substation control centre IT equipment)**

All IT products procured /supplied shall have a valid Certificate of Common Criteria as per ISO/IEC 15408 issued by signatories of the Common Criteria Recognition Agreement (CCRA) ([www.commoncriteriaportal.org](http://www.commoncriteriaportal.org)).

Import/procurement/supplied from vendors sourcing from prior reference countries, the Certificate for Common Criteria shall be from Government Laboratories in India according to the IC3S scheme operated by Ministry of Electronics and Information Technology, which is a signatory to CCRA.

<https://www.commoncriteria-india.gov.in/>

## Details of tests for various identified products

### Remote Terminal Units (RTUs) (Sl. No. 1 of Table – A of Annexure – 1)

#### Test protocol:

Utilities / manufacturers will submit the sample along with all the required technical documentation for taking up testing to the designated laboratory.

#### Reference standards

- 1) IEC 60870-5-101 & IEC 60870-5-104 as applicable
- 2) IEC 60870-5-7 Telecontrol equipment and systems - Part 5-7: Transmission protocols - Security extensions to IEC 60870-5-101 and IEC 60870-5-104 protocols (applying IEC 62351)
- 3) IEC 62351-100-1 & IEC 62351-100-3 and other cross referenced standards.

#### Test cases

##### Extract from standard (IEC 62351-100-1)

The conformance test cases are divided into four clauses:

- Clause 5: Verification of configuration parameters. This clause contains the configuration parameters affecting the message contents and/or the protocol behaviour.
- Clause 6: Verification of communication. The goal of this clause is to verify that Device Under Test (DUT) is able to implement the security extension messages as described in IEC TS 60870-5-7.
- Clause 7: Verification of procedures. The goal of this clause is to verify that DUT is able to execute the security extension procedures as described in IEC TS 62351-5.
- Clause 8: Test result chart. This clause contains the results of the test cases listed in Clauses 6 and 7 for each supported value of the configuration parameters listed in Clause 5.

The test cases are organized in tables. They are numbered; their numbering syntax is: Subclause number (where the Table is located) + test case number.

In the column ‘reference’ each test case has a direct reference to IEC TS 62351-5 or IEC TS 60870-5-7 where the clause under test is defined.

Test cases are mandatory depending on the description in the column ‘Required’. The following situations are possible:

M= Mandatory test case. The test is referencing a clause that is mandatory in IEC TS 62351-5 or IEC TS 60870-5-7.

Protocol Information Conformance Statement (PICS) x, x = Mandatory test case if the functionality is enabled in the PICS (by marking the applicable check box), with a reference to the section number of the PICS (x.x).

## Conformance testing of security extension procedures

The security extension procedures can be summarized as follows:

- User management
- Update key maintenance
- Session key maintenance
- Challenge/Reply authentication
- Aggressive Mode authentication

### Extract from standard (IEC 62351-100-3)

IEC 62351-3 defines the requirements related to the authentication/encryption protocol, procedures and methods to be implemented at TCP/IP (transport) level.

The conformance test cases are divided into three clauses:

- Clause 5: Verification of configuration parameters. This clause contains the parameters specified by the standards referencing IEC 62351-3 (see IEC 62351-3:2014/AMD1:2018, Clause 7) and affecting the protocol behaviour.
- Clause 6: Verification of IEC 62351-3 requirements. The goal of this clause is to verify that DUT is conformant to the requirements of the IEC 62351-3.
- Clause 7: Test result chart. This clause contains the results of the test cases listed in Clause 6 for each supported value of the configuration parameters listed in Clause 5.

The test cases are organized in tables. They are numbered, their numbering syntax is: Subclause number (where the table is located) + test case number.

In the column ‘Reference’ each test case has a direct reference to IEC 62351-3 where the clause under test is defined. PICS or Protocol Implementation eXtra Information for Testing (PIXIT) could be found in the “Reference” column for some test cases whenever the execution of the test case shall take into account specific parameter values declared in the PICS or PIXIT of the DUT.

Test cases are mandatory depending on the description in the column ‘Required’. The following situations are possible:

M = Mandatory test case. The test is referencing to a clause that is mandatory in IEC 62351-3.

PICS

or

PIXIT = Mandatory test case if the functionality is enabled in the PICS or PIXIT by marking the applicable check box or declaring the applicable value.

### **Intelligent Electronic Devices (IEDs) (Sl. No. 2 of Table – A of Annexure – 1)**

Utilities / manufacturers will submit the sample along with all the required technical documentation for taking up testing to the designated laboratory.

#### **Reference standards**

IEC 61850 series

Specifically IEC 61850-5, IEC 61850-6, IEC 61850-7, IEC 61850-8, IEC 61850-9 and IEC 61850-10

#### **Test cases**

Communication protocol conformance as per IEC 61850 -10. This part of standard defines methods and abstract test cases for conformance testing of client, server and sampled values devices used in power utility automation systems, the methods and abstract test cases for conformance testing of engineering tools used in power utility automation systems, and the metrics to be measured within devices according to the requirements defined in IEC 61850-5. Further this part of standard specifies standard techniques for testing of conformance of client, server and sampled value devices and engineering tools, as well as specific measurement techniques to be applied when declaring performance parameters. The use of these techniques will enhance the ability of the system integrator to integrate IEDs easily, operate IEDs correctly, and support the applications as intended.

### **Smart Meters (Sl. No. 3 of Table – A of Annexure – 1)**

Utilities / manufacturers will submit the sample along with all the required technical documentation for taking up testing to the designated laboratory.

IEC 62056 series of standards (Electricity metering data exchange – The DLMS/COSEM suite) specifies details of communication protocol requirements, conformance testing and security requirements. The Part 5-3 (DLMS/COSEM application layer) specifies the DLMS/COSEM application layer in terms of structure, services and protocols for DLMS/COSEM clients and servers, and defines rules to specify the DLMS/COSEM communication profiles. It defines services for establishing and releasing application associations, and data communication services for accessing the methods and attributes of COSEM interface objects, defined in IEC 62056-6-2 using either logical name (LN) or short name (SN) referencing.

Clause 5 and sub clauses specifies security requirements. It cover security concepts, Identification and authentication, Cryptographic algorithms, Cryptographic keys – overview, Key used with symmetric key algorithms, Keys used with public key algorithms and Applying cryptographic protection.

**Note:** All above referred standards shall be latest with amendments if any at the time of submission of sample(s) for testing.

## Testing Criteria

### 1) Supply from Trusted Sources

The sample size shall be as specified by CEA as per the approved criteria for Trusted Vendors

### 2) Supply from other than trusted vendors

The sample size shall be shall be 5% of the supply lot / ordered quantity (minimum one). The manufacturer shall submit request to the Nodal agency along with vendor's / manufacturer's certifications for supply chain management system practices and secure product development process implementations based on any one or more of standards ISO / IEC 27036, ISO / IEC 20243, IEC 62443 for verification.

After scrutiny of vendor's / manufacturer's certifications the supplier / utilities shall be asked to submit product to the designated laboratory for communication and cyber security conformance testing.

The supply lot shall stand rejected on failure to comply with the test requirements.

### 3) Supply from prior reference countries

The utility shall obtain prior permission from the Government of India for importing the product / system from prior reference countries.

The sample size shall be shall be 10 % of the supply lot / ordered quantity (minimum one). The manufacturer shall submit request to the Nodal agency along with vendor's / manufacturer's certifications for supply chain management system practices and secure product development process implementations based on any one or more of standards ISO / IEC 27036, ISO / IEC 20243, IEC 62443 for verification.

After scrutiny of vendor's / manufacturer's certifications the supplier / utilities shall be asked to submit product to the designated Government / Government controlled Autonomous laboratory for type tests (Annexure – 4) and communication & cyber security conformance testing.

The supply lot shall stand rejected on failure to comply with the test requirements.

## Type Tests

Products imported from prior reference countries shall also undergo type testing as per following standards in addition to communication protocol and security conformance testing at the designated Government / Government controlled Autonomous laboratory:

### Type test standards for RTUs

1. IEC 60870-1-2:1989 Telecontrol equipment and systems. Part 1: General considerations. Section Two: Guide for specifications.
2. IEC 60870-2-1:1995 Telecontrol equipment and systems - Part 2: Operating conditions - Section 1: Power supply and electromagnetic compatibility.
3. EC 60870-2-2:1996 Telecontrol equipment and systems - Part 2: Operating conditions -Section 2: Environmental conditions (climatic, mechanical and other non-electrical influences).
4. IEC 60870-3:1989 Telecontrol equipment and systems. Part 3: Interfaces (electrical characteristics)

### Type test standard for IEDs / Numerical Protection Relays / Bay controls units

1. IEC 61850-3: 2013, Ed. 2 Communication networks and systems for power utility automation – Part 3: General requirements.

### Type test standards for Smart meters

1. IS 16444: 2015 AC static direct connected watthour smart meter class 1 and 2 – Specification.
2. IS 16444 Part 2: 2017 AC static transformer operated watthour and var - Hour smart meters, class 0.2 S, 0.5 S and 1.0 S: Part 2 specification transformer operated smart meters.

### Note:

1. All above referred standards shall be latest with amendments if any at the time of submission of sample(s) for testing.
2. Type tests generally covers functionality, environmental, mechanical, EMI/ EMC and electrical safety related tests.



**No. 20(3)/2022-CERT-In**  
**Government of India**  
**Ministry of Electronics and Information Technology (MeitY)**  
**Indian Computer Emergency Response Team (CERT-In)**

Electronics Niketan,  
6 CGO Complex,  
New Delhi-110003

Dated: 28 April, 2022

**Subject: Directions under sub-section (6) of section 70B of the Information Technology Act, 2000 relating to information security practices, procedure, prevention, response and reporting of cyber incidents for Safe & Trusted Internet.**

**Whereas**, the Central Government in terms of the provisions of sub-section (1) of section 70B of Information Technology (IT) Act, 2000 (IT Act, 2000) has appointed “Indian Computer Emergency Response Team (CERT-In)” vide notification dated 27<sup>th</sup> October 2009 published in the official Gazette and as per provisions of sub-section (4) of section 70B of IT Act, 2000 The Indian Computer Emergency Response Team shall serve as the national agency for performing the following functions in the area of cyber security:-

- a) collection, analysis and dissemination of information on cyber incidents;
- b) forecast and alerts of cyber security incidents;
- c) emergency measures for handling cyber security incidents;
- d) coordination of cyber incidents response activities;
- e) issue guidelines, advisories, vulnerability notes and whitepapers relating to information security practices, procedures, prevention, response and reporting of cyber incidents;
- f) such other functions relating to cyber security as may be prescribed.

**And whereas**, “The Information Technology (The Indian Computer Emergency Response Team and Manner of performing functions and duties) Rules, 2013” were notified and published vide notification dated 16.01.2014 by the Central Government in exercise of the powers conferred by clause (zf) of sub-section (2) of section 87 read with sub-section (5) of section 70B of the IT Act, 2000.

**And whereas**, as per provisions of sub-section (6) of section 70B of the IT Act, 2000, CERT-In is empowered and competent to call for information and give directions to the service providers, intermediaries, data centres, body corporate and any other person for carrying out the activities enshrined in sub-section (4) of section 70B of the IT Act, 2000.

**And whereas**, various instances of cyber incidents and cyber security incidents have been and continue to be reported from time to time and in order to coordinate response activities as well as emergency measures with respect to cyber security incidents, the requisite information is either sometime not found available or readily not available with service providers/data centres/body corporate and the said primary information is essential to carry out the analysis, investigation and coordination as per the process of law.

**And whereas**, it is considered expedient in the interest of the sovereignty or integrity of India, defence of India, security of the state, friendly relations with foreign states or public order or for preventing incitement to the commission of any cognizable offence using computer resource or for handling of any cyber incident, that following directions are issued to augment and strengthen the cyber security in the country:

- (i) All service providers, intermediaries, data centres, body corporate and Government organisations shall connect to the Network Time Protocol (NTP) Server of National Informatics Centre (NIC) or National Physical Laboratory (NPL) or with NTP servers traceable to these NTP servers, for synchronisation of all their ICT systems clocks. Entities having ICT infrastructure spanning multiple geographies may also use accurate and standard time source other than NPL and NIC, however it is to be ensured that their time source shall not deviate from NPL and NIC.
- (ii) Any service provider, intermediary, data centre, body corporate and Government organisation shall mandatorily report cyber incidents as mentioned in Annexure I to CERT-In within 6 hours of noticing such incidents or being brought to notice about such incidents. The incidents can be reported to CERT-In via email (incident@cert-in.org.in), Phone (1800-11-4949) and Fax (1800-11-6969). The details regarding methods and formats of reporting cyber security incidents is also published on the website of CERT-In www.cert-in.org.in and will be updated from time to time.

- (iii) When required by order/direction of CERT-In, for the purposes of cyber incident response, protective and preventive actions related to cyber incidents, the service provider/intermediary/data centre/body corporate is mandated to take action or provide information or any such assistance to CERT-In, which may contribute towards cyber security mitigation actions and enhanced cyber security situational awareness. The order / direction may include the format of the information that is required (up to and including near real-time), and a specified timeframe in which it is required, which should be adhered to and compliance provided to CERT-In, else it would be treated as non-compliance of this direction. The service providers, intermediaries, data centres, body corporate and Government organisations shall designate a Point of Contact to interface with CERT-In. The Information relating to a Point of Contact shall be sent to CERT-In in the format specified at Annexure II and shall be updated from time to time. All communications from CERT-In seeking information and providing directions for compliance shall be sent to the said Point of Contact.
- (iv) All service providers, intermediaries, data centres, body corporate and Government organisations shall mandatorily enable logs of all their ICT systems and maintain them securely for a rolling period of 180 days and the same shall be maintained within the Indian jurisdiction. These should be provided to CERT-In along with reporting of any incident or when ordered / directed by CERT-In.
- (v) Data Centres, Virtual Private Server (VPS) providers, Cloud Service providers and Virtual Private Network Service (VPN Service) providers, shall be required to register the following accurate information which must be maintained by them for a period of 5 years or longer duration as mandated by the law after any cancellation or withdrawal of the registration as the case may be:
- a. Validated names of subscribers/customers hiring the services
  - b. Period of hire including dates
  - c. IPs allotted to / being used by the members
  - d. Email address and IP address and time stamp used at the time of registration / on-boarding
  - e. Purpose for hiring services
  - f. Validated address and contact numbers
  - g. Ownership pattern of the subscribers / customers hiring services

- (vi) The virtual asset service providers, virtual asset exchange providers and custodian wallet providers (as defined by Ministry of Finance from time to time) shall mandatorily maintain all information obtained as part of Know Your Customer (KYC) and records of financial transactions for a period of five years so as to ensure cyber security in the area of payments and financial markets for citizens while protecting their data, fundamental rights and economic freedom in view of the growth of virtual assets.

For the purpose of KYC, the Reserve Bank of India (RBI) Directions 2016 / Securities and Exchange Board of India (SEBI) circular dated April 24, 2020 / Department of Telecom (DoT) notice September 21, 2021 mandated procedures as amended from time to time may be referred to as per Annexure III.

With respect to transaction records, accurate information shall be maintained in such a way that individual transaction can be reconstructed along with the relevant elements comprising of, but not limited to, information relating to the identification of the relevant parties including IP addresses along with timestamps and time zones, transaction ID, the public keys (or equivalent identifiers), addresses or accounts involved (or equivalent identifiers), the nature and date of the transaction, and the amount transferred.

**And whereas,** the meaning to the terms ‘cyber incident’ or ‘cyber security incident’ or ‘computer resource’ or other terms may be ascribed as defined in the IT Act, 2000 or “The Information Technology (The Indian Computer Emergency Response Team and Manner of performing functions and duties) Rules, 2013” as the case may be.

**And whereas,** in case of any incident, the above-referred entities must furnish the details as called for by CERT-In. The failure to furnish the information or non-compliance with the *ibid.* directions, may invite punitive action under sub-section (7) of the section 70B of the IT Act, 2000 and other laws as applicable.

This direction will become effective after 60 days from the date on which it is issued.

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**Types of cyber security incidents mandatorily to be reported by service providers, intermediaries, data centres, body corporate and Government organisations to CERT-In:**

[Refer Rule 12(1)(a) of The Information Technology (The Indian Computer Emergency Response Team and Manner of Performing Functions and Duties) Rules, 2013]

- i. Targeted scanning/probing of critical networks/systems
- ii. Compromise of critical systems/information
- iii. Unauthorised access of IT systems/data
- iv. Defacement of website or intrusion into a website and unauthorised changes such as inserting malicious code, links to external websites etc.
- v. Malicious code attacks such as spreading of virus/worm/Trojan/Bots/Spyware/Ransomware/Cryptominers
- vi. Attack on servers such as Database, Mail and DNS and network devices such as Routers
- vii. Identity Theft, spoofing and phishing attacks
- viii. Denial of Service (DoS) and Distributed Denial of Service (DDoS) attacks
- ix. Attacks on Critical infrastructure, SCADA and operational technology systems and Wireless networks
- x. Attacks on Application such as E-Governance, E-Commerce etc.
- xi. Data Breach
- xii. Data Leak
- xiii. Attacks on Internet of Things (IoT) devices and associated systems, networks, software, servers
- xiv. Attacks or incident affecting Digital Payment systems
- xv. Attacks through Malicious mobile Apps
- xvi. Fake mobile Apps
- xvii. Unauthorised access to social media accounts
- xviii. Attacks or malicious/ suspicious activities affecting Cloud computing systems/servers/software/applications
- xix. Attacks or malicious/suspicious activities affecting systems/ servers/ networks/ software/ applications related to Big Data, Block chain, virtual assets, virtual asset exchanges, custodian wallets, Robotics, 3D and 4D Printing, additive manufacturing, Drones

xx. Attacks or malicious/ suspicious activities affecting systems/ servers/software/ applications related to Artificial Intelligence and Machine Learning

The incidents can be reported to CERT-In via email ([incident@cert-in.org.in](mailto:incident@cert-in.org.in)), Phone (1800-11-4949) and Fax (1800-11-6969). The details regarding methods and formats of reporting cyber security incidents is also published on the website of CERT-In [www.cert-in.org.in](http://www.cert-in.org.in) and will be updated from time to time.

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## Annexure II

### **Format for providing Point of Contact (PoC) information by Service providers, intermediaries, data centres, body corporate and Government organisations to CERT-In**

The Information relating to the Point of Contact shall be sent to CERT-In via email (info@cert-in.org.in) in the format specified below and shall be updated from time to time:

Name	
Designation	
Organisation Name	
Office Address	
Email ID	
Mobile No.	
Office Phone	
Office Fax	

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## Annexure III

### **KYC Requirements**

For the purpose of KYC, any of following Officially Valid Document (OVD) as a measure of identification procedure prescribed by the Reserve Bank of India (Know Your Customer (KYC)) Directions, 2016 / Securities and Exchange Board of India Clarification on Know Your Client (KYC) Process and Use of Technology for KYC vide Circular SEBI/HO/MIRSD/DOP/CIR/P/2020/73 dated April 24, 2020 / The Department of Telecom File No: 800-12/2021- AS.II dated September 21, 2021 on Self-KYC (S-KYC) as an alternate process for issuing of new mobile connections to Local and Outstation category customers, shall be used and maintained:

- a. The passport,
- b. The driving license,
- c. Proof of possession of Aadhaar number,
- d. The Voter's Identity Card issued by the Election Commission of India,
- e. Job card issued by NREGA duly signed by an officer of the State Government and
- f. Letter issued by the National Population Register containing details of name and address.
- g. Validated phone number
- h. Trading account number and details, Bank account number and bank details

For the purpose of KYC for business entities (B2B), documents mentioned in the Customer Due Diligence (CDD) process prescribed in Reserve Bank of India Master Direction - Know Your Customer (KYC) Direction, 2016 as updated from time to time shall be used and maintained.

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## RIHAND- I, II &amp; III (RECEIPT OF COAL THROUGH DIFFERENT MODES)

	Oct-18			Nov-18			Dec-18		
	MGR 0.2%	Rail 0.8%	Total	MGR 0.2%	Rail 0.8%	Total	MGR 0.2%	Rail 0.8%	Total
Quantity of Coal	936754.29	167037.60	<b>1103791.89</b>	923676.36	102428.39	<b>1026104.75</b>	989155.90	176539.69	<b>1165695.59</b>
Normative shortage	1873.51	1336.30	<b>3209.81</b>	1847.35	819.43	<b>2666.78</b>	1978.31	1412.32	<b>3390.63</b>
Net Qty Receipt	934880.78	165701.30	<b>1100582.08</b>	921829.01	101608.96	<b>1023437.97</b>	987177.59	175127.37	<b>1162304.96</b>
	Oct-19			Nov-19			Dec-19		
	MGR 0.2%	Rail 0.8%	Total	MGR 0.2%	Rail 0.8%	Total	MGR 0.2%	Rail 0.8%	Total
Quantity of Coal	1210425.34	170848.90	<b>1381274.24</b>	1245966.77	65632.98	<b>1311599.75</b>	1073881.84	0.00	<b>1073881.84</b>
Normative shortage	2420.85	1366.79	<b>3787.64</b>	2491.93	525.06	<b>3017.00</b>	2147.76	0.00	<b>2147.76</b>
Net Qty Receipt	1208004.49	169482.11	<b>1377486.60</b>	1243474.84	65107.92	<b>1308582.75</b>	1071734.08	0.00	<b>1071734.08</b>
	Oct-20			Nov-20			Dec-20		
	MGR 0.2%	Rail 0.8%	Total	MGR 0.2%	Rail 0.8%	Total	MGR 0.2%	Rail 0.8%	Total
Quantity of Coal	1174817.92	249363.89	<b>1424181.81</b>	1197975.32	64507.32	<b>1262482.64</b>	1128144.82	23895.29	<b>1152040.11</b>
Normative shortage	2349.64	1994.91	<b>4344.55</b>	2395.95	516.06	<b>2912.01</b>	2256.29	191.16	<b>2447.45</b>
Net Qty Receipt	1172468.28	247368.98	<b>1419837.26</b>	1195579.37	63991.26	<b>1259570.63</b>	1125888.53	23704.13	<b>1149592.66</b>
	Oct-21			Nov-21			Dec-21		
	MGR 0.2%	Rail 0.8%	Total	MGR 0.2%	Rail 0.8%	Total	MGR 0.2%	Rail 0.8%	Total
Quantity of Coal	1097711.64	0.00	<b>1097711.64</b>	1153204.18	0.00	<b>1153204.18</b>	1240458.04	37885.02	<b>1278343.06</b>
Normative shortage	2195.42	0.00	<b>2195.42</b>	2306.41	0.00	<b>2306.41</b>	2480.92	303.08	<b>2784.00</b>
Net Qty Receipt	1095516.22	0.00	<b>1095516.22</b>	1150897.77	0.00	<b>1150897.77</b>	1237977.12	37581.94	<b>1275559.06</b>
	Oct-22			Nov-22			Dec-22		
	MGR 0.2%	Rail 0.8%	Total	MGR 0.2%	Rail 0.8%	Total	MGR 0.2%	Rail 0.8%	Total
Quantity of Coal	982297.46	0.00	<b>982297.46</b>	1217064.32	0.00	<b>1217064.32</b>	1118452.96	0.00	<b>1118452.96</b>
Normative shortage	1964.59	0.00	<b>1964.59</b>	2434.13	0.00	<b>2434.13</b>	2236.91	0.00	<b>2236.91</b>
Net Qty Receipt	980332.87	0.00	<b>980332.87</b>	1214630.19	0.00	<b>1214630.19</b>	1116216.05	0.00	<b>1116216.05</b>





NTPC Ltd.

Non-Tariff income to be shared with Beneficiary for the year 2021-22

S.No.	Station Name	Amount in ₹	
		Net Non-Tariff Income to be considered for Sharing	Non-tariff Income to be shared (50%)
1	Singrauli Super Thermal Power Station	11,18,44,600	5,59,22,300
2	Rihand Superthermal Power Project- Stage 1	4,50,25,800	2,25,12,900
3	Rihand Superthermal Power Project- Stage 2	4,50,25,600	2,25,12,800
4	Rihand Superthermal Power Project- Stage 3	4,50,25,600	2,25,12,800
5	Unchahar Super Thermal Power Project- Stage 1	1,92,11,400	96,05,700
6	Unchahar Super Thermal Power Project- Stage 2	1,92,11,600	96,05,800
7	Unchahar Super Thermal Power Project- Stage 3	96,05,800	48,02,900
8	Unchahar Super Thermal Power Project- Stage 4	2,28,71,000	1,14,35,500
9	Tanda Thermal Power Project- Stage 1	84,17,000	42,08,500
10	Tanda Thermal Power Project- Stage 2	2,21,03,400	1,10,51,700
11	National Capital Dadri thermal- Stage 1	57,01,200	28,50,600
12	National Capital Dadri thermal- Stage 2	2,55,13,400	1,27,56,700
13	Auraiya Gas Power Project	61,54,800	30,77,400
14	Anta Gas Power Project	68,72,400	34,36,200
15	Dadri Gas Power Project	11,55,400	5,77,700
16	Feridabad Gas Power Project	29,18,400	14,59,200
17	Korba Super Thermal Power Project- Stage 1 & 2	11,87,75,200	5,93,87,600
18	Korba Super Thermal Power Project- Stage 3	2,82,79,800	1,41,39,900
19	Vindhyachal Super Thermal Power Project- Stage 1	4,54,69,000	2,27,34,500
20	Vindhyachal Super Thermal Power Project- Stage 2	3,60,86,600	1,80,43,300
21	Vindhyachal Super Thermal Power Project- Stage 3	3,60,86,600	1,80,43,300
22	Vindhyachal Super Thermal Power Project- Stage 4	3,60,86,600	1,80,43,300
23	Vindhyachal Super Thermal Power Project- Stage 5	1,80,43,200	90,21,600
24	Sipat Super Thermal Power Project- Stage 2	1,40,72,800	70,36,400
25	Sipat Super Thermal Power Project- Stage 1	2,78,64,400	1,39,32,200
26	Kawasgas Power Project	47,13,800	23,56,900
27	Gandhargas Power Project	77,01,000	38,50,500
28	Farakka Super Thermal Power Project- Stage 1 & 2	3,28,32,600	1,64,16,300
29	Farakka Super Thermal Power Project- Stage 3	1,02,60,200	51,30,100
30	Kahalgaoon Super Thermal Power- Stage 1	2,10,90,600	1,05,45,300
31	Kahalgaoon Super Thermal Power Station- Stage 2	3,76,62,000	1,88,31,000
32	Talcher Super Thermal Power Project- Stage 1	2,79,63,800	1,39,81,900
33	Talcher Super Thermal Power Project- Stage 2	5,59,27,400	2,79,63,700
34	Barh Thermal Power Plant- Stage 1	72,95,000	36,47,500
35	Barh Thermal Power Plant- Stage 2	3,80,38,600	1,90,19,300
36	Ramagundam Super Thermal Power- Stage 1 & 2	9,06,49,400	4,53,24,700
37	Ramagundam Super Thermal Power- Stage 3	2,15,83,200	1,07,91,600
38	Simhadri Thermal Power Project- Stage 1	3,46,84,000	1,73,42,000
39	Simhadri Thermal Power Project- Stage 2	3,46,84,000	1,73,42,000
40	Koldam Hydro Project	27,14,600	13,57,300
41	Bongaigaon	66,83,200	33,41,600
42	Mauda	98,34,200	49,17,100
43	Mauda- Stage 2	1,29,81,000	64,90,500
44	Solapur STPP	2,45,76,400	1,22,88,200
45	Kudgi STPP	73,77,800	36,88,900
46	Lara STPP	1,40,40,000	70,20,000
47	Gadarwara Super Th Power Plant	1,03,03,000	51,51,500
48	Darlipalli	2,38,38,000	1,19,19,000
49	Khargone	1,06,69,800	53,34,900
50	Barauni Thermal Power Station- Stage 1	56,17,800	28,08,900
51	Barauni Thermal Power Station- Stage 2	1,80,49,800	90,24,900
	Total	1,32,91,92,800	66,45,96,400

For  
Management (NTPC)

*Thota Vinod Kumar*

Thota Vinod Kumar  
GM (Finance Commercial)



For R.M. Bansal  
Cost Accountants  
FRN 000022

*R.M. Bansal*  
Shri R.M. Bansal  
(Partner)  
Membership No. 3323

UDIN 2203323ZZDHSWQF2CL

Date - 07-06-22

NTPC Ltd.

Non-Tariff Income to be shared with Beneficiary for the year 2023-23

Amount in ₹

S.No.	Station Name	Net Non-Tariff Income to be considered for Sharing	Non-tariff Income to be shared (50%)
1	Singrauli Super Thermal Power Station	4,37,94,600	2,18,97,300
2	Rihand Superthermal Power Project- Stage 1	8,10,26,600	4,05,13,300
3	Rihand Superthermal Power Project- Stage 2	8,10,26,400	4,05,13,200
4	Rihand Superthermal Power Project- Stage 3	8,10,26,400	4,05,13,200
5	Udchahar Super Thermal Power Project- Stage 1	56,58,600	28,29,300
6	Udchahar Super Thermal Power Project- Stage 2	56,58,600	28,29,300
7	Udchahar Super Thermal Power Project- Stage 3	28,29,400	14,14,700
8	Udchahar Super Thermal Power Project- Stage 4	67,36,400	33,68,200
9	Tanda Thermal Power Project- Stage 1	41,25,200	20,62,600
10	Tanda Thermal Power Project- Stage 2	1,23,75,800	61,87,900
11	National Capital Dadri thermal- Stage 1	14,31,94,600	7,15,97,300
12	National Capital Dadri thermal- Stage 2	16,70,60,400	8,35,30,200
13	Aaralya Gas Power Project	32,34,200	16,17,100
14	Arta Gas Power Project	56,49,000	28,24,500
15	Dadri Gas Power Project	9,89,800	4,94,900
16	Paridabad Gas Power Project	25,66,400	12,83,200
17	Korba Super Thermal Power Project- Stage 1 & 2	9,95,17,600	4,97,58,800
18	Korba Super Thermal Power Project- Stage 3	2,26,94,900	1,13,47,300
19	Vindhyachal Super Thermal Power Project- Stage 1	4,18,19,600	2,09,09,800
20	Vindhyachal Super Thermal Power Project- Stage 2	3,31,90,400	1,65,95,200
21	Vindhyachal Super Thermal Power Project- Stage 3	3,31,90,400	1,65,95,200
22	Vindhyachal Super Thermal Power Project- Stage 4	3,31,90,400	1,65,95,200
23	Vindhyachal Super Thermal Power Project- Stage 5	1,65,95,200	82,97,600
24	Sipat Super Thermal Power Project- Stage 2	6,76,15,400	3,38,07,700
25	Sipat Super Thermal Power Project- Stage 1	13,18,78,600	6,69,39,300
26	Kawagas Power Project	43,10,200	21,55,100
27	Gowthangas Power Project	11,39,000	5,69,500
28	Parakka Super Thermal Power Project- Stage 1 & 2	3,78,23,800	1,89,11,900
29	Parakka Super Thermal Power Project- Stage 3	1,18,20,000	59,10,000
30	Kahalgaoon Super Thermal Power- Stage 1	3,91,41,600	1,95,70,800
31	Kahalgaoon Super Thermal Power Station- Stage 2	6,98,95,800	3,49,47,900
32	Talcher Super Thermal Power Project- Stage 1	8,41,67,200	4,20,83,600
33	Talcher Super Thermal Power Project- Stage 2	16,83,34,400	8,41,67,200
34	Barh Thermal Power Plant- Stage 1	63,50,600	31,75,300
35	Barh Thermal Power Plant- Stage 2	1,37,01,200	68,50,600
36	Ramagundam Super Thermal Power- Stage 1 & 2	8,37,34,400	4,18,67,200
37	Ramagundam Super Thermal Power- Stage 3	1,98,36,800	99,18,400
38	Simhadri Thermal Power Project- Stage 1	1,64,29,600	82,14,800
39	Simhadri Thermal Power Project- Stage 2	1,64,29,600	82,14,800
40	Koldam Hydro Project	10,94,800	5,47,400
41	Bonggaon	1,22,73,000	61,36,500
42	Mouda	1,06,96,800	1,03,48,400
43	Mouda- Stage 2	1,73,19,800	1,36,59,800
44	Solapur STPP	1,50,01,400	75,00,700
45	Rudgi STPP	1,40,90,000	70,45,000
46	Lars STPP	1,38,88,600	1,14,44,300
47	Gadawara Super Th Power Plant	1,19,91,000	1,09,95,500
48	Daripalli	59,85,100	29,92,600
49	Khargone	27,03,000	13,51,500
50	Borauni Thermal Power Station- Stage 1	16,97,100	8,43,600
51	Borauni Thermal Power Station- Stage 2	26,69,400	13,34,700
52	Nabinagar Super Thermal Power Station- Stage 1	5,90,19,400	2,95,09,700
53	Muzaffargarh TPS (Kanti)- Stage 2	28,39,600	14,19,800
		<b>1,91,71,18,600</b>	<b>95,85,59,000</b>

For  
Management (NTPC)

*[Signature]*

Thota Vinod Kumar  
GM (Finance Commercial)

For R.J. Goel & Co.,  
Cost Accountants



UDIN: 23142562256BF0HJSM

NTPC Limited

Non-tariff income to be shared with beneficiaries for the year 2023-24

**S. DHAL & CO.**  
COST ACCOUNTANTS

Sl No.	Station Name	Net Non-tariff income to be considered for sharing	Non-tariff income to be shared (50%)
1	Setsraadi Super Thermal Power Station	25,64,04,400	12,82,02,200
2	Rihand Superthermal Power Project- Stage 1	6,32,12,600	3,16,06,300
3	Rihand Superthermal Power Project- Stage 2	6,32,12,800	3,16,06,400
4	Rihand Superthermal Power Project- Stage 3	6,32,12,600	3,16,06,300
5	Unchahar Super Thermal Power Project- Stage 1	1,13,29,000	56,64,500
6	Unchahar Super Thermal Power Project- Stage 2	1,13,29,000	56,64,500
7	Unchahar Super Thermal Power Project- Stage 3	56,64,600	28,32,300
8	Unchahar Super Thermal Power Project- Stage 4	1,34,87,000	67,43,500
9	Tanda Thermal Power Project- Stage 1	1,13,91,500	56,96,800
10	Tanda Thermal Power Project- Stage 2	3,41,80,600	1,70,90,300
11	National Capital Dabri thermal- Stage 1	8,80,64,800	4,44,82,400
12	National Capital Dabri thermal- Stage 2	10,17,92,600	5,08,96,300
13	Aumya Gas Power Project	15,60,600	7,80,300
14	Arza Gas Power Project	15,59,000	7,79,500
15	Dabri Gas Power Project	6,11,400	3,05,700
16	Fardabad Gas Power Project	54,37,200	27,18,600
17	Korba Super Thermal Power Project- Stage 1 & 2	16,04,42,400	8,02,21,200
18	Korba Super Thermal Power Project- Stage 3	3,82,00,600	1,91,00,300
19	Vindhyachal Super Thermal Power Project- Stage 1	1,11,80,800	55,90,400
20	Vindhyachal Super Thermal Power Project- Stage 2	2,63,34,000	1,31,67,000
21	Vindhyachal Super Thermal Power Project- Stage 3	2,63,34,000	1,31,67,000
22	Vindhyachal Super Thermal Power Project- Stage 4	2,63,34,000	1,31,67,000
23	Vindhyachal Super Thermal Power Project- Stage 5	1,31,67,000	65,83,500
24	Sisat Super Thermal Power Project- Stage 2	4,76,49,800	2,38,24,800
25	Sisat Super Thermal Power Project- Stage 3	9,43,46,000	4,71,73,000
26	Kawasgas Power Project	41,55,200	20,77,600
27	Gandhargas Power Project	66,43,000	33,21,500
28	Farakka Super Thermal Power Project- Stage 1 & 2	3,83,48,200	1,91,74,100
29	Farakka Super Thermal Power Project- Stage 3	1,82,33,800	91,16,900
30	Kahalgaon Super Thermal Power- Stage 1	3,65,40,400	1,82,70,200
31	Kahalgaon Super Thermal Power- Stage 2	6,52,50,600	3,26,25,300
32	Talcher Super Thermal Power Project- Stage 1	4,90,71,000	2,45,35,500
33	Talcher Super Thermal Power Project- Stage 2	9,81,42,100	4,90,71,100
34	Barh Thermal Power Plant- Stage 1	1,34,12,400	67,06,200
35	Barh Thermal Power Plant- Stage 2	1,60,95,000	80,47,500
36	North Karanpura STPS	1,83,41,200	91,70,600
37	Ranagundem Super Thermal Power- Stage 1 & 2	13,53,93,200	6,76,96,600
38	Ranagundem Super Thermal Power- Stage 3	3,22,36,400	1,61,18,200
39	Simhadri Thermal Power Project- Stage 1	1,76,31,400	88,15,700
40	Simhadri Thermal Power Project- Stage 2	1,76,31,400	88,15,700
41	Koldam Hydro Project	19,81,000	9,90,500
42	Bongajon	3,12,54,000	1,56,27,000
43	Mauda	1,29,51,400	64,75,700
44	Mauda- Stage 2	3,70,96,000	1,85,48,000
45	Solapur STPP	1,84,92,800	92,46,400
46	Kudjer STPP	5,41,77,800	2,70,88,900
47	Lara STPP	4,88,51,000	2,44,25,500
48	Gadamara Super Th Power Plant	1,58,01,400	79,00,700
49	Darjuli	2,40,40,000	1,20,20,000
50	Khargone	1,24,11,000	62,05,500
51	Barauni Thermal Power Station- Stage 1	93,82,000	46,91,000
52	Barauni Thermal Power Station- Stage 2	4,26,45,200	2,13,22,600
53	Nabinagar Super Thermal Power Station- Stage 1	2,05,53,600	1,02,76,800
54	Muzaffarpur TPS (Kand)- Stage 2	64,30,800	32,15,400
		<b>2,10,44,33,600</b>	<b>1,05,22,16,800</b>

For Management (NTPC)

*[Signature]*

Thota Vinod Kumar  
GM (Finance Commercial)

For S. Dhal & Co.,  
Cost Accountants

*[Signature]*

(Sailaba Dhal)  
Partner  
Membership No. 22835



UDIN - 2422835Z22V33V8100

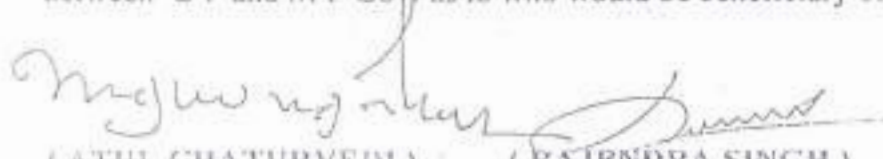
**FOLLOWING WERE PRESENT :**

1. Shri Naresh Agarwal, Hon'ble Minister of Energy, U.P.
2. Shri Atul Chaturvedi, Secretary (Energy), Govt. of U.P.
3. Shri G P Singh, Chairman, UPSEB
4. Shri Rajendra Singh, CMD, NTPC

**PRINCIPLES FOR CONSUMPTIVE WATER CHARGES FOR FUTURE**

Following principles for calculation of consumptive water charges for Rihand and Singrauli STPS to be adopted in future will be as under :-

- i) Water level may be taken on theoretical basis i.e. minimum of 830 feet and maximum of 880 feet.
- ii) T&D losses to be taken @ 12 % (Twelve percent ).
- iii) Aux. Power consumption of UPSEB hydro stations viz Rihand and Obra will be taken as 0.5 %.
- iv) The energy loss will be calculated taking into consideration the actual availability of Rihand hydro station of UPSEB for the year 1998.
- v) Water charges will be payable from the date of synchronization of the units.
- vi) The per Kilowatt hour charges to be applied will be the highest average annual rate during 1998 amongst Northern Region coal based stations of NTPC and will be applicable w.e.f. 1.1.1999 for next five years. This will be revised upwards by 10% after every five years.
- vii) To provide for generation loss on account of spillover of water, the charges for consumptive use will be worked out on the basis of 3.0 ( Three ) times of the above rate in place of 2 ( Two ) times as earlier proposed. No separate payments towards spillover water will be admissible.
- viii) Water charges will be pass-through in the tariff.
- ix) M P Govt have demanded water charges from NTPC for Vindhyachal Super Thermal Power Station. It was agreed that water charges for Vindhyachal Super Thermal Power Station of NTPC located in M P will not be billed to NTPC till the matter is settled between U P and M P Govt as to who would be beneficiary of water charges.



( ATUL CHATURVEDI )  
Secretary ( Energy )  
Govt. of U.P.

( RAJENDRA SINGH )  
CMD  
NTPC



( G P SINGH )  
Chairman  
UPSEB

**Month wise availability of Rihand Hydro Station for year 1998**

Month	Availability as intimated by UPSEB(as recorded in IOM ref No: NTPC:NRHQ :Commi: 2 Dated 26/05/99 From DGM (Commi) NRHQ Allahbad to GM (F&A).CC		No of days	Available hours
		%		
Jan-98		98.46	31	73254.24
Feb-98		96.46	28	64821.12
Mar-98		89.86	31	66855.84
Apr-98		84.02	30	60494.4
May-98		97.09	31	72234.96
Jun-98		87.84	30	63244.8
Jul-98		77.81	31	57890.64
Aug-98		79.14	31	58880.16
Sep-98		71.95	30	51804
Oct-98		88.57	31	65896.08
Nov-98		80.26	30	57787.2
Dec-98		86.6	31	64430.4
<b>Year 1998</b>		<b>86.48</b>	<b>365</b>	<b>757593.8</b>



Details of Source wise Fuel for Computation of Energy Charges

Name of the Company :		NTPC Limited						
Name of the Power Station :		Rihand STPP Stage I, II & III						
S. No.	Month	Unit	Oct-18		Nov-18		Dec-18	
			Domestic	Imported	Domestic	Imported	Domestic	Imported
<b>A)</b>	<b>OPENING QUANTITY</b>							
1	Opening Quantity of Coal/Lignite	(MMT)	0.7986		0.8633		0.8580	
2	Value of Stock	(Rs.)	1731507484		1827094965		2013308246	
<b>B)</b>	<b>QUANTITY</b>							
3	Quantity of Coal/Lignite supplied by Coal/Lignite Company	(MMT)	1.1038		1.0261		1.1657	
4	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)						
5	Coal supplied by Coal/Lignite Company (3+4)	(MMT)	1.1038		1.0261		1.1657	
6	Non-routine Transit & Handling Losses (For coal/ Lignite based projects)	(MMT)	0.0032		0.0027		0.0034	
7	Net coal / Lignite Supplied (3-4)	(MMT)	1.1006		1.0234		1.1623	
<b>C)</b>	<b>PRICE</b>							
8	Amount charged by the Coal /Lignite Company	(Rs.)	2206288010		2531217257		2364612979	
9	Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs.)						
10	Handling, Sampling and such other similar charges	(Rs.)	24146258		28113557		58428524	
11	Total amount Charged (8+9+10)	(Rs.)	2230434268		2559328814		2423041803	
<b>D)</b>	<b>TRANSPORTATION</b>							
12	Transportation charges by rail/ship/road transport							
	By Rail	(Rs.)	36520499		22283997		38310986	
	By Road							
	By Ship							
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs.)						
14	Demurrage Charges, if any	(Rs.)						
15	Cost of diesel in transporting coal through MGR systems, if applicable	(Rs.)	20994373		18434410		18527883	
16	Total Transportation Charges (12+13+14+15)	(Rs.)	57514872		40718407		56838860	
17	Total amount Charged for coal/lignite supplied including Transportation (11+16)	(Rs.)	2287949140		2600047221		2479880672	
<b>E)</b>	<b>TOTAL COST</b>							
18	Landed cost of coal/ Lignite (2+17)/(1+7)	Rs./MT	2116.46		2346.48		2224.00	
19	Blending Ratio (Domestic/Imported)		100.00		100.00		100.00	
20	Weighted average cost of coal/ Lignite for preceding three months	Rs./MT			2228.62			
<b>F)</b>	<b>QUALITY</b>							
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/Kg)						
22	GCV of Domestic Coal supplied as per bill of Coal Company (Eq Basis)	(kCal/Kg)	4660		5009		4667	
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/Kg)						
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)						
25	Weighted average GCV of coal/ Lignite as Billed	(kCal/Kg)						
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/Kg)						
27	GCV of Domestic Coal supplied as received at Station (TM basis)	(kCal/Kg)	4000		4402		4137	
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)						
29	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)						
30	Weighted average GCV of coal/ Lignite as Received (Eq Basis)	(kCal/Kg)	4000		4402		4137	

Digitally signed by NTPC Limited  
 DN: cn=NTPC Limited, o=NTPC Limited, ou=NTPC Limited, email=NTPC.Limited@npsc.co.in

*[Handwritten Signature]*

  
 JAI RAM KHATRI ASSOCIATES  
 JAIPUR

M. No - 423164

(Petitioner)

## Details of Secondary Fuel for Computation of Energy Charges

Name of the Company :	NTPC Limited
Name of the Power Station :	Rihand STPP Stage I, II & III

Sl.No.	Month	Unit	Oct-18		Nov-18		Dec-18	
			LDO	HFO	LDO	HFO	LDO	HFO
1	Opening Quantity of Oil	KL	561.95	4383.4	736.45	4263.2	3639.84	4114.2
2	Value of Opening	(Rs)	29044499	134181533	41005239	130502056	215594390	125940974
3	Quantity of Oil supplied by Oil Company	KL	233	0	3433.98	0	0	0
4	Adjustment(+/-) in quantity supplied made by Oil Company	KL	0		0.00	0	0	0
5	Oil supplied by Oil Company (1+2)	KL	233	0	3433.98	0	0	0
6	Normative Transit & Handling Losses	KL	0		0.00	0	0	0
7	Net Oil Supplied (3-4)	KL	233	0	3433.98	0	0	0
8	Amount charged by the Oil Company	(Rs)	15217996	0	206016697	0	0	0
9	Adjustment(+/-) in amount charged made by Oil Company	(Rs)						
10	Total amount charged (6+7)	(Rs)	15217996	0	206016697	0	0	0
11	Transportation charges by rail / ship / road transport	(Rs)						
12	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs)						
13	Demurrage Charges, if any	(Rs)						
14	Cost of diesel in transporting Oil through MGR system, if applicable	(Rs)						
15	Total Transportation Charges (9+-10-11+12)	(Rs)						
16	Others -Entry Tax on Oil	(Rs.)						
17	Total amount Charged for fuel supplied including Transportation (8+13+14)	(Rs)	15217996	0	206016697		0	
18	Landed Price of Oil	Rs/KL	55679.60	30611.29	59231.77	30611.29	59231.77	30611.29
19	Weighted average GCV of Oil as fired Stage-I	(kCal/L)	9790		9790		9597	
20	Weighted average rate of Secondary Fuel Stage-I	Rs/KL	30611.29		30611.29		59231.77	
19	Weighted average GCV of Oil as fired Stage-II	(kCal/L)	9790		9790		9790	
20	Weighted average rate of Secondary Fuel Stage-II	Rs/KL	30611.29		30611.29		30611.29	
19	Weighted average GCV of Oil as fired Stage-III	(kCal/L)	9349		9419		9597	
20	Weighted average rate of Secondary Fuel Stage-III	Rs/KL	55679.60		59231.77		59231.77	

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40749 KUMAR  
M No - 425104



PETITIONER

Details of Source wise Fuel for Computation of Energy Charges

Name of the Company :		NTPC Limited						
Name of the Power Station :		Rihand STPP Stage II						
S. No.	Month	Unit	Oct-19		Nov-19		Dec-19	
			Domestic	Imported	Domestic	Imported	Domestic	Imported
<b>A) OPENING QUANTITY</b>								
1	Opening Quantity of Coal/Lignite	(MMT)	0.0945		0.1666		0.4684	
2	Value of Stock	(Rs.)	95965270		156473917		1184742802	
<b>B) QUANTITY</b>								
3	Quantity of Coal/Lignite supplied by Coal/Lignite Company	(MMT)	1.3813		1.3316		1.0739	
4	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)	0.0000		0.0000		0.0000	
5	Coal supplied by Coal/Lignite Company (3+4)	(MMT)	1.3813		1.3316		1.0739	
6	Normative Transit & Handling losses (For coal/Lignite based projects)	(MMT)	0.0038		0.0030		0.0021	
7	Net coal/Lignite Supplied (3-4)	(MMT)	1.3775		1.3086		1.0717	
<b>C) PRICE</b>								
8	Amount charged by the Coal/Lignite Company	(Rs.)	2856235555		1229503233		2018393474	
9	Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs.)	0		0		0	
10	Handling, Sampling and such other similar charges	(Rs.)	20857197		66007174		84595642	
11	Total amount charged (8+9+10)	(Rs.)	2886092752		1275504007		2082989116	
<b>D) TRANSPORTATION</b>								
12	Transportation charges by rail/ship/road transport							
	By Rail	(Rs.)	37212710		14618692		0	
	By Road	(Rs.)	0		0		0	
	By Ship	(Rs.)	0		0		0	
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs.)	0		0		0	
14	Demurrage Charges, if any	(Rs.)						
15	Cost of diesel in transporting coal through MDR system, if applicable	(Rs.)	24048159		21496274		18856007	
16	Total Transportation Charges (12+13+14+15)	(Rs.)	61260879		35914966		18856007	
17	Total amount charged for coal/lignite supplied including Transportation (11+16)	(Rs.)	2947353630		331465373		2099645123	
<b>E) TOTAL COST</b>								
18	Landed cost of coal/lignite (2+17)/(1+7)	Rs./MT	2138.88		2486.43		2119.49	
19	Blending Ratio (Domestic/Imported)		100.00		100.00		100.00	
20	Weighted average cost of coal/lignite for preceding three months	Rs./MT			2248.01			
<b>F) QUALITY</b>								
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/kg)	4538		4578		4898	
22	GCV of Domestic Coal supplied as per bill of Coal Company (Eq Basis)	(kCal/kg)	4579		4939		4729	
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/kg)						
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/kg)						
25	Weighted average GCV of coal/Lignite as Billed	(kCal/kg)	4578		4833		4432	
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/kg)	4126		4072		4355	
27	GCV of Domestic Coal supplied as received at Station (TM basis)	(kCal/kg)	4070		4191		4020	
28	GCV of Imported Coal of opening stock as received at Station	(kCal/kg)						
29	GCV of Imported Coal of opening stock as received at Station	(kCal/kg)						
30	Weighted average GCV of coal/lignite as received (TM basis)	(kCal/kg)	4072		4355		4122	

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(Petitioner)

Sailabala Dhal  
Sailabala Dhal, Partner  
M No- 22835  
UDIN - 2422835ZZTKX236AZ5



S. DHAL & CO.  
COST ACCOUNTANTS

## Details of Secondary Fuel for Computation of Energy Charges

Name of the Company :	NTPC Limited
Name of the Power Station :	Rihand STPP Stage III

Sl.No.	Month	Unit	Oct-19		Nov-19		Dec-19	
			LDO	HFO	LDO	HFO	LDO	HFO
1	Opening Quantity of Oil	KL	5772.386		5507.386		5383.39	
2	Value of Opening	(Rs)	305775957		291738325		285169772	
3	Quantity of Oil supplied by Oil Company	KL	0		0.00		0	
4	Adjustment(+/-) in quantity supplied made by Oil Company	KL	0		0.00		0	
5	Oil supplied by Oil Company (1+2)	KL	0		0.00		0	
6	Normative Transit & Handling Losses	KL	0		0.00		0	
7	Net Oil Supplied (3-4)	KL	0		0.00		0	
8	Amount charged by the Oil Company	(Rs)	0		0		0	
9	Adjustment(+/-) in amount charged made by Oil Company	(Rs)					24084	
10	Total amount charged (6+7)	(Rs)	0		0		24084	
11	Transportation charges by rail / ship / road transport	(Rs)	0		0		0	
12	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs)	0		0		0	
13	Demurrage Charges, if any	(Rs)	0		0		0	
14	Cost of diesel in transporting Oil through MGR system, if applicable	(Rs)	0		0		0	
15	Total Transportation Charges (9+/-10-11+12)	(Rs)	0		0		0	
16	Others	(Rs.)	0		0		0	
17	Total amount Charged for fuel supplied including Transportation (8+13+14)	(Rs)	0		0		24084	
18	Landed Price of Oil	Rs/KL	52972.20		52972.20		52976.70	
19	Weighted average GCV of Oil as fired Stage-III	(kCal/L)	9609		9609		9609	
20	Weighted average rate of Secondary Fuel Stage-III	Rs/KL	52972.20		52972.20		52976.70	

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Sailabala Dhal

Sailabala Dhal, Partner  
M No- 22835  
UDIN - 2422835ZTKX236A25

## Details of Source wise Fuel for Computation of Energy Charges

Name of the Company :		NTPC Limited						
Name of the Power Station :		Rihand STPP Stage III						
S. No.	Month	Unit	Oct-20		Nov-20		Dec-20	
			Domestic	Imported	Domestic	Imported	Domestic	Imported
<b>A) OPENING QUANTITY</b>								
1	Opening Quantity of Coal/Lignite	(MMT)	0.0000		0.2248		0.5834	
2	Value of Stock	(Rs.)	0		452410097		1282722780	
<b>B) QUANTITY</b>								
3	Quantity of Coal/Lignite supplied by Coal/Lignite Company	(MMT)	1.4242		1.2625		1.1520	
4	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)	0.0000		0.0000		0.0000	
5	Coal supplied by Coal/Lignite Company (3+4)	(MMT)	1.4242		1.2625		1.1520	
6	Normative Transit & Handling Losses (For coal/ Lignite based projects)	(MMT)	0.0043		0.0029		0.0024	
7	Net coal / Lignite Supplied (3-4)	(MMT)	1.4198		1.2596		1.1496	
<b>C) PRICE</b>								
8	Amount charged by the Coal /Lignite Company	(Rs.)	2665832773		2343178863		2196593399	
9	Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs.)	65179008		379086848		310108449	
10	Handling, Sampling and such other similar charges	(Rs.)	40785312		51279360		58721528	
11	Total amount Charged (8+9+10)	(Rs.)	2771797093		2773545071		2565423376	
<b>D) TRANSPORTATION</b>								
12	Transportation charges by rail/ship/road transport							
	By Rail	(Rs.)	58232386		14809169		31506721	
	By Road	(Rs.)	0		0		0	
	By Ship	(Rs.)	0		0		0	
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs.)	0		0		0	
14	Demurrage Charges, if any	(Rs.)						
15	Cost of diesel in transporting coal through MGR system, if applicable	(Rs.)	27262513		22773599		21624463	
16	Total Transportation Charges (12+13+14+15)	(Rs.)	85494899		37582768		53131184	
17	Total amount Charged for coal/lignite supplied including Transportation (11+16)	(Rs.)	2857291992		2811127839		2618554560	
<b>E) TOTAL COST</b>								
18	Landed cost of coal/ Lignite (2+17)/(1+7)	Rs./MT	2012.41		2198.59		2251.14	
19	Blending Ratio (Domestic/Imported)		100.00		100.00		100.00	
20	Weighted average cost of coal/ Lignite for preceding three months	Rs./MT			2161.22			
<b>F) QUALITY</b>								
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/Kg)						
			4365		4435		4667	
22	GCV of Domestic Coal supplied as per bill of Coal Company (Eq Basis)	(kCal/Kg)	4435		4708		4679	
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/Kg)						
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)						
25	Weighted average GCV of coal/ Lignite as Billed	(kCal/Kg)	4435		4667		4675	
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/Kg)	3630		3817		4148	
27	GCV of Domestic Coal supplied as received at Station (TM basis)	(kCal/Kg)	3817		4207		4151	
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)						
29	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)						
30	Weighted average GCV of coal/ Lignite as Received (TM basis)	(kCal/Kg)	3817		4148		4150	

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**Details of Secondary Fuel for Computation of Energy Charges**

<b>Name of the Company :</b>		NTPC Limited						
<b>Name of the Power Station :</b>		Rihand STPP Stage III						
Sl.No.	Month	Unit	Oct-20		Nov-20		Dec-20	
			LDO	HFO	LDO	HFO	LDO	HFO
1	Opening Quantity of Oil	KL	5060.395		5004.395		4089.40	
2	Value of Opening	(Rs)	229437752		226898718		185412719	
3	Quantity of Oil supplied by Oil Company	KL	0		0.00		3156.27	
4	Adjustment(+/-) in quantity supplied made by Oil Company	KL	0		0.00		0	
5	Oil supplied by Oil Company (1+2)	KL	0		0.00		3156.27	
6	Normative Transit & Handling Losses	KL	0		0.00		0	
7	Net Oil Supplied (3-4)	KL	0		0.00		3156.27	
8	Amount charged by the Oil Company	(Rs)	0		0		142915264	
9	Adjustment(+/-) in amount charged made by Oil Company	(Rs)					0	
10	Total amount charged (6+7)	(Rs)	0		0		142915264	
11	Transportation charges by rail / ship / road transport	(Rs)	0		0		0	
12	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs)	0		0		0	
13	Demurrage Charges, if any	(Rs)	0		0		0	
14	Cost of diesel in transporting Oil through MGR system, if applicable	(Rs)	0		0		0	
15	Total Transportation Charges (9+/-10-11+12)	(Rs)	0		0		0	
16	Others	(Rs.)	0		0		0	
17	Total amount Charged for fuel supplied including Transportation (8+13+14)	(Rs)	0		0		142915264	
18	Landed Price of Oil	Rs/KL	45339.89		45339.89		45313.71	
19	Weighted average GCV of Oil as fired Stage-I	(kCal/L)	9540		9540		9371	
20	Weighted average rate of Secondary Fuel Stage-I	Rs/KL	45339.89		45339.89		45313.71	

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Details of Source wise Fuel for Computation of Energy Charges

Name of the Company :		NTPC Limited									
Name of the generating Station :		Rihand STPP Stage III									
S. No.	Month	Unit	Oct-21			Nov-21			Dec-21		
			Domestic	Imported	Biomass	Domestic	Imported	Biomass	Domestic	Imported	Biomass
<b>A) OPENING QUANTITY</b>											
1	Opening Quantity of Coal/Lignite	MT	190191.28	0.00	0.00	191611.48	0.00	0.00	191915.25	0.00	0.00
2	Value of Stock	Rs.	412893607	0	0	471921223	0	0	441706535	0	0
<b>B) QUANTITY</b>											
3	Quantity of Coal/Lignite supplied by Coal/Lignite Company	MT	10977711.64	0.00	0.00	1154304.18	0.00	0.00	1278343.06	0.00	0.00
4	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	MT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Coal supplied by Coal/Lignite Company (3+4)	MT	10977711.64	0.00	0.00	1154304.18	0.00	0.00	1278343.06	0.00	0.00
6	Normative Transit & Handling losses (For coal/ Lignite based projects)	MT	2395.42	0.00	0.00	7936.41	0.00	0.00	2788.00	0.00	0.00
7	Net coal/ Lignite Supplied (3-6)	MT	10953756.22	0.00	0.00	1146367.77	0.00	0.00	1275555.06	0.00	0.00
<b>C) PRICE</b>											
8	Amount charged by the Coal/Lignite Company	Rs.	2109502953	0	0	2209717972	0	0	244066576	0	0
9	Adjustment (+/-) in amount charged made by Coal/Lignite Company	Rs.	505401860	0	0	830567855	0	0	686458332	0	0
10	Handling, Sampling and such other similar charges	Rs.	47576247	0	0	40594717	0	0	50417449	0	0
11	Total amount Charged (8+9+10)	Rs.	2762280560	0	0	2680000544	0	0	3177342557	0	0
<b>D) TRANSPORTATION</b>											
12	Transportation charges by rail/ship/head transport										
	By Rail	Rs.	0	0	0	0	0	0	7833517	0	0
	By Road	Rs.	0	0	0	0	0	0	0	0	0
	By Ship	Rs.	0	0	0	0	0	0	0	0	0
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	Rs.	0	0	0	0	0	0	0	0	0
14	Demurrage Charges, if any	Rs.	0	0	0	0	0	0	0	0	0
15	Cost of diesel in transporting coal through MGT system, if applicable	Rs.	23456100	0	0	25787011	0	0	26458958	0	0
16	Total Transportation Charges (12+13+14+15)	Rs.	23456100	0	0	25787011	0	0	26292275	0	0
17	Total amount Charged for coal/Lignite supplied including Transportation (11+16)	Rs.	2766717560	0	0	2682567555	0	0	3203635332	0	0
<b>E) TOTAL COST</b>											
18	Landed cost of coal/ Lignite (2+3)(1+7)	Rs./MT	2473.06	0.00	0.00	8.00	8.00	0.00	9.00	0.00	0.00
19	Blending Ratio (Domestic/Imported)		100.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00
20	Weighted average cost of coal/ Lignite (including Biomass)	Rs./MT	2473.06			2381.33			2689.51		
20a	Weighted average cost of coal/ Lignite (excluding Biomass)	Rs./MT	2473.06			2381.33			2689.51		
<b>F) QUALITY</b>											
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/kg)	4575			4901			4748		
22	GCV of Domestic Coal supplied as per bill of Coal Company (Eq Basis)	(kCal/kg)	4959			4723			4893		
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/kg)									
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/kg)									
25	Weighted average GCV of coal/ Lignite as billed (including Biomass)	(kCal/kg)	4901			4708			4876		
25a	Weighted average GCV of coal/ Lignite as billed (including Biomass)	(kCal/kg)	4901			4748			4876		
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/kg)	3983			4372			4318		
27	GCV of Domestic Coal supplied as received at Station	(kCal/kg)	4322			4309			4472		
28	GCV of Imported Coal of opening stock as received at Station	(kCal/kg)									
29	GCV of Imported Coal of opening stock as received at Station	(kCal/kg)									
30	Weighted average GCV of coal/ Lignite as received (including Biomass)	(kCal/kg)	4372			4316			4491		
30a	Weighted average GCV of coal/ Lignite as received (including Biomass)	(kCal/kg)	4372			4316			4491		

  
**श्री० इमरान**  
**Mohd Inam**  
**वरिष्ठ प्रबंधक (वित्त)**  
**Sr. Manager (Finance)**  
**एनपीसी लि०- राहती / NTPC (M. P.)**

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Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited						
Name of the generating Station		Rihand STPP Stage III						
Month		Oct-21		Nov-21		Dec-21		
Sl	Particulars	Unit	LDO	HFO	LDO	HFO	LDO	HFO
<b>A) OPENING QUANTITY</b>								
1	Opening Stock of Oil	KL	4,360.09	0.00	7,027.17	0.00	6,865.17	0.00
2	Value of Stock	Rs	22,02,87,492	0.00	45,75,86,771	0.00	39,81,90,030	0.00
<b>B) QUANTITY</b>								
3	Quantity of Oil supplied by Oil Company	KL	3,162.08	0.00	0.00	0.00	0.00	0.00
4	Adjustment (+/-) in quantity supplied made by Oil Company	KL	0.00	0.00	0.00	0.00	0.00	0.00
5	Coal supplied by Oil Company (3+4)	KL	3,162.08	0.00	0.00	0.00	0.00	0.00
6	Normative transit & Handling losses	KL	0.00	0.00	0.00	0.00	0.00	0.00
7	Net Oil supplied (5 - 6)	KL	3,162.08	0.00	0.00	0.00	0.00	0.00
<b>C) PRICE</b>								
8	Amount charged by the Oil Company	Rs	21,60,09,516	0	0	0	0	0
9	Adjustment (+/-) in amount charged by Oil Company	Rs	0	0	0	0	0	0
10	Handling, Sampling and such other similar charges	Rs	0	0	0	0	0	0
11	Total Amount charged (8+9+10)	Rs	21,60,09,516	0	0	0	0	0
<b>D) TRANSPORTATION</b>								
12	Transportation charges by Rail / Ship / Road Transport	Rs						
	By Rail	Rs	0	0	0	0	0	0
	By Road	Rs	0	0	0	0	0	0
	By Ship	Rs	0	0	0	0	0	0
13	Adjustment (+/-) in amount charged by railways / transport company	Rs	0	0	0	0	0	0
14	Demurrage charges, if any	Rs	0	0	0	0	0	0
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs	0	0	0	0	0	0
16	Total transportation charges (12+/- 13 - 14 + 15)	Rs	0	0	0	0	0	0
17	Total amount charged for Oil supplied including transportation (11 + 16)	Rs	21,60,09,516	0	0	0	0	0
<b>E) TOTAL COST</b>								
18	Landed Cost of Oil (LDO/HFO) (2+17) / (1+7)	Rs/KL	58,001.49	0.00	58,001.49	0.00	58,001.49	0.00
19	Blending Ratio		1.00	0.00	1.00	0.00	1.00	0.00
20	Weighted average cost. of Oil		58,001.49		58,001.49		58,001.49	
<b>F) QUALITY</b>								
21	GCV of Oil of the opening stock as per bill of Oil company	(Kcal/Ltr)						
22	GCV of oil supplied as per bill of oil company	(Kcal/Ltr)						
23	GCV of imported coal of the opening coal stock as per bill of coal company	(Kcal/Ltr)						
24	GCV of imported coal supplied as per bill of coal company	(Kcal/Ltr)						
25	Weighted average GCV of Oil as billed	(Kcal/Ltr)						
26	GCV of Oil of the Opening stock as received at station	(Kcal/Ltr)						
27	GCV of Oil supplied	(Kcal/Ltr)	9232	0	9232	0	9232	0
28	GCV of Imported coal of the Opening stock as received at station	(Kcal/Ltr)						
29	GCV of Imported coal supplied as received at station	(Kcal/Ltr)						
30	Weighted average GCV of Oil	(Kcal/Ltr)	9232		9232		9232	

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**मोह. इमाम**  
**Mohd. Inam**  
**सीनियर प्रबंधक (वित्त)**  
**Sr. Manager (Finance)**

एनटीपीसी लिमिटेड - राहना / NTPC Ltd. - Raheena

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Details of Source wise Fuel for Computation of Energy Charges

Name of the Company :		NTPC Limited									
Name of the generating Station :		Rihand STPP Stage III									
S. No.	Month	Unit	Oct-22			Nov-22			Dec-22		
			Domestic	Imported	Biomass	Domestic	Imported	Biomass	Domestic	Imported	Biomass
<b>A) OPENING QUANTITY</b>											
1	Opening Quantity of Coal/Lignite	MT	815589.42	0.00	0.00	849182.29	0.00	0.00	837711.48	0.00	0.00
2	Value of Stock	Rs.	2277426302	0	0	1874175388	0	0	1920680724	0	0
<b>B) QUANTITY</b>											
3	Quantity of Coal/Lignite supplied by Coal/Lignite Company	MT	982257.46	0.00	0.00	1217054.32	0.00	0.00	1118452.96	0.00	0.00
4	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	MT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Coal supplied by Coal/Lignite Company (3+4)	MT	982257.46	0.00	0.00	1217054.32	0.00	0.00	1118452.96	0.00	0.00
6	Normative Transit & Handling Losses (For coal/ lignite based projects)	MT	1964.59	0.00	0.00	2434.13	0.00	0.00	2236.91	0.00	0.00
7	Net coal / lignite Supplied (3-6)	MT	980292.87	0.00	0.00	1214620.19	0.00	0.00	1116216.05	0.00	0.00
<b>C) PRICE</b>											
8	Amount charged by the Coal /Lignite Company	Rs.	1959935106	0	0	2422352592	0	0	2279119043	0	0
9	Adjustment (+/-) in amount charged made by Coal/Lignite Company	Rs.	325588879	0	0	206195971	0	0	228889574	0	0
10	Handling, Sampling and such other similar charges	Rs.	43676433	0	0	49790207	0	0	45579718	0	0
11	Total amount Charged (8+9+10)	Rs.	2379161418	0	0	2678338770	0	0	2503779434	0	0
<b>D) TRANSPORTATION</b>											
12	Transportation charges by rail/ship/road transport										
	By Rail	Rs.	0	0	0	0	0	0	0	0	0
	By Road	Rs.	0	0	0	0	0	0	0	0	0
	By Ship	Rs.	0	0	0	0	0	0	0	0	0
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	Rs.	0	0	0	0	0	0	0	0	0
14	Demurrage Charges, if any	Rs.									
15	Cost of diesel in transporting coal through MGH system, if applicable	Rs.	26729163	0	0	31930967	0	0	29847437	0	0
16	Total Transportation Charges (12+13+14+15)	Rs.	26729163	0	0	31930967	0	0	29847437	0	0
17	Total amount Charged for coal/lignite supplied including Transportation (11+16)	Rs.	2405850779	0	0	2700269737	0	0	2533623871	0	0
<b>E) TOTAL COST</b>											
18	Landed cost of coal/ lignite (2+17)/(1+7)	Rs./MT	2579.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Blending Ratio (Domestic/Imported)		100.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00
20	Weighted average cost of coal/ lignite (including Biomass)	Rs./MT	2579.06			2352.46			2385.26		
20a	Weighted average cost of coal/ lignite (excluding Biomass)	Rs./MT	2579.06			2352.46			2385.26		
<b>F) QUALITY</b>											
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(KCal/Kg)									
22	GCV of Domestic Coal supplied as per bill of Coal Company (Eq Basis)	(KCal/Kg)	5045			4948			4708		
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(KCal/Kg)	4866			4579			4585		
24	GCV of Imported Coal supplied as per bill Coal Company	(KCal/Kg)									
25	Weighted average GCV of coal/ lignite as Billed (including Biomass)	(KCal/Kg)	4948			4708			4640		
25a	Weighted average GCV of coal/ lignite as Billed (excluding Biomass)	(KCal/Kg)	4948			4708			4640		
26	GCV of Domestic Coal of the opening stock as received at Station	(KCal/Kg)	4431			4311			4086		
27	GCV of Domestic Coal supplied as received at Station	(KCal/Kg)	4209			3965			3862		
28	GCV of Imported Coal of opening stock as received at Station	(KCal/Kg)									
29	GCV of Imported Coal of opening stock as received at Station	(KCal/Kg)									
30	Weighted average GCV of coal/ lignite as Received (including Biomass)		4311			4086			3958		
30a	Weighted average GCV of coal/ lignite as Received (excluding Biomass)	(KCal/Kg)	4311			4086			3958		

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 DN: cn=Shalabh Jain, o=NTPC Ltd., ou=Finance, email=shalabh.jain@nptcltd.com



  
**MOHD. IMRAN**  
 Sr. Manager (Finance)  
 NTPC Ltd. UFCG-Dadri

  
**SANDAY SINHA**  
 Add. General Manager (U.F.C.G.-Fuel)  
 एन.टी.सी. लि., ददरी / NTPC Ltd., Dadri

**Shalabh Jain**  
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Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited					
Name of the generating Station		Rihand STPP Stage III					
Month		Oct-22		Nov-22		Dec-22	
Sl. Particulars	Unit	LDO	HFO	LDO	HFO	LDO	HFO
<b>A) OPENING QUANTITY</b>							
1 Opening Stock of Oil	KL	5,770.92	0.00	4,863.92	0.00	4,481.92	0.00
2 Value of Stock	Rs.	45,72,64,443	0.00	38,53,97,406	0.00	35,51,29,390	0.00
<b>B) QUANTITY</b>							
3 Quantity of Oil supplied by Oil Company	KL	0.00	0.00	0.00	0.00	3,035.63	0.00
4 Adjustment (+/-) in quantity supplied made by Oil Company	KL	0.00	0.00	0.00	0.00	0.00	0.00
5 Coal supplied by Oil Company (3+4)	KL	0.00	0.00	0.00	0.00	3,035.63	0.00
6 Normative transit & Handling losses	KL	0.00	0.00	0.00	0.00	0.00	0.00
7 Net Oil supplied (5 - 6)	KL	0.00	0.00	0.00	0.00	3,035.63	0.00
<b>C) PRICE</b>							
8 Amount charged by the Oil Company	Rs.	0	0	0	0	29,42,39,528	0
9 Adjustment (+/-) in amount charged by Oil Company	Rs.	0	0	0	0	0	0
10 Handling, Sampling and such other Similar charges	Rs.	0	0	0	0	0	0
11 Total Amount charged (8+9+10)	Rs.	0	0	0	0	29,42,39,528	0
<b>D) TRANSPORTATION</b>							
12 Transportation charges by Rail / Ship / Road Transport	Rs.						
By Rail	Rs.	0	0	0	0	0	0
By Road	Rs.	0	0	0	0	0	0
By Ship	Rs.	0	0	0	0	0	0
13 Adjustment (+/-) in amount charged by railways / transport company	Rs.	0	0	0	0	0	0
14 Demurrage charges, if any	Rs.	0	0	0	0	0	0
15 Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0	0	0	0	0	0
16 Total transportation charges (12+ 13 + 14 + 15)	Rs.	0	0	0	0	0	0
17 Total amount charged for Oil supplied including transportation (11 + 16)	Rs.	0	0	0	0	29,42,39,528	0
<b>E) TOTAL COST</b>							
18 Landed Cost of Oil (LDO/HFO) (2+17) / (3+7)	Rs/KL	79,235.98	0.00	79,235.98	0.00	86,380.39	0.00
19 Blending Ratio		1.00	0.00	1.00	0.00	1.00	0.00
20 Weighted average cost of Oil		79,235.98		79,235.98		86,380.39	
<b>F) QUALITY</b>							
21 GCV of Oil of the opening stock as per bill of Oil company	(Kcal/Ltr)						
22 GCV of oil supplied as per bill of oil company	(Kcal/Ltr)						
23 GCV of Imported coal of the opening coal stock as per bill of coal company	(Kcal/Ltr)						
24 GCV of Imported coal supplied as per bill of coal company	(Kcal/Ltr)						
25 Weighted average GCV of Oil as billed	(Kcal/Ltr)						
26 GCV of Oil of the Opening stock as received at station	(Kcal/Ltr)						
27 GCV of Oil supplied	(Kcal/Ltr)	9362	0	9362	0	9302	0
28 GCV of Imported coal of the Opening stock as received at station	(Kcal/Ltr)						
29 GCV of Imported coal supplied as received at station	(Kcal/Ltr)						
30 Weighted average GCV of Oil	(Kcal/Ltr)	9362		9362		9302	

**MOHD. IMRAN**  
Sr. Manager (Finance)  
NTPC Ltd. UFGG-Dadri

**SANJAY SINHA**  
Addl. General Manager (UFGG-Fuel)  
एन.पी.सी. लि. दाद्री / NTPC Ltd. Dadri

**Shalabh Jain**

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**RHAND SUPER THERMAL POWER STATION**

**BALANCE SHEET**

( Amount in ₹ )

As at	Note	31.03.2020	31.03.2019
001	<b>ASSETS</b>	<b>0.00</b>	<b>0.00</b>
002		<b>0.00</b>	<b>0.00</b>
003	<b>Non-Current Assets</b>	<b>0.00</b>	<b>0.00</b>
004	Property, plant and equipment	58,728,501,510.10	58,943,024,021.02
005	Capital Work-in-Progress	823,654,175.83	526,168,443.09
006	Intangible Assets	19,560.18	134,643.21
007	Intangible Assets under Development	0.00	0.00
008	Investments in Subsidiaries and Joint Ventures	0.00	0.00
009	<b>Financial Assets</b>	<b>0.00</b>	<b>0.00</b>
010	i) Investments	0.00	0.00
011	ii) Trade receivables	0.00	0.00
012	iii) Loans	97,279,112.63	102,118,264.34
013	iv) Other financial assets	0.00	0.00
014	Other non-current assets	2,910,570,999.29	1,730,829,571.76
015	<b>Total non-current assets</b>	<b>60,160,025,348.23</b>	<b>61,302,275,633.52</b>
016		<b>0.00</b>	<b>0.00</b>
017	<b>Current Assets</b>	<b>0.00</b>	<b>0.00</b>
018	Inventories	3,934,708,096.39	5,522,897,180.17
019	<b>Financial assets</b>	<b>0.00</b>	<b>0.00</b>
020	i) Investments	0.00	0.00
021	ii) Trade receivables	8,200,899.09	3,309,693.64
022	iii) Cash and cash equivalents	436,387.81	3,393,293.36
023	iv) Bank balances other than cash and cash equivalents	0.00	0.00
024	v) Loans	70,942,725.42	71,017,591.86
025	vi) Other financial assets	881,977,881.50	177,325,679.59
026		<b>0.00</b>	<b>0.00</b>
027	Other Current Assets	841,228,747.65	493,844,905.72
028		<b>0.00</b>	<b>0.00</b>
029		<b>0.00</b>	<b>0.00</b>
030	<b>Total Current Assets</b>	<b>5,335,493,741.06</b>	<b>6,271,787,654.38</b>
031	Regulatory deferral account debit balances	366,710,508.19	348,046,371.04
032	<b>TOTAL ASSETS</b>	<b>65,862,229,597.48</b>	<b>67,922,109,658.96</b>
034	<b>EQUITY AND LIABILITIES</b>	<b>0.00</b>	<b>0.00</b>
035	<b>Equity</b>	<b>0.00</b>	<b>0.00</b>
036	Equity Share capital	0.00	0.00
037	Other equity	154,392,807,607.96	142,905,372,241.66
040	<b>Total equity</b>	<b>154,392,807,607.96</b>	<b>142,905,372,241.66</b>
041		<b>0.00</b>	<b>0.00</b>
042	<b>Liabilities</b>	<b>0.00</b>	<b>0.00</b>
043	<b>Non-Current Liabilities</b>	<b>0.00</b>	<b>0.00</b>
044	<b>Financial liabilities</b>	<b>0.00</b>	<b>0.00</b>
045	i) Borrowings	0.00	0.00

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*V. Malik*  
V. Malik  
(HOF)

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**RIHAND SUPER THERMAL POWER STATION  
BALANCE SHEET**

( Amount in ₹ )

As at	Note	31.03.2020	31.03.2019
046	ii) Trade payables	0.00	0.00
047	- Total outstanding dues of micro and small enterprises	15,622,396.62	6,964,940.99
048	- Total outstanding dues of creditors other than micro and small enterprises	5,712,598.82	19,217,358.89
049	iii) Other financial liabilities	34,379,901.73	2,083,288.09
050	Provisions	0.00	0.00
051	Deferred Tax Liabilities (net)	0.00	0.00
052	Other non-current liabilities	0.00	0.00
053		0.00	0.00
054	<b>Total non-current liabilities</b>	<b>55,714,897.17</b>	<b>28,265,588.97</b>
055		0.00	0.00
056	<b>Current Liabilities</b>	<b>0.00</b>	<b>0.00</b>
057	<b>Financial liabilities</b>	<b>0.00</b>	<b>0.00</b>
058	i) Borrowings	0.00	0.00
059	ii) Trade Payables	0.00	0.00
060	- Total outstanding dues of micro and small enterprises	347,533,123.95	277,066,480.33
061	- Total outstanding dues of creditors other than micro and small enterprises	1,929,276,543.35	1,245,121,688.26
062	iii) Other financial liabilities	2,174,040,601.24	2,424,995,497.91
063	Other current liabilities	98,045,489.01	96,740,893.18
064	Provisions	8,480,817.99	7,624,629.10
065	Current tax liabilities (net)	0.00	0.00
066		0.00	0.00
067	<b>Sub Total</b>	<b>4,557,376,576.54</b>	<b>4,021,549,088.79</b>
068		0.00	0.00
069	Deferred Revenue	1,990,729,000.00	1,250,048,000.00
070	Regulatory deferral account credit balances	0.00	0.00
071	Inter Unit Accounts	-95,134,398,483.19	-80,283,125,960.56
072		0.00	0.00
073	<b>TOTAL EQUITY AND LIABILITIES</b>	<b>65,862,229,097.46</b>	<b>67,922,109,858.86</b>
074	Significant Accounting Policies as per Note 1	0.00	0.00
075		0.00	0.00
076	The accompanying notes 1 to 44 form an integral part of these financial statements	0.00	0.00
077		0.00	0.00
078		0.00	0.00

( Auditor Initial & Stamp )

*V. Malik*  
V. Malik  
(HOP)

*ASR*  
( Head of Unit )

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**RIHAND SUPER THERMAL POWER STATION**  
**STATEMENT OF PROFIT AND LOSS**

( Amount in ₹ )

	For the Year ended	Note	31.03.2020	31.03.2019
001	Revenue		0.00	0.00
002	Revenue from operations	37	50,565,358,913.88	50,048,258,348.89
003	Other income	38	3,035,476,371.88	1,974,635,183.87
005	<b>Total Revenue</b>		<b>53,600,835,285.76</b>	<b>52,022,893,532.76</b>
007	Expenses		0.00	0.00
008	Fuel including cost of captive coal	38A	30,418,545,545.88	28,585,776,745.41
009	Employee benefits expense	39	1,854,129,627.42	2,041,743,925.51
010	Electricity Purchased		0.00	0.00
011	Finance costs	40	2,130,434,794.21	2,232,706,359.72
012	Depreciation, amortization and impairment expense	41	3,014,630,907.64	4,107,321,614.55
013			0.00	0.00
014	Other expenses	42	2,903,654,769.93	2,581,285,071.21
015	CC expenses charge to revenue		865,355,462.00	838,528,155.29
016	Less: Unit expenses transferred to CC		0.00	0.00
017	<b>Total expenses</b>		<b>42,084,284,198.88</b>	<b>40,469,371,671.68</b>
020	<b>Profit before exceptional items &amp; tax</b>		<b>11,516,551,086.88</b>	<b>11,554,521,861.10</b>
021	Exceptional items		0.00	0.00
024	<b>Profit before tax</b>		<b>11,516,551,086.88</b>	<b>11,554,521,861.10</b>
027	Tax expense:		0.00	0.00
028	Current tax		0.00	0.00
029	Deferred tax		0.00	0.00
030			0.00	0.00
031	<b>Total Tax expense</b>		<b>0.00</b>	<b>0.00</b>
032	<b>Profit for the period before regulatory deferral account balances</b>		<b>11,516,551,086.88</b>	<b>11,554,521,861.10</b>
033	Movement in regulatory deferral account balances		0.00	0.00
034	Regulatory deferral account - deferred		0.00	0.00
035	Others		16,012,648.15	63,815,031.15
036	Tax impact on Regulatory deferral account balances		0.00	0.00
037	<b>Movement in Regulatory deferral account balances (Net of Tax)</b>		<b>16,012,648.15</b>	<b>63,815,031.15</b>
038	<b>Profit for the period/ year</b>		<b>11,532,563,737.03</b>	<b>11,618,336,892.25</b>
039	Other comprehensive income		0.00	0.00
040	(A) Items that will not be reclassified to profit or loss		0.00	0.00
041	- Net gains/(losses) on fair value of equity instruments through other comprehensive income		0.00	0.00
042	Income tax on above that will not be reclassified to profit or loss		0.00	0.00
043	- Net actuarial gains/(losses) on defined benefit plans		-53,349,231.17	-2,772,380.20
044	Income tax on above that will not be		0.00	0.00

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*V. Malik*  
V. Malik  
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Page 2 of 2

**RIHAND SUPER THERMAL POWER STATION**  
**STATEMENT OF PROFIT AND LOSS**

( Amount in ₹ )

	For the Year ended	Note	31.03.2020	31.03.2019
	reclassified to profit or loss			
048			0.00	0.00
049	Other comprehensive income for the year, net of income tax		-53,349,231.17	-2,772,380.20
050			0.00	0.00
001	Total Comprehensive income for the year		11,479,214,505.86	11,915,594,312.05
055			0.00	0.00
056	Earnings per equity share:		0.00	0.00
067	Basic & Diluted		0.00	0.00
068	Significant Accounting Policies		0.00	0.00
069	Expenditure during construction period (Net) Dev. of coal mines (net) 43 J43A		0.00	0.00
070	The accompanying notes 1 to 44 form an integral part of these financial statements.		0.00	0.00

( Auditor Initial & Stamp )

( Head of Finance )

( Head of Unit )

V. Malik  
(HOF)

Note forming part of Balance Sheet  
Note 2 : Property, Plant And Equipment  
Business Area :1005

Asset Class	Opening Gross Block As At 01.04.2019	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2020	Opening Depreciation As At 01.04.2019	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2020	Net Block As At 31.03.2020	Net Block As At 31.03.2019
<b>1 TANGIBLE ASSETS</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>2 Land : (including development expenses)</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>3 Freehold</b>	354101950.25	0.00	914893.00	355016843.25	0.00	0.00	0.00	0.00	355016843.25	354101950.25
<b>4 Right of Use</b>	312564894.63	0.00	0.00	312564894.63	54156195.50	10521536.67	0.00	64677732.17	247887162.46	258408699.13
<b>5 Submergence</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>6 CBA Land</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>7 Roads,bridges, culverts &amp; helipads</b>	633382471.20	0.00	3064445.24	636446916.44	84717207.88	24819390.13	0.00	109536598.01	526910318.43	548665263.32
<b>8 Building :</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 Freehold</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>10 Main plant</b>	1852956664.03	0.00	0.00	1852956664.03	250006943.20	62858014.88	0.00	312864958.08	1540091705.95	1602949720.83
<b>11 Others</b>	2526816498.43	0.00	7148785.46	2533965283.89	295814769.33	93611156.32	0.00	389425925.65	2144539358.24	2231001729.10
<b>12 Right of Use</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>13 Temporary erection</b>	231168.13	0.00	0.00	231168.13	231168.13	0.00	0.00	231168.13	0.00	0.00
<b>14 Water Supply, drainage &amp; sewerage system</b>	528872639.67	0.00	15099211.89	543971851.56	73117733.28	25176366.99	0.00	98294100.27	445677751.29	455754906.39
<b>15 Hydraulic works, barrages, dams, tunnels and power channel</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>16 MGR track and signalling system</b>	1331637054.56	0.00	0.00	1331637054.56	213397002.77	69391989.74	0.00	282788992.51	1048848062.05	1118240051.79
<b>17 Railway siding</b>	1528212.48	0.00	0.00	1528212.48	518982.35	64482.46	0.00	583464.81	944747.67	1009230.13
<b>18 Earth dam reservoir</b>	1456921.40	0.00	0.00	1456921.40	0.00	0.00	0.00	0.00	1456921.40	1456921.40
<b>19 Plant and machinery(including associated civil works)</b>	70060155454.71	1159352990.29	930582602.97	72150091047.97	18342069443.48	4015873615.81	(19444481.65)	22338498577.64	49811592470.33	51718086011.23
<b>Owned Asset</b>										



**Note forming part of Balance Sheet**  
**Note 2 : Property, Plant And Equipment**  
**Business Area :1005**

Asset Class	Opening Gross Block As At 01.04.2019	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2020	Opening Depreciation As At 01.04.2019	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2020	Net Block As At 31.03.2020	Net Block As At 31.03.2019
20 Plant and machinery(including associated civil works) -Right of use Asset	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21 Furniture and fixtures	162827901.39	11643132.75	(8157.00)	174462877.14	44691819.20	11307625.48	(6082.95)	55993361.73	118469515.41	118136082.19
22 Assets under 5 Km Scheme	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23 Vehicles - Owned	6558165.35	0.00	0.00	6558165.35	1447799.10	579121.79	0.00	2026920.89	4531244.46	5110366.25
24 Vehicles - Leased	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25 Office equipment	84012276.10	3589852.00	108075.12	87710203.22	35082454.15	7205598.19	(6379.98)	42281672.36	45428530.86	48929821.95
26 EDP, WP machines and satcom equipment	90601420.49	1595454.00	(3450231.96)	88746642.53	60222035.59	9917758.55	(3461317.64)	66678476.50	22068166.03	30379384.90
27 Construction equipments	65110895.86	0.00	0.00	65110895.86	21512359.27	3506656.19	0.00	25019015.46	40091880.40	43598536.59
28 Electrical Installations	320745742.54	10354500.00	(2700.00)	331097542.54	63152266.13	30831333.36	0.00	93983599.49	237113943.05	257593476.41
29 Communication equipments	31934747.30	0.00	0.00	31934747.30	18196504.33	2942944.88	0.00	21139449.21	10795298.09	13738242.97
30 Hospital equipments	23064355.97	339187.00	0.00	23403542.97	5041564.24	1261479.28	0.00	6303043.52	17100499.45	18022791.73
31 Laboratory and workshop equipments	146083529.77	0.00	(155143.00)	145928386.77	28241795.31	7749500.18	0.00	35991295.49	109937091.28	117841734.46
32 Capital expenditure on assets not owned by the Company	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33 Assets of Government	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34 Less:Grants from Government	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

  
 Anil Kumar (Authorized Signatory)  
 Anil Kumar (Authorized Signatory)  
 Anil Kumar (Authorized Signatory)



**Note forming part of Balance Sheet**  
**Note 2 : Property, Plant And Equipment**  
**Business Area :1005**

Asset Class	Opening Gross Block As At 01.04.2019	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2020	Opening Depreciation As At 01.04.2019	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2020	Net Block As At 31.03.2020	Net Block As At 31.03.2019
35 Less: Recoverable from GOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36 Assets for ash utilisation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37 (Less):-Adjusted from fly ash utilisation reserve fund	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38 Site Restoration Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39 Mining Properties	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Grand Total (Tangible)</b>	78534642964.26	1186875116.04	953301781.72	80674819862.02	19591618043.24	4377618570.90	(22918262.22)	23946318351.92	56728501510.10	58943024921.02
<b>Grand Total Prev Year (Tangible)</b>	76513713413.11	1766484574.63	254444976.52	78534642964.26	15142568138.78	4550839731.18	(101789826.72)	19591618043.24	58943024921.02	61371145274.33

  
 Chief Financial Officer (Accounting)  
 Ash Global Minerals (Company)  
 एन डी सी लिमिटेड/ANPC LIMITED

**Note forming part of Balance Sheet**  
**Note 2 : Property, Plant And Equipment**  
**Business Area :1005**

**Details of Adjustments of Gross Block and Depreciation/Amortization**

Particulars	Gross Block		Depreciation/Amortization	
	Tangible As At: 31.03.2020	Tangible As At: 31.03.2019	Tangible As At: 31.03.2020	Tangible As At: 31.03.2019
Disposal of assets	(2114197.00)	(5304388.79)	(2071876.78)	(4951981.07)
Retirement of assets	(69448632.25)	(138103959.79)	(19577026.64)	(81828236.73)
Cost adjustments	1021726514.10	421175458.15	0.00	0.00
Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Depreciation on construction equipment capitalised as EDC	0.00	0.00	0.00	0.00
Prior Period Depreciation due to Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Special Depreciation (As per New Policy)	0.00	0.00	0.00	0.00
Transfer in /out because of Inter Unit transfers	3138096.87	(23322133.05)	(1269358.80)	(15009608.92)
Others	0.00	0.00	0.00	0.00
<b>TOTAL</b>	<b>953301781.72</b>	<b>254444976.52</b>	<b>(22918262.22)</b>	<b>(101789826.72)</b>

  
 Chief Financial Officer (Accounting)  
 Add: General Manager (Commercial)  
 एन टी सी लिमिटेड/NTPC LIMITED

## Note forming part of Balance Sheet

## Note 3: Capital-Work-in-Progress

## Business Area: RIHAND SUPER THERMAL POWER STATION

SI No	Asset Class	As At 01.04.2019	Addition	Deduction/ Adjustment	Capitalized	As At 31.03.2020
	1	2	3	4	5	6
1	CAPITAL WORK-IN-PROGRESS					
2	Development of land					
3	Roads, bridges, culverts & helipads		3064445.24	(3064445.24)		
4	Piling and foundation					
5	Buildings :					
6	Main plant		12776883.21	(12776883.21)		
7	Others	3128243.68	8015025.53	(7148785.46)		3994483.75
8	Temporary erection					
9	Water supply, drainage and sewerage system		8662414.61	(5712414.61)		2950000.00
10	Hydraulic works, barrages, dams, tunnels and power channel					
11	MGR track and signalling system		20000000.00			20000000.00
12	Railway siding					
13	Earth dam reservoir					
14	Plant and equipment	423512011.96	1222073063.20	(412613876.96)	516109085.59	716862112.61
15	Furniture and fixtures					
16	Vehicles					
17	Office equipment					
18	EDP/WP machines & satcom equipment		1367798.00			1367798.00
19	Construction equipments					
20	Electrical installations		10354500.00		10354500.00	
21	Communication equipment					
22	Hospital equipments					
23	Laboratory and workshop equipments					
24	Assets under 5Km Scheme of the GOI					
25	Capital expenditure on assets not owned by the company					
26	Expenditure towards development of coal mines					
27	Survey,Investigation,Consultancy & Supervision Cha	2987667.50				2987667.50
28	Difference in exchange on foreign currency loans					

## Note forming part of Balance Sheet

## Note 3: Capital-Work-in-Progress

## Business Area: RIHAND SUPER THERMAL POWER STATION

SI No	Asset Class	As At 01.04.2019	Addition	Deduction/ Adjustment	Capitalized	As At 31.03.2020
	1	2	3	4	5	6
29	Expenditure towards diversion of forest land					
30	Pre-commissioning expenses (net)					
31	ExpPendAlloca-oth ex attribut Project					
32	Expenditure During Construction Period (net)*	7991487.00	14502884.03	(6718199.59)		15776171.44
33	LESS : Allocated to related works		15776171.44			15776171.44
34	LESS : Provision for Unservicable works					
35	<b>Construction stores (At Cost)</b>					
36	Steel	31435733.98		(2612252.04)		28823481.94
37	Cement	6722611.99		(4568450.33)		2154161.66
38	Others	53975278.44	65047466.87	(70421303.71)		48601441.60
39	<b>Sub-total</b>	<b>92133624.41</b>	<b>65047466.87</b>	<b>(77602006.08)</b>		<b>79579085.20</b>
40	LESS : Provision for shortages	3584591.46		502379.77		4086971.23
41	<b>Sub-total</b>	<b>88549032.95</b>	<b>65047466.87</b>	<b>(78104385.85)</b>		<b>75492113.97</b>
42	<b>Total CWIP</b>	<b>526168443.09</b>	<b>1350088309.25</b>	<b>(526138990.92)</b>	<b>526463585.59</b>	<b>823654175.83</b>
43						
44						
45	<b>PREVIOUS YEAR TOTAL</b>	<b>1117191125.22</b>	<b>1406540908.81</b>	<b>(497169141.34)</b>	<b>999861027.04</b>	<b>526168443.09</b>

Note forming part of Balance Sheet  
**Note-4 Non Current Assets- Intangible Assets**  
**Business Area :1005**

Asset Class	Opening Gross Block As At 01.04.2019	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2020	Opening Depreciation As At 01.04.2019	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2020	Net Block As At 31.03.2020	Net Block As At 31.03.2019
<b>INTANGIBLE ASSETS</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>1 Right of Use- Land</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>2 -Others</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>3 -Software</b>	4773867.26	0.00	0.00	4773867.26	4639223.95	115063.13	0.00	4754287.08	19580.18	134643.31
<b>Grand Total (Intangible)</b>	4773867.26	0.00	0.00	4773867.26	4639223.95	115063.13	0.00	4754287.08	19580.18	134643.31
<b>Grand Total Prev Year (Intangible)</b>	4773867.26	0.00	0.00	4773867.26	4516527.46	122696.49	0.00	4639223.95	134643.31	257339.80

  
 Chief Financial Officer (Accounting)  
 Add. General Manager (Commercial)  
 एन टी सी लिमिटेड/NTSC LIMITED

Note forming part of Balance Sheet  
**Note-4 Non Current Assets- Intangible Assets**  
**Business Area :1005**

<b>Details of Adjustments of Gross Block and Depreciation/Amortization</b>				
<b>Particulars</b>	<b>Gross Block</b>		<b>Depreciation/Amortization</b>	
	<b>InTangible As At: 31.03.2020</b>	<b>InTangible As At: 31.03.2019</b>	<b>InTangible As At: 31.03.2020</b>	<b>InTangible As At: 31.03.2019</b>
Disposal of assets	0.00	0.00	0.00	0.00
Retirement of assets	0.00	0.00	0.00	0.00
Cost adjustments	0.00	0.00	0.00	0.00
Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Depreciation on construction equipment capitalised as EDC	0.00	0.00	0.00	0.00
Prior Period Depreciation due to Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Special Depreciation (As per New Policy)	0.00	0.00	0.00	0.00
Transfer in /out because of Inter Unit transfers	0.00	0.00	0.00	0.00
Others	0.00	0.00	0.00	0.00
<b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

  
 Anil Kumar (Commander)  
 Anil Kumar / ANPC LIMITED

Note forming part of Balance Sheet

Note 5: Intangible Assets under Development

Business Area: RIHAND SUPER THERMAL POWER STATION

SI No	Asset Class	As At 01.04.2019	Addition	Deduction/ Adjustment	Capitalized	As At 31.03.2020
	1	2	3	4	5	6
1	INTANGIBLE ASSETS UNDER DEVELOPMENT					
2	Software					
3	Right to use Others					
4	Exploration and Evaluation Expenditure - Coal Mini					
5	Exploratory wells-in-progress					
6	<b>Less: Provision for exploratory wells-in-progress</b>					
7	<b>Total</b>					
8	<b>PREVIOUS YEAR TOTAL-I</b>					



## RIHAND SUPER THERMAL POWER STATION

### NOTE NO. 6 TO THE FS-NCA-INVESTMENTS IN SUBSIDIARIES & JOINT VENTURES

( Amount in ₹ )

As at	No. of shares	Face value	31.03.2020	31.03.2019
001	<b>NON CURRENT INVESTMENTS-</b>		<b>0.00</b>	<b>0.00</b>
	<b>Investments in subsidiaries and joint ventures</b>			
012	<b>Equity Instruments - Unquoted-(fully paid up unless otherwise stated, at cost)</b>		<b>0.00</b>	<b>0.00</b>
013	<b>Subsidiary Companies</b>		<b>0.00</b>	<b>0.00</b>
014	Patratu Vidyut Utpadan Nigam Ltd.		0.00	0.00
015	NTPC Electric Supply Company Ltd.		0.00	0.00
016	NTPC Vidyut Vyapar Nigam Ltd.		0.00	0.00
017	Nabinagar Power Generating Company Ltd.		0.00	0.00
018	Kanti Bijlee Utpadan Nigam Ltd.		0.00	0.00
019	Bhartiya Rail Bijlee Company Ltd.		0.00	0.00
020	NTPC Mining Ltd (NML)		0.00	0.00
021	THDC India Ltd.		0.00	0.00
022	NEEPCO LTD.		0.00	0.00
023			0.00	0.00
024			0.00	0.00
025			0.00	0.00
026			0.00	0.00
027			0.00	0.00
028			0.00	0.00
029			0.00	0.00
030	<b>Sub Total</b>		<b>0.00</b>	<b>0.00</b>
055	<b>Joint Venture Companies</b>		<b>0.00</b>	<b>0.00</b>
056	Utility Powertech Ltd.		0.00	0.00
057	NTPC GE Power Services Pvt.Ltd.		0.00	0.00
058	NTPC-SAIL Power Company Ltd.		0.00	0.00
059	NTPC-Tamil Nadu Energy Company Ltd.		0.00	0.00
060	Ratnagiri Gas & Power Pvt. Limited (RGPPL)		0.00	0.00

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अध्यक्ष, निदेशक (व्यवस्थापक)  
असि. निदेशक (व्यवस्थापक)  
एन टी सी लिमिटेड / NTPC LIMITED





## RIHAND SUPER THERMAL POWER STATION

### NOTE NO. 6 TO THE FS-NCA-INVESTMENTS IN SUBSIDIARIES & JOINT VENTURES

( Amount in ₹ )

As at	No. of shares	Face value	31.03.2020	31.03.2019
061	Aravali Power Company Private Ltd.		0.00	0.00
062			0.00	0.00
063	NTPC BHEL Power Projects Private Ltd.		0.00	0.00
064	Meja Urja Nigam Private Limited		0.00	0.00
065	BF-NTPC Energy Systems Ltd.		0.00	0.00
066			0.00	0.00
067	Nabinagar Power Generating Company Ltd.		0.00	0.00
068	Transformer and Electrical Kerala Ltd.		0.00	0.00
069	National High Power Test Laboratory Private Ltd.		0.00	0.00
070			0.00	0.00
071	CIL NTPC Urja Private Ltd.		0.00	0.00
072	Anushakti Vidhyut Nigam Ltd.		0.00	0.00
073	Energy Efficiency Services Ltd.		0.00	0.00
074			0.00	0.00
075	Trincomalee Power Company Ltd.		0.00	0.00
076	Bangladesh-India Friendship Power Company (Pvt.) Ltd.		0.00	0.00
077	Hindustan Urvarak & Rasayan Limited		0.00	0.00
078	Konkan LNG Pvt. Ltd		0.00	0.00
079			0.00	0.00
081	<b>Sub Total</b>		<b>0.00</b>	<b>0.00</b>
109	Aggregate amount of impairment in the value of investments		0.00	0.00
110			0.00	0.00
111			0.00	0.00
134	<b>Total</b>		<b>0.00</b>	<b>0.00</b>
135	Details of Investments		0.00	0.00
136	Aggregate amount of Unquoted Investments		0.00	0.00

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अध्यक्ष निदेशक (वित्त/निवेश)  
अ.स. निदेशक (अध्यक्ष)  
एन टी सी लिमिटेड / NTPC LIMITED



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 6 TO THE FS-NCA-INVESTMENTS IN SUBSIDIARIES & JOINT VENTURES

( Amount in ₹ )

As at	No. of shares	Face value	31.03.2020	31.03.2019
141			0.00	0.00
142			0.00	0.00
143			0.00	0.00
144			0.00	0.00
145			0.00	0.00
153	Valuation of Investments as per Note 1.		0.00	0.00
154			0.00	0.00
202			0.00	0.00
233			0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 7 TO THE FS-NCA-INVESTMENTS**

( Amount in ₹ )

	As at	No. of shares	Face value	31.03.2020	31.03.2019
001	Non-current financial assets (investments)			0.00	0.00
006	<b>Long Term - Trade</b>			<b>0.00</b>	<b>0.00</b>
007	<b>Equity Instruments (fully paid up-unless otherwise stated)</b>			<b>0.00</b>	<b>0.00</b>
008	<b>Quoted</b>			<b>0.00</b>	<b>0.00</b>
009	<b>Joint Venture Companies</b>			<b>0.00</b>	<b>0.00</b>
010	PTC India Ltd.			0.00	0.00
070	International Coal Ventures Private Ltd.			0.00	0.00
075	BF-NTPC Energy Systems Ltd.			0.00	0.00
098				0.00	0.00
110	Cooperative Societies			0.00	0.00
111	<b>Sub Total</b>			<b>0.00</b>	<b>0.00</b>
112	Aggregate amount of impairment in the value of investments			0.00	0.00
115	<b>Total</b>			<b>0.00</b>	<b>0.00</b>
120				0.00	0.00
146	NTPC Employees Consumers and Thrift Co-operative Society Ltd. Korba			0.00	0.00
147	NTPC Employees Consumers and Thrift Cooperative Society Ltd. RSTPP			0.00	0.00
148	NTPC Employees Consumers Cooperative Society Ltd. Farakka			0.00	0.00
149	NTPC Employees Consumers Cooperative Society Ltd. Vindhyachal			0.00	0.00
150	NTPC Employees Consumers Cooperative Society Ltd. Anta			0.00	0.00
151	NTPC Employees Consumers Cooperative Society Ltd. Kawas			0.00	0.00
152	NTPC Employees Consumers Cooperative Society Ltd. Kaniha			0.00	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 8 TO THE FS-NCA-TRADE RECEIVABLES

( Amount in ₹ )

As at	31.03.2020	31.03.2019
001 Non-current financial assets - Trade receivables	0.00	0.00
002 Unsecured, considered good	0.00	0.00
003 With significant increase in Credit Risk	0.00	0.00
004 Credit impaired	0.00	0.00
005	0.00	0.00
006 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 9 TO THE FS-NCA-LOANS**
**( Amount in ₹ )**

As at	31.03.2020	31.03.2019
001 <b>Loans (Non Current)</b>	<b>0.00</b>	<b>0.00</b>
004 Related Parties	0.00	0.00
005 Secured	0.00	0.00
006 Un-Secured	0.00	0.00
007 With significant increase in Credit Risk	0.00	0.00
008 Credit impaired	0.00	0.00
009	0.00	0.00
010 Employees(including accrued interest)	0.00	0.00
011 Secured	78,002,193.59	74,458,322.58
012 Unsecured	48,524,350.45	59,457,513.24
013 With significant increase in Credit Risk	0.00	0.00
014 Credit impaired	0.00	0.00
015 Less : Employee Loans Discounting	0.00	0.00
016 Secured	21,268,252.60	21,325,766.04
017 Unsecured	7,979,178.61	10,471,815.44
018 Loan to State Government in settlement of dues from customers (Unsecured)	0.00	0.00
019 Others	0.00	0.00
020 Secured	0.00	0.00
021 Unsecured	0.00	0.00
022 With significant increase in Credit Risk	0.00	0.00
023 Credit impaired	0.00	0.00
024 Less: Allowance for credit impaired loans	0.00	0.00
025 <b>Sub Total</b>	<b>97,279,112.83</b>	<b>102,118,254.34</b>
026	0.00	0.00
027 <b>Total</b>	<b>97,279,112.83</b>	<b>102,118,254.34</b>
028	0.00	0.00
029	0.00	0.00
030 <b>Due from Directors and Officers of the Company</b>	<b>0.00</b>	<b>0.00</b>
031 Directors	0.00	0.00
032 Officers	0.00	0.00
033	<b>0.00</b>	<b>0.00</b>
034 <b>Loans to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
035 i)Key management personel	0.00	0.00
036 ii)Subsidiary companies	0.00	0.00
037 iii)Joint Venture companies	0.00	0.00
038 iv)Others	0.00	0.00
039	<b>0.00</b>	<b>0.00</b>
054 Other loans represent loans given to	0.00	0.00
055 a) APIIC	0.00	0.00
060	0.00	0.00
061 RPD	0.00	0.00
062 i)Key management personel	0.00	0.00
063 ii)Subsidiary companies	0.00	0.00
064 iii)Joint Venture companies	0.00	0.00
065 iv)Others	0.00	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 9 TO THE FS-NCA-LOANS

( Amount in ₹ )

	As at	31.03.2020	31.03.2019
066	<b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 10 TO THE FS-NCA-OTHER FINANCIAL ASSETS**
**( Amount in ₹ )**

As at	31.03.2020	31.03.2019
001 <b>Other Financial Assets (non current)</b>	<b>0.00</b>	<b>0.00</b>
002	0.00	0.00
003 <b>Share application money pending allotment in (Subsidiary Companies) :</b>	<b>0.00</b>	<b>0.00</b>
004 NTPC Electric Supply Company Ltd.	0.00	0.00
005 NTPC Vidyut Vyapar Nigam Ltd.	0.00	0.00
006 Nabinagar Power Generating Company Ltd.	0.00	0.00
007 Kanti Bijlee Utpadan Nigam Ltd.	0.00	0.00
008 Bhartiya Rail Bijlee Company Ltd.	0.00	0.00
009 Patratu Vidyut Utpadan Nigam Ltd.	0.00	0.00
010 NTPC Mining Limited	0.00	0.00
011 THDC Ltd.	0.00	0.00
012 NEEPCO Ltd	0.00	0.00
013	0.00	0.00
014 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
015 <b>Share application money pending allotment (Joint Venture)</b>	<b>0.00</b>	<b>0.00</b>
016 Utility Powertech Ltd.	0.00	0.00
017 NTPC GE Power Services Pvt.Ltd.	0.00	0.00
018 NTPC-SAIL Power Company Ltd.	0.00	0.00
019 NTPC-Tamil Nadu Energy Company Ltd.	0.00	0.00
020 Ratnagiri Gas & Power Private Ltd.	0.00	0.00
021 Aravali Power Company Private Ltd.	0.00	0.00
022	0.00	0.00
023 NTPC BHEL Power Projects Private Ltd.	0.00	0.00
024 Meja Urja Nigam Private Limited	0.00	0.00
025 BF-NTPC Energy Systems Ltd.	0.00	0.00
026 Anushakti Vidhyut Nigam Ltd.	0.00	0.00
027 Nabinagar Power Generating Company Ltd.	0.00	0.00
028 Energy Efficiency Services Ltd.	0.00	0.00
029 National High Power Test Labortory Private Ltd.	0.00	0.00
030	0.00	0.00
031 CIL NTPC Urja Private Ltd.	0.00	0.00
032 Trincomalee Power Company Ltd.	0.00	0.00
033 Hindustan Urvarak & Rasayan Limited	0.00	0.00
034 Bangladesh-India Friendship Power Company Private Ltd.	0.00	0.00
035 <b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
036	0.00	0.00
037 Claims Recoverable	0.00	0.00
038 Finance Lease Recoverable	0.00	0.00
039 Mine Closure Deposit	0.00	0.00
040	0.00	0.00
041 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 11 TO THE FS-NCA-OTHER NON-CURRENT ASSETS**
**( Amount in ₹ )**

As at	31.03.2020	31.03.2019
001 <b>Other Non-current Assets</b>	<b>0.00</b>	<b>0.00</b>
002	<b>0.00</b>	<b>0.00</b>
003 <b>CAPITAL ADVANCES</b>	<b>0.00</b>	<b>0.00</b>
004 Secured	0.00	0.00
005 Unsecured	0.00	0.00
006 Covered by Bank Guarantee	323,177,345.00	297,201,725.00
007 Others	89,609,598.63	113,243,558.35
008 Considered doubtful	0.00	0.00
009 Less: Allowance for bad & doubtful advances	0.00	0.00
010 <b>Sub-Total</b>	<b>412,786,943.63</b>	<b>410,445,283.35</b>
011	0.00	0.00
012 Advances other than capital advances	0.00	0.00
013 Security deposits	1,436,400.00	1,436,400.00
019 Advances to Related parties	0.00	0.00
022 <b>Advances to Contractors &amp; Suppliers</b>	<b>0.00</b>	<b>0.00</b>
023 Secured	0.00	0.00
024 Unsecured	0.00	0.00
025 Considered Doubtful	0.00	0.00
026 Less: Allowance for bad & doubtful advances	0.00	0.00
027 <b>Sub Total</b>	<b>1,436,400.00</b>	<b>1,436,400.00</b>
039 Advance tax & tax deducted at source	1,374,625.00	321,125.00
040 Less:- Provision for current tax	0.00	0.00
041	0.00	0.00
042 <b>Sub Total</b>	<b>1,374,625.00</b>	<b>321,125.00</b>
043 Deferred Payroll Expenses (Secured)	18,035,323.47	18,756,382.73
044 Deferred Payroll Expenses (Unsecured)	5,842,677.19	7,851,180.68
045 <b>Sub Total</b>	<b>23,878,000.66</b>	<b>26,607,563.41</b>
046 Deferred Foreign Currency Fluctuation Asset	2,071,095,000.00	1,292,019,000.00
048 <b>Total</b>	<b>2,510,570,969.29</b>	<b>1,730,829,371.76</b>
049	0.00	0.00
050	0.00	0.00
061 Advances include amount due from the following Private Companies in which Directors of the Company are also Directors in such Companies	0.00	0.00
063	0.00	0.00
064 NTPC GE Power Services Pvt.Ltd.	0.00	0.00
065	0.00	0.00
066 Ratnagiri Gas & Power Private Ltd.	0.00	0.00
067 Aravali Power Company Private Ltd.	0.00	0.00
068 NTPC-SCCL Global Ventures Private Ltd.	0.00	0.00
069 NTPC BHEL Power Projects Private Ltd.	0.00	0.00
070 Meja Urja Nigam Private Limited	0.00	0.00
071 Nabinagar Power Generating Company Ltd.	0.00	0.00
072 National High Power Test Labortory Private Ltd.	0.00	0.00
074 CIL NTPC Urja Private Ltd.	0.00	0.00
076	0.00	0.00
077 <b>Related Party (Adv)</b>	<b>0.00</b>	<b>0.00</b>





RIHAND SUPER THERMAL POWER STATION

NOTE NO. 11 TO THE FS-NCA-OTHER NON-CURRENT ASSETS

( Amount in ₹ )

As at	31.03.2020	31.03.2019
078 Key Management personel	0.00	0.00
079 Subsidiary companies	0.00	0.00
080 Joint Venture companies	0.00	0.00
081 Contractors	0.00	0.00
082 Others	0.00	0.00
084	0.00	0.00
085 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 12 TO THE FS-CA-INVENTORIES**
**( Amount in ₹ )**

	As at	31.03.2020	31.03.2019
001	<b>INVENTORIES</b>	<b>0.00</b>	<b>0.00</b>
002		<b>0.00</b>	<b>0.00</b>
003	Coal	530,693,477.72	2,088,231,631.33
004	Fuel oil	213,916,508.70	276,978,893.24
005	Naphtha	0.00	0.00
006	Stores and spares	2,507,691,473.02	2,466,139,085.48
007	Chemicals & consumables	82,869,440.00	67,098,480.64
008	Loose tools	1,481,824.88	1,681,496.63
009	Steel Scrap	4,556,896.18	4,826,650.77
010	Others*	618,290,642.20	644,360,919.29
011	<b>Sub Total</b>	<b>3,959,500,262.70</b>	<b>5,549,317,157.38</b>
012	Less: Provision for shortages	1,959,334.78	4,052,394.00
013	Less: Provision for obsolete/ unservicable/dimuntion in value of surplus inventory	22,832,831.53	22,367,583.21
014		0.00	0.00
015	<b>Total</b>	<b>3,934,708,096.39</b>	<b>5,522,897,180.17</b>
016	<b>Inventories include material in transit</b>	<b>0.00</b>	<b>0.00</b>
017	Coal	0.00	0.00
018	Fuel oil	0.00	0.00
019	Naphtha	0.00	0.00
020	Stores and spares	24,889,533.24	34,306,383.44
021	Chemicals & consumables	30,471.33	0.00
022	Loose tools	0.00	0.00
023	Others	527,190.00	7,458.00
024		<b>0.00</b>	<b>0.00</b>
025	Inventory items other than steel scrap have been valued considering Note 1. Steel scrap has been valued at estimated realisable value.	0.00	0.00

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 13 TO THE FS-CA-INVESTMENTS

( Amount in ₹ )

As at	No. of shares	Face value	31.03.2020	31.03.2019
001	<b>CURRENT INVESTMENTS</b>		<b>0.00</b>	<b>0.00</b>
002	<b>(Valuation as per Note 1)</b>		<b>0.00</b>	<b>0.00</b>
003			0.00	0.00
033	Investment in Mutual Funds (Details as under)		0.00	0.00
034	SBI-Magnum Insta Cash Fund-DDR		0.00	0.00
035	SBI Premier Liquid Fund Super-IP-DDR		0.00	0.00
036	SBI-SHF Ultra Short Term Fund-IP-DDR		0.00	0.00
037	UTI Money Market- IP-Direct-Growth		0.00	0.00
038	IDBI-Liquid plan- Direct-Growth		0.00	0.00
039	Canara Robeco Liquid Fund Super-IP-DDR		0.00	0.00
040	Canara Robeco Treasury Advantage Fund Super-IP-DDR		0.00	0.00
041	IDBI Liquid Fund-DDR		0.00	0.00
042	SBI Premier Liquid fund-Direct DDR (Ash Fund)		0.00	0.00
043	UTI Liquid CashPlan - IP - DDR (Ash Funds)		0.00	0.00
044	IDBI Liquid Fund - DDR - (Ash Funds)		0.00	0.00
045			0.00	0.00
046	<b>Sub Total</b>		<b>0.00</b>	<b>0.00</b>
047			<b>0.00</b>	<b>0.00</b>
052	<b>Unquoted Investments</b>		<b>0.00</b>	<b>0.00</b>
054			0.00	0.00
066	<b>TOTAL</b>		<b>0.00</b>	<b>0.00</b>
067			0.00	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 14 TO THE FS-CA-TRADE RECEIVABLES

( Amount in ₹ )

As at	31.03.2020	31.03.2019
001 <b>TRADE RECEIVABLES (current)*</b>	<b>0.00</b>	<b>0.00</b>
002	0.00	0.00
003 Secured, Considered Good	0.00	0.00
004 Unsecured , considered good	6,200,899.09	3,309,893.64
005 With significant increase in Credit Risk	0.00	0.00
006 Credit impaired	0.00	0.00
007 <b>Sub-Total</b>	<b>6,200,899.09</b>	<b>3,309,893.64</b>
008 <b>Total</b>	<b>6,200,899.09</b>	<b>3,309,893.64</b>
009 Less: Allowance for credit impaired receivables	0.00	0.00
010 <b>Total</b>	<b>6,200,899.09</b>	<b>3,309,893.64</b>
011	<b>0.00</b>	<b>0.00</b>
013 * After adjustment for Unbilled Revenue	0.00	0.00
014 Long-term trade receivables	0.00	0.00
015	0.00	0.00
016	<b>0.00</b>	<b>0.00</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 15 TO THE FS-CA-CASH AND CASH EQUIVALENTS

( Amount in ₹ )

As at	31.03.2020	31.03.2019
001 <b>CASH &amp; BANK BALANCES</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Cash &amp; Cash Equivalents</b>	<b>0.00</b>	<b>0.00</b>
003 Balances with Banks	435,387.81	3,143,233.30
004 Cheques & Drafts on hand	0.00	250,000.00
005 Cash on hand	0.00	0.00
006 Others (stamps in hand)	0.00	0.00
007 Bank deposits with original maturity upto three months	0.00	0.00
008 Balances with RBI	0.00	0.00
009	0.00	0.00
010 <b>Total</b>	<b>435,387.81</b>	<b>3,393,233.30</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 16 TO THE FS-CA-BANK BALANCES OTHER THAN CASH AND CASH EQUIVALENTS ( Amount in ₹ )**

As at	31.03.2020	31.03.2019
001 <b>Other Bank Balances</b>	<b>0.00</b>	<b>0.00</b>
002 Deposits with original maturity of more than three months but not more than twelve months	0.00	0.00
003 Earmarked balances with banks*	0.00	0.00
004 <b>SubTotal</b>	<b>0.00</b>	<b>0.00</b>
005 Interest accrued on deposits	0.00	0.00
006	0.00	0.00
007 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
008	0.00	0.00
009 <b>Earmarked balances with banks consist of :</b>	<b>0.00</b>	<b>0.00</b>
010 Unpaid dividend account balance	0.00	0.00
011 Towards public deposit repayment reserve	0.00	0.00
012 Towards redemption of bonds due for repayment within one year	0.00	0.00
013 Security with Government/other authorities	0.00	0.00
014 Unpaid refund/interest account balance - Tax free bonds/ Bonus Debentures	0.00	0.00
015 Earmarked for RGGVY/DDUGJY/SAUBHAGYA Fund	0.00	0.00
016 Earmarked for Flyash Utilisation Reserve Fund	0.00	0.00
017 Deposits with original maturity upto three months as per court orders	0.00	0.00
018 Payment Security Scheme of MNRE NSM (NTPC)	0.00	0.00
019 Payment Security Scheme of MNRE NSM (NVVN)	0.00	0.00
020 Enforcement Directorate of Solar Plant(NVVN)	0.00	0.00
021 Bank guarantee Fund of MNRE (NVVN)	0.00	0.00
022 Others	0.00	0.00
023	0.00	0.00
024 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
025	0.00	0.00
026 Bank deposits with original maturity of less than three months- other than earmarked	0.00	0.00
027 Bank deposits with original maturity of more than three months but not more than twelve months- other than earmarked	0.00	0.00
028 Earmarked bank balances (current account)	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 17 TO THE FS-CA-LOANS**
**( Amount in ₹ )**

As at	31.03.2020	31.03.2019
001 <b>Current financial assets - Loans</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Loans (current)-including interest accrued</b>	<b>0.00</b>	<b>0.00</b>
004 <b>Related Parties</b>	<b>0.00</b>	<b>0.00</b>
005 Secured	0.00	0.00
006 Un-Secured	0.00	0.00
007 With significant increase in Credit Risk	0.00	0.00
008 Credit impaired	0.00	0.00
009	<b>0.00</b>	<b>0.00</b>
010 <b>Employees</b>	<b>0.00</b>	<b>0.00</b>
011 Secured	18,561,561.43	19,034,311.90
012 Unsecured	52,381,166.99	51,983,249.98
013 With significant increase in Credit Risk	0.00	0.00
014 Credit impaired	0.00	0.00
015 Less : Employee Loans Discounting	0.00	0.00
016 <b>Loan to State Government in settlement of dues from customers (Unsecured)</b>	<b>0.00</b>	<b>0.00</b>
017	0.00	0.00
018 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
019 Secured	0.00	0.00
020 Unsecured	0.00	0.00
021 With significant increase in Credit Risk	0.00	0.00
022 Credit impaired	0.00	0.00
023	<b>0.00</b>	<b>0.00</b>
024 Less: Allowance for credit impaired loans	0.00	0.00
025 <b>Total (Loans)</b>	<b>70,942,728.42</b>	<b>71,017,561.88</b>
026	<b>0.00</b>	<b>0.00</b>
027 <b>Due from Directors and Officers of the Company</b>	<b>0.00</b>	<b>0.00</b>
028 Directors	0.00	0.00
029 Officers	0.00	0.00
030	<b>0.00</b>	<b>0.00</b>
031 <b>Loans to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
032 i)Key management personel	0.00	0.00
033 ii)Subsidiary companies	0.00	0.00
034 KBUNL	0.00	0.00
035 PVUNL	0.00	0.00
036 NVVN	0.00	0.00
037 iii)Joint Venture companies	0.00	0.00
038 iv)others	0.00	0.00
039	0.00	0.00
059 RPD	0.00	0.00
060 i)Key management personel	0.00	0.00
061 ii)Subsidiary companies	0.00	0.00
062 iii)Joint Venture companies	0.00	0.00
063 iv)Others	0.00	0.00
064	0.00	0.00
065 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

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**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 18 TO THE FS-CA-OTHER FINANCIAL ASSETS**
**( Amount in ₹ )**

As at	31.03.2020	31.03.2019
001 <b>Other Financial Assets (current)</b>	<b>0.00</b>	<b>0.00</b>
002	0.00	0.00
003 <b>ADVANCES</b>	<b>0.00</b>	<b>0.00</b>
004	<b>0.00</b>	<b>0.00</b>
005 <b>Related Parties</b>	<b>0.00</b>	<b>0.00</b>
006 Secured	0.00	0.00
007 Un-Secured	583,008,854.62	115,514,066.15
008 Considered doubtful	0.00	0.00
009	<b>0.00</b>	<b>0.00</b>
010 <b>Employees</b>	<b>0.00</b>	<b>0.00</b>
012 Unsecured	3,465,523.87	2,545,980.44
013 Considered Doubtful	0.00	0.00
014	<b>0.00</b>	<b>0.00</b>
020 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
021 Secured	0.00	0.00
022 Unsecured	0.00	0.00
023 Considered Doubtful	0.00	0.00
024	<b>0.00</b>	<b>0.00</b>
025 Less: Allowance for bad & doubtful advances	0.00	0.00
026	<b>0.00</b>	<b>0.00</b>
033 <b>Total (Advances)</b>	<b>586,474,378.49</b>	<b>118,060,046.59</b>
044	<b>0.00</b>	<b>0.00</b>
045 <b>Claims Recoverable</b>	<b>0.00</b>	<b>0.00</b>
046 Secured	0.00	0.00
047 Unsecured, considered good	95,503,503.01	59,241,658.00
048 Considered Doubtful	0.00	0.00
049 Less:- Allowance for doubtful claims	0.00	0.00
050 Others-Claims Recoverable	0.00	0.00
051	<b>0.00</b>	<b>0.00</b>
052 Unbilled Revenue	0.00	0.00
053 Hedging cost recoverable from beneficiaries	0.00	0.00
054 Derivative MTM Asset	0.00	0.00
055 Finance Lease Receivable	0.00	0.00
056 Mine Closure Deposit	0.00	0.00
057 Others*	0.00	23,375.00
058 Receivable from MCP Escrow A/c	0.00	0.00
059 <b>Total</b>	<b>681,977,881.50</b>	<b>177,325,079.59</b>
060	0.00	0.00
062 * Other include amount recoverable from contractors and other parties towards hire charges, rent/electricity etc.	0.00	0.00
063	0.00	0.00
067	<b>0.00</b>	<b>0.00</b>
068 <b>Advances to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
069 i)Key management personel	0.00	0.00
070 ii)Subsidiary companies	0.00	0.00
071 iii)Joint Venture companies	0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION****NOTE NO. 18 TO THE FS-CA-OTHER FINANCIAL ASSETS****( Amount in ₹ )**

As at	31.03.2020	31.03.2019
072 iv)Contractors	0.00	0.00
073 v)Others	0.00	0.00
074	<b>0.00</b>	<b>0.00</b>
075 Advances include amount due from the following Private Companies in which Directors of the Company are also Directors in such Companies	0.00	0.00
076	<b>0.00</b>	<b>0.00</b>
077	0.00	0.00
078 NTPC GE Power Services Pvt.Ltd.	0.00	0.00
079 Ratnagiri Gas & Power Private Ltd.	0.00	0.00
080 Aravali Power Company Private Ltd.	0.00	0.00
081 NTPC-SCCL Global Ventures Private Ltd.	0.00	0.00
082 NTPC BHEL Power Projects Private Ltd.	0.00	0.00
083 Meja Urja Nigam Private Limited	0.00	0.00
084 Nabinagar Power Generating Company Ltd.	0.00	0.00
085 National High Power Test Labortory Private Ltd.	0.00	0.00
086 International Coal Ventures Private Ltd.	0.00	0.00
087 CIL NTPC Urja Private Ltd.	0.00	0.00
089 Bangladesh-India Friendship Power Co. Pvt.Ltd	0.00	0.00
090	<b>0.00</b>	<b>0.00</b>
091 Related Party (Adv)- Employee	0.00	0.00
092 Related Party (Adv)- Subsidiaries	0.00	0.00
093 Related Party (Adv)- Joint Ventures	0.00	0.00
094 Related Party (Adv)- Contractors	0.00	0.00
095 Related Party (Adv)- Others	583,008,854.62	115,514,066.15
096 <b>Total</b>	<b>583,008,854.62</b>	<b>115,514,066.15</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 19 TO THE FS-CA-OTHER CURRENT ASSETS**
**( Amount in ₹ )**

As at	31.03.2020	31.03.2019
<b>001 OTHER CURRENT ASSETS</b>	<b>0.00</b>	<b>0.00</b>
002 Security Deposits (Unsecured)	0.00	0.00
003 Deposit with Customs, port trust & others*	191,392,850.00	191,392,850.00
<b>004 ADVANCES</b>	<b>0.00</b>	<b>0.00</b>
005	<b>0.00</b>	<b>0.00</b>
<b>006 Related Parties</b>	<b>0.00</b>	<b>0.00</b>
007 Secured	0.00	0.00
008 Un-Secured	22,267,172.00	15,733,245.00
009 Considered doubtful	0.00	0.00
010	<b>0.00</b>	<b>0.00</b>
<b>011 Employees(including imprest)</b>	<b>0.00</b>	<b>0.00</b>
012 Secured	0.00	0.00
013 Unsecured	313,974.00	367,109.28
014 Considered Doubtful	0.00	0.00
015	<b>0.00</b>	<b>0.00</b>
<b>016 Contractors &amp; Suppliers</b>	<b>0.00</b>	<b>0.00</b>
017 Secured	0.00	0.00
018 Unsecured	195,835,792.94	122,879,539.27
019 Considered Doubtful	0.00	53,600.00
020	0.00	0.00
<b>021 Others**</b>	<b>0.00</b>	<b>0.00</b>
022 Secured	0.00	0.00
023 Unsecured	12,449,859.00	65,159,372.17
024 Considered Doubtful	0.00	0.00
025	<b>0.00</b>	<b>0.00</b>
026 Less: Allowance for bad & doubtful advances	0.00	53,600.00
027 Deferred Payroll Expenses (Secured)	2,488,898.40	2,810,851.92
028 Deferred Payroll Expenses (Unsecured)	3,815,730.86	4,524,013.84
<b>029 Sub-total</b>	<b>6,304,629.26</b>	<b>7,334,865.76</b>
<b>030 Interest accrued on :</b>	<b>0.00</b>	<b>0.00</b>
031 Advances to contractors	0.00	0.00
032	<b>0.00</b>	<b>0.00</b>
<b>033 Claims Recoverable</b>	<b>0.00</b>	<b>0.00</b>
034 Secured	0.00	0.00
035 Unsecured, considered good	207,959,344.25	86,481,056.84
036 Considered Doubtful	26,600,000.00	26,600,000.00
037 Less:- Allowance for doubtful claims	26,600,000.00	26,600,000.00
038	<b>0.00</b>	<b>0.00</b>
039 Deferred premium on forward exchange contract/ Option Assets	0.00	0.00
041 Assets Held for Disposal	197,831.40	197,831.40
042 Others	4,507,295.00	4,299,036.00
043	0.00	0.00
<b>044 Total (Other Current Assets)</b>	<b>641,228,747.85</b>	<b>493,844,905.72</b>
045 **Include Prepaid Expenses	12,449,859.00	65,159,372.17
046 *Includes sales tax/Entry tax/VAT deposited under protest with Sales Tax Authorities	812,756.00	466,336.00

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**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 19 TO THE FS-CA-OTHER CURRENT ASSETS**
**( Amount in ₹ )**

As at	31.03.2020	31.03.2019
047 *Includes deposited with courts	0.00	0.00
048 *Includes deposited with LIC for annuity payments	0.00	0.00
049 * Includes deposits with WRD / against BG in r/o finance lease	0.00	0.00
050 Other include amount recoverable from contractors and other parties towards hire charges, rent/electricity etc.	0.00	0.00
<b>052 Advances to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
053 i)Key management personel	0.00	0.00
054 ii)Subsidiary companies	0.00	0.00
055 iii)Joint Venture companies	0.00	0.00
056 Contractors	0.00	0.00
057 Others	0.00	0.00
058	0.00	0.00
059 Advances include amount due from the following Private Companies in which Directors of the Company are also Directors in such Companies	0.00	0.00
060	<b>0.00</b>	<b>0.00</b>
061	0.00	0.00
062 Related Party (Adv)- Employee	0.00	0.00
063 Related Party (Adv)- Subsidiaries	0.00	0.00
064 Related Party (Adv)- Joint Venture	0.00	3,091,378.00
065 Related Party (Adv)- Contractors	21,706,489.00	10,778,611.00
066 Related Party (Adv)- Others	560,683.00	1,863,256.00
067 <b>Total</b>	<b>22,267,172.00</b>	<b>15,733,245.00</b>
068	0.00	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 20 TO THE FS--REGULATORY DEFERRAL ACCOUNT DEBIT BALANCES

( Amount in ₹ )

As at	31.03.2020	31.03.2019
001 On account of Exchange Differences	-15,205,072.81	-33,869,209.96
002 On account of employee benefit exp	381,915,581.00	381,915,581.00
003 Regulatory deferred account - deferred	0.00	0.00
004 Deferred asset for ash transportation	0.00	0.00
005	0.00	0.00
006 <b>Total</b>	<b>366,710,508.19</b>	<b>348,046,371.04</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 21 TO THE FS-EQUITY-EQUITY SHARE CAPITAL**
**( Amount in ₹ )**

As at	31.03.2020	31.03.2019
001 <b>SHARE CAPITAL</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Equity Share Capital</b>	<b>0.00</b>	<b>0.00</b>
003 <b>Authorised</b>	<b>0.00</b>	<b>0.00</b>
004 10,000,000,000 equity shares of Rs.10/- each (Previous year 10,000,000,000 eq shares of Rs.10/- each)	0.00	0.00
005 <b>Issued,Subscribed and fully Paid-up</b>	<b>0.00</b>	<b>0.00</b>
006 9,894,557,280 equity shares of Rs.10/- (Pv. Year 9,894,557,280 equity shares of Rs.10/- each)	0.00	0.00
007	<b>0.00</b>	<b>0.00</b>
008 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
009 During FY 2018-19, the company has issued 1,649,092,880 equity shares of Rs.10/- each as fully paid bonus shares	0.00	0.00
010 The holders of the equity shares are entitled to receive dividends as declared from time to time, and are entitled to one vote per share at meetings of the company.	0.00	0.00
011 Details of shareholders holding more than 5% shares in the company	0.00	0.00
012 - President of India	0.00	0.00
013 No. of Shares	0.00	0.00
014 % of holding	0.00	0.00
015 - Life Insurance Corporation of India/ICICI Prudential Mutual Fund	0.00	0.00
016 No. of Shares	0.00	0.00
017 % of holding	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 22 TO THE FS-EQUITY-OTHER EQUITY**
**( Amount in ₹ )**

	As at	31.03.2020	31.03.2019
001	RESERVE AND SURPLUS	0.00	0.00
002		<b>0.00</b>	<b>0.00</b>
003	<b>Capital Reserve</b>	<b>0.00</b>	<b>0.00</b>
004	As per last financial statements	0.00	0.00
006	Add : Grants received during the year	0.00	0.00
007	Add: Transfer from Surplus	0.00	0.00
008	Less: Write back during the year/period	0.00	0.00
009	Less: Adjustments during the year/period	0.00	0.00
010	<b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
011	<b>Securities Premium Account</b>	<b>0.00</b>	<b>0.00</b>
012	As per last financial statements	0.00	0.00
013	Add: Additions during the year/period	0.00	0.00
014	Less: Adjustments during the year/period	0.00	0.00
015	<b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
016	<b>Bonds Redemption Reserve</b>	<b>0.00</b>	<b>0.00</b>
017	As per last financial statements	0.00	0.00
018	Add: Transfer from Surplus	0.00	0.00
019	Less: Transfer to surplus on redemption	0.00	0.00
020	Less: Adjustments during the year/ period	0.00	0.00
021	<b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
022	<b>Share Application money Allotment</b>	<b>0.00</b>	<b>0.00</b>
023	As per last financial statements	0.00	0.00
024	Add: Addition during the year	0.00	0.00
025	Less: Utilised for allotment during the year	0.00	0.00
026	Less: Adjustments during the year/ period	0.00	0.00
027	<b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
028	<b>Fly-ash utilisation reserve Fund</b>	<b>0.00</b>	<b>0.00</b>
029	As per last financial statements	0.00	-129,445,999.71
030	Transferred to CC	0.00	194,794,711.06
031	Add:Transfer from revenue from operations	8,220,860.44	0.00
032	Add:Transfer from other income	0.00	0.00
033	Less: Utilised during the year	0.00	0.00
034	Tangible assets	0.00	0.00
035	Employee benefit expenses	0.00	-4,821,064.10
036	Generation,adm. and other expenses	0.00	-60,527,647.25
037	Tax Expenses	0.00	0.00
038	<b>Sub-Total</b>	<b>8,220,860.44</b>	<b>0.00</b>
039	<b>Corporate social responsibility (CSR) reserve</b>	<b>0.00</b>	<b>0.00</b>
040	As per last financial statements	0.00	0.00
041	Add : Transfer from surplus	0.00	0.00
042	Less:-Write back during the year	0.00	0.00
043	<b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
044	<b>General Reserve</b>	<b>0.00</b>	<b>0.00</b>
045	As per last financial statements	0.00	0.00
046	Add: Transfer from Surplus	0.00	0.00
047	Less: Transfer to Surplus	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 22 TO THE FS-EQUITY-OTHER EQUITY**
**( Amount in ₹ )**

As at	31.03.2020	31.03.2019
048 Less: Write back during the year /period	0.00	0.00
049 Less: Adjustments during the year /period	0.00	0.00
050 <b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
051	<b>0.00</b>	<b>0.00</b>
052 <b>Retained earnings</b>	<b>0.00</b>	<b>0.00</b>
053 As per last financial statements	143,024,832,290.02	131,406,495,597.77
054 Add(Less):-Changes in accounting policy / prior period errors	0.00	0.00
055 Add(Less):-Profit (Loss) after tax for the year from Statement of Profit & Loss	11,532,563,737.03	11,618,336,692.25
056	0.00	0.00
057 Add: Write back from Bond Redemption Reserve	0.00	0.00
058 Add: Write back from Capital Reserve	0.00	0.00
059 Add: Write back from Foreign Project Reserve	0.00	0.00
060 Add: Write back from CSR Reserve	0.00	0.00
061 Add: Write back from General Reserve	0.00	0.00
062 Less: Transfer to Bonds Redemption Reserve	0.00	0.00
063 Less: Transfer to Foreign Project Reserve	0.00	0.00
064 Less:Transfer to Capital Reserve	0.00	0.00
065 Less:Transfer to CSR Reserve	0.00	0.00
066 Less:Transfer to General Reserve	0.00	0.00
067 Less:Interim Dividend Paid	0.00	0.00
068 Less:Tax on Interim Dividend Paid	0.00	0.00
069 Less:Final Dividend Paid	0.00	0.00
070 Less:Tax on Final Dividend Paid	0.00	0.00
071 Less: Issue of bonus debenture	0.00	0.00
072 Less: Tax on issue of bonus debenture	0.00	0.00
073 <b>Sub-Total</b>	<b>154,557,396,027.05</b>	<b>143,024,832,290.02</b>
074	0.00	0.00
075 <b>Remeasurement of defined benefit plans</b>	<b>0.00</b>	<b>0.00</b>
076 As per last financial statements	-119,460,048.36	-116,687,668.16
077 Add/(Less):- Actuarial Gains/loss through OCI	-53,349,231.17	-2,772,380.20
078 <b>Sub-Total</b>	<b>-172,809,279.53</b>	<b>-119,460,048.36</b>
080	0.00	0.00
081 <b>FVTOCI Reserve</b>	<b>0.00</b>	<b>0.00</b>
082 As per last financial statements	0.00	0.00
083 Add(Less):-Net gain/loss of equity instruments through OCI	0.00	0.00
084 <b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
085	<b>0.00</b>	<b>0.00</b>
086 <b>Total Other equity</b>	<b>154,392,807,607.96</b>	<b>142,905,372,241.66</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at	31.03.2020	31.03.2019
<b>001 LONG TERM BORROWINGS</b>	<b>0.00</b>	<b>0.00</b>
<b>002 Bonds</b>	<b>0.00</b>	<b>0.00</b>
<b>003 Secured</b>	<b>0.00</b>	<b>0.00</b>
004 7.37 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2035 (Fifty Sixth Issue - Public Issue - Series 3A).	0.00	0.00
005 7.62 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2035 (Fifty Sixth Issue - Public Issue - Series 3 B).	0.00	0.00
006 8.61% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4th March 2034 (Fifty First Issue C - Private Placement)	0.00	0.00
007 8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2033 ( Fiftieth Issue - Public Issue - Series 3A)	0.00	0.00
008 8.91% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2033 ( Fiftieth Issue - Public Issue - Series 3B)	0.00	0.00
009 7.37% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 14th December 2031 (Sixty Sixth Issue - Private Placement)	0.00	0.00
010 7.49% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 7th November 2031 (Sixty Fourth Issue - Private Placement)	0.00	0.00
011 7.28 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2030 (Fifty Sixth Issue - Public Issue - Series	0.00	0.00



**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at	31.03.2020	31.03.2019
2A)		
012 7.53 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2030 (Fifty Sixth Issue - Public Issue - Series 2 B).	0.00	0.00
013 7.93% Secured non-cumulative non-convertible redeemable taxable bonds of ` 10,00,000/- each redeemable at par in full on 03 May 2022 (68th Issue - Private Placement)	0.00	0.00
014 8.63% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4th March 2029 (Fifty First Issue B - Private Placement)	0.00	0.00
015 8.30% Secured non-cumulative non-convertible redeemable taxable bonds of Rs 10,00,000/- each redeemable at par in full on 15 January 2029 (Sixty Seventh Issue - Private Placement)	0.00	0.00
016 8.48% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2028 ( Fiftieth Issue - Public Issue - Series 2A)	0.00	0.00
017 8.73% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2028 ( Fiftieth Issue - Public Issue - Series 2B)	0.00	0.00
018 7.47% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 16th September 2026 (Sixty Third Issue - Private Placement)	0.00	0.00
019 7.58% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 23rd August 2026 (Sixty Second Issue - Private Placement)	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at	31.03.2020	31.03.2019
020 8.05% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 5th May 2026 (Sixtieth Issue - Private Placement)	0.00	0.00
021 8.19% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 15th December 2025 (Fifty Seventh Issue - Private Placement)	0.00	0.00
022 7.11 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2025 (Fifty Sixth Issue - Public Issue - Series 1A).	0.00	0.00
023 7.36 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2025 (Fifty Sixth Issue - Public Issue - Series 1 B).	0.00	0.00
024 7.15% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of Rs. 10,00,000/- each redeemable at par in full on 21st August 2025 (Fifty Fifth Issue - Private Placement)	0.00	0.00
025 9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 22nd September 2024 (53rd Issue - private placement).	0.00	0.00
026 9.34% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 24th March 2024 (Fifty Second Issue - private placement)	0.00	0.00
027 8.19% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 10,00,000/- each redeemable at par in full on 4th March 2024 (Fifty First Issue A - Private Placement)	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at	31.03.2020	31.03.2019
028 8.41% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2023 ( Fiftieth Issue - Public Issue - Series 1A)	0.00	0.00
029 8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2023 ( Fiftieth Issue - Public Issue - Series 1B)	0.00	0.00
030 9.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 4th May 2023 and ending on 4th May 2027 (Forty fourth issue - private placement)VII	0.00	0.00
031 8.48% Secured non-cumulative non-nonvertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 1st May 2023 (Seventeenth issue - private placement)I	0.00	0.00
032 8.80% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4th April 2023 (Forty ninth issue -private placement	0.00	0.00
033 8.49% Secured non-cumulative non-convertible redeemable taxable fully paid-up bonus debentures of Rs. 12.50 each redeemable at par in three annual installments of Rs. 2.50, Rs. 5.00 and Rs. 5.00 at the end of 8th year, 9th year and 10th year on 25th March 2023, 25th March 2024 and 25th March 2025 respectively (Fifty Fourth Issue -Bonus Debentures)X - (refer Note 5 d)	0.00	0.00
034 8.73% Secured non-cumulative non-convertible redeemable taxable bonds of	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

			31.03.2020	31.03.2019
	As at			
	₹ 10,00,000/- each redeemable at par in full on 07th March 2023 (Forty eighth issue - private placement)			
035	9.00% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 25th January 2023 and ending on 25th January 2027 (Forty second issue- private placement)III		0.00	0.00
036	8.84% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4th October 2022 (Forty seventh issue- private placement)VII		0.00	0.00
037	7.32% Secured non-cumulative non-convertible redeemable taxable bonds of Rs 10,00,000/- each redeemable at par in full on 17 July 2029 (Sixty Ninth Issue - Private Placement)		0.00	0.00
038	6.72% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 24th November 2021 (Sixty Fifth Issue - Private Placement)		0.00	0.00
039	8.10% Secured Non-Cumulative Non-Convertible Redeemable Taxable Bonds of Rs. 30,00,000/- each redeemable at par in three equal separately transferable redeemable principal parts (STRPP) at the end of 5th year, 10th year & 15th year on 27th May 2021, 27th May 2026 and 27th May 2031 respectively (Sixty First Issue- Private Placement)		0.00	0.00
040	8.33% Secured non-cumulative non-convertible redeemable taxable bonds of Rs.10,00,000/- each redeemable at par in full on 24th February 2021		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at				31.03.2020	31.03.2019
(Fifty Ninth Issue - Private Placement).					
042	8.93%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 19th January 2021 Thirty seventh issue - private placement)III	0.00	0.00
043	8.18%	Secured	non-cumulative non-convertible redeemable taxable bonds of Rs.10,00,000/- each redeemable at par in full on 31st December 2020 (Fifty Eight Issue - Private Placement).	0.00	0.00
044	8.73 %	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 31st March 2020 (Thirty third issue- private placement)III	0.00	0.00
045	8.78 %	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 9th March 2020 (Thirty first issue- private placement)III	0.00	0.00
046	11.25%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in five equal annual installments commencing from 6th Nov 2019 and ending on 6th Nov 2023 (Twenty seventh issue - private placement)III	0.00	0.00
047	7.89%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 5th May 2019 (Thirtieth issue - private placement)III	0.00	0.00
048	8.65%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4th February 2019 (Twenty ninth issue - private placement)III	0.00	0.00
049	7.50%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at			31.03.2020	31.03.2019
on 12th January 2019 (Nineteenth issue - private placement)II				
050	11%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 21st November 2018 (Twenty eighth issue - private placement)III	0.00	0.00
051	9.3473%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 20th July 2018 and ending on 20th July 2032 (Forty sixth issue - private placement)VII	0.00	0.00
052	9.4376%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 16th May 2018 and ending on 16th May 2032 (Forty fifth issue - private placement)VII	0.00	0.00
053	8.00%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 10th April 2018 (Sixteenth issue -private placement)I	0.00	0.00
054	9.2573%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 2nd March 2018 and ending on 2nd March 2032 (Forty third issue - private placement)III	0.00	0.00
055	9.6713%	Secured non-cumulative non-convertible redeemable taxable bonds	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at	31.03.2020	31.03.2019
of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 23rd December 2017 and ending on 23rd December 2031 (Forty first issue - private placement)III		
056 9.558% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 29th July 2017 and ending on 29th July 2031(Fourtieth issue-private placement)III	0.00	0.00
057 9.3896% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 9th June 2017 and ending on 9th June 2031(Thirty ninth issue-private placement)III	0.00	0.00
058 9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 22nd March 2017 and ending on 22nd March 2031(Thirty eighth issue-private placement)III	0.00	0.00
059 8.8086% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at		31.03.2020	31.03.2019
	year and in annual installments thereafter upto the end of 20th year respectively commencing from 15th December 2016 and ending on 15th December 2030 (Thirty sixth issue - private placement)III		
060	8.785% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15th September 2016 and ending on 15th September 2030 (Thirty fifth issue - private placement)III	0.00	0.00
061	8.71% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 10th June 2016 and ending on 10th June 2030 (Thirty fourth issue - private placement)III	0.00	0.00
062	8.8493% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 25th March 2016 and ending on 25th March 2030 (Thirty second issue - private placement)III	0.00	0.00
063	9.37% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 70,00,000/- each with fourteen separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 4th June 2012 and ending on 4th December 2018 (Twenty fifth issue -	0.00	0.00



**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at			31.03.2020	31.03.2019
private placement)III				
065	9.06%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 70,00,000/- each with fourteen separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 4th June 2012 and ending on 4th December 2018 (Twenty sixth issue - private placement)III	0.00	0.00
066	8.6077%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 9th September 2011 and ending on 9th March 2021 (Twenty fourth issue - private placement)IV	0.00	0.00
067	8.3796%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 5th August 2011 and ending on 5th February 2021 (Twenty third issue - private placement)IV	0.00	0.00
068	8.1771%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2nd July 2011 and ending on 2nd January 2021 (Twenty second issue - private placement)IV	0.00	0.00
069	7.7125%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2nd August 2010 and ending on 2nd February 2020 (Twenty first issue - private placement)V	0.00	0.00
070	7.552%	Secured non-cumulative non-convertible redeemable taxable bonds	0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

		31.03.2020	31.03.2019
As at			
of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 23rd September 2009 and ending on 23rd March 2019 (Twentieth issue - private placement)VI			
071	9.55% Secured non-cumulative non-convertible taxable redeemable bonds of ₹ 10,00,000/- each with ten equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of the 6th year and in annual installments thereafter upto the end of 15th year respectively from 30th April 2002 (Thirteenth issue - Part B - private placement)VIII	0.00	0.00
072	9.55% Secured non-cumulative non-convertible taxable redeemable bonds of ₹ 10,00,000/- each redeemable at par in ten equal annual installments commencing from the end of 6th year and upto the end of 15th year respectively from 18th April 2002 (Thirteenth issue -Part A - private placement)VIII	0.00	0.00
074		0.00	0.00
075		0.00	0.00
081		0.00	0.00
082	<b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
083	<b>Foreign Currency Notes-Unsecured</b>	<b>0.00</b>	<b>0.00</b>
084	4.50% Fixed Rate Notes Due for repayment on 19th March 2028	0.00	0.00
085	2.75% Fixed rate notes due for repayment on 1st February 2027	0.00	0.00
086	4.25 % Fixed rate notes due for repayment on 26th February 2026	0.00	0.00
087	4.375% Fixed Rate Note due for repayment on 26th November 2024	0.00	0.00
088	4.75 % Fixed Rate Notes due for repayment on 3rd Oct 2022	0.00	0.00
089	7.25 % Fixed green global INR denominated bonds due on 3 May 2022	0.00	0.00
090	7.375 % Fixed green global INR denominated bonds due on 10 August 2021	0.00	0.00
091	5.625% Fixed Rate Notes due for repayment on 14th July 2021	0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at	31.03.2020	31.03.2019
092 3.75 % Fixed rate notes due for repayment on 03 April 2024	0.00	0.00
093	0.00	0.00
094 <b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
095 Long term maturities of Finance Lease Obligations (Secured) IX	0.00	0.00
100 Long term maturities of Finance Lease Obligations (Unsecured) X	0.00	0.00
101 <b>Term Loans</b>	<b>0.00</b>	<b>0.00</b>
102 <b>From Banks</b>	<b>0.00</b>	<b>0.00</b>
103 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
104 Rupee Loans	0.00	0.00
105 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
106 Foreign Currency Loans	0.00	0.00
107 Rupee Loans	0.00	0.00
108 <b>From Others</b>	<b>0.00</b>	<b>0.00</b>
109 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
110 Rupee Loans	0.00	0.00
111 Foreign Currency loans (guaranteed by GOI)	0.00	0.00
112 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
113 Foreign Currency loans (guaranteed by GOI)	0.00	0.00
114 Other Foreign currency loans	0.00	0.00
115 Rupee Loans	0.00	0.00
116 <b>Deposits</b>	<b>0.00</b>	<b>0.00</b>
117 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
118 Fixed Deposits	0.00	0.00
119 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
120 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
121 Bonds Application Money Pending Allotment	0.00	0.00
122 <b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
123 Less:- Interst accrued but not due on borrowings	0.00	0.00
124 Less:- Current maturities of long term borrowings	0.00	0.00
125 Bonds-Secured	0.00	0.00
126 5.875% Fixed Rate Notes	0.00	0.00
127 Foreign currency loans from Banks- unsecured	0.00	0.00
128 Rupee loans from banks- Secured	0.00	0.00
129 Rupee loans from banks- unsecured	0.00	0.00
130 Rupee Term loan from Others - Secured	0.00	0.00
131 Foreign currency loans from others- unsecured (Guaranteed by GOI)	0.00	0.00
132 Other foreign currency loans from others- unsecured	0.00	0.00
133 Rupee loans from others- unsecured	0.00	0.00
134 Finance Lease obligations - secured	0.00	0.00
135 Finance Lease obligations - unsecured	0.00	0.00
136	0.00	0.00
137	0.00	0.00



RIHAND SUPER THERMAL POWER STATION  
NOTE NO. 23 TO THE FS-NCL-BORROWINGS

( Amount in ₹ )

	As at	31.03.2020	31.03.2019
200	<b>Total</b>	<b>0.00</b>	<b>0.00</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 24 TO THE FS-NCL-TRADE PAYABLES

( Amount in ₹ )

	As at	31.03.2020	31.03.2019
001	<b>TRADE PAYABLES(NON CURRENT)</b>	<b>0.00</b>	<b>0.00</b>
002	<b>For Goods and Services</b>	<b>0.00</b>	<b>0.00</b>
003	- Micro & Small Enterprises	15,622,396.62	6,964,940.99
004	- Others	5,712,598.82	19,217,358.89
005		0.00	0.00
006	<b>Total</b>	<b>21,334,995.44</b>	<b>26,182,299.88</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 25 TO THE FS-NCL-OTHER FINANCIAL LIABILITIES

( Amount in ₹ )

As at	31.03.2020	31.03.2019
001 <b>OTHER FINANCIAL LIABILITIES (NON-CURRENT)</b>	<b>0.00</b>	<b>0.00</b>
002 Payable for Capital Expenditure	0.00	0.00
003 - Micro & Small Enterprises	36,951.05	1,644,420.88
004 - Others	34,267,850.68	438,868.21
005 Others	0.00	0.00
006 Deposits from contractors and others	75,100.00	0.00
007	0.00	0.00
008	0.00	0.00
009 <b>Total</b>	<b>34,379,901.73</b>	<b>2,083,289.09</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 26 TO THE FS-NCL-PROVISIONS

( Amount in ₹ )

As at	31.03.2020	31.03.2019
001 <b>LONG TERM PROVISIONS</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Provision for Employee Benefits</b>	<b>0.00</b>	<b>0.00</b>
003 Opening Balance	0.00	0.00
004 Additions/ (adjustments) during the year	0.00	0.00
005 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
013	<b>0.00</b>	<b>0.00</b>
014 <b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>

**NOTE NO. 27 TO THE FS-NCL-DEFERRED TAX LIABILITIES (NET)**
**( Amount in ₹ )**

As at	Opening Balance on 01.04.2019	Addition	Closing Balance on 31.03.2020
001 <b>DEFERRED TAX LIABILITIES (NET)</b>			
002 Difference of book depreciation and tax depreciation	0.00	0.00	0.00
003 Less: Deferred tax assets			
004 Provisions & Other disallowances for tax purposes	0.00	0.00	0.00
005 Unabsorbed Depreciation	0.00	0.00	0.00
006 Disallowances u/s 43B of the Income Tax Act, 1961	0.00	0.00	0.00
007 MAT credit entitlement	0.00	0.00	0.00
008	0.00	0.00	0.00
009 <b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
010	0.00	0.00	0.00
011 <b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
012 Breakup of deferred tax assets	0.00	0.00	0.00
013 Provision	0.00	0.00	0.00
014 Statutory dues	0.00	0.00	0.00
015 Leave encashment	0.00	0.00	0.00
016 Others	0.00	0.00	0.00
017	0.00	0.00	0.00
018	0.00	0.00	0.00





RIHAND SUPER THERMAL POWER STATION

NOTE NO. 28 TO THE FS-NCL-OTHER NON-CURRENT LIABILITIES

( Amount in ₹ )

As at	31.03.2020	31.03.2019
001 Other Non current Liabilities	0.00	0.00
002 Advances from customers and others	0.00	0.00
003 Deposits from contractors and others	0.00	0.00
004	0.00	0.00
005 <b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION****NOTE NO. 29 TO THE FS-CL-BORROWINGS****( Amount in ₹ )**

As at	31.03.2020	31.03.2019
001 <b>Short Term Borrowings</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Loans repayable on demand</b>	<b>0.00</b>	<b>0.00</b>
003 <b>From Banks</b>	<b>0.00</b>	<b>0.00</b>
004 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
005 Cash Credit	0.00	0.00
006 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
007 Cash Credit	0.00	0.00
008 <b>Other loans-unsecured</b>	<b>0.00</b>	<b>0.00</b>
009 Commercial Papers	0.00	0.00
010 Less: Unamortised discount on Commercial Papers	0.00	0.00
011 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
012	0.00	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 30 TO THE FS-CL-TRADE PAYABLES

( Amount in ₹ )

	As at	31.03.2020	31.03.2019
001	<b>TRADE PAYABLES</b>	<b>0.00</b>	<b>0.00</b>
002	For Goods and Services	0.00	0.00
003	- Micro & Small Enterprises	347,533,123.95	277,066,480.33
004	- Others	1,929,276,543.35	1,245,121,688.26
005		0.00	0.00
006	<b>Total</b>	<b>2,276,809,667.30</b>	<b>1,522,188,168.59</b>
007		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 31 TO THE FS-CL-OTHER FINANCIAL LIABILITIES**
**( Amount in ₹ )**

As at	31.03.2020	31.03.2019
001 <b>OTHER FINANCIAL LIABILITIES (CURRENT)</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Current maturity of long term borrowings</b>	<b>0.00</b>	<b>0.00</b>
003 Bonds-Secured	0.00	0.00
004 Foreign Currency Fixed Rate Notes	0.00	0.00
005 <b>From Banks</b>	<b>0.00</b>	<b>0.00</b>
006 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
007 Rupee Term Loan	0.00	0.00
008 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
009 Foreign currency loans	0.00	0.00
010 Rupee term loans	0.00	0.00
011 <b>From Others</b>	<b>0.00</b>	<b>0.00</b>
012 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
013 Rupee Term Loan	0.00	0.00
014 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
015 Foreign currency loans (Guaranteed by Government of India)	0.00	0.00
016 Other foreign currency loans	0.00	0.00
017 Rupee term loans	0.00	0.00
018 Fixed deposits	0.00	0.00
019 Sub Total	0.00	0.00
020 Current maturity of finance lease obligations (secured)	0.00	0.00
021 Current maturity of finance lease obligations (unsecured)	0.00	0.00
022 Interest accrued but not due on borrowings	0.00	0.00
023 Unpaid Dividends*	0.00	0.00
024 Unpaid matured deposits and interest accrued thereon*	0.00	0.00
025 Unpaid matured bonds and interest accrued thereon*	0.00	0.00
026 Unpaid bond refund money-Tax free bonds *	0.00	0.00
027 Book Overdraft	0.00	0.00
028 Payable to Customers	0.00	0.00
029 Liability under forward exchange contact	0.00	0.00
030 Hedging cost payable to beneficiaries	0.00	0.00
031 Derivative MTM Liability	0.00	0.00
032 <b>Payable for Capital Expenditure</b>	<b>0.00</b>	<b>0.00</b>
033 - Micro & Small Enterprises	118,466,640.74	118,220,405.93
034 - Others	1,851,731,237.95	1,779,019,030.22
035 <b>Others Payables</b>	<b>0.00</b>	<b>0.00</b>
036 Deposits from contractors and others	55,965,895.78	375,029,853.80
037 Gratuity Obligations	0.00	0.00
038 Payable to employees	21,909,288.36	31,125,349.51
039 Payable to holding company	0.00	0.00
040 Retention on A/c BG encashment (Solar)	0.00	0.00
041 Payable to Solar Payment Security Account	0.00	0.00
042 Others **	125,967,538.41	121,601,858.45



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 31 TO THE FS-CL-OTHER FINANCIAL LIABILITIES

( Amount in ₹ )

As at	31.03.2020	31.03.2019
043	0.00	0.00
044 <b>Total</b>	<b>2,174,040,601.24</b>	<b>2,424,996,497.91</b>
045 * Represents the amounts which have not been claimed by the investor/holders of the bonds/fixed deposits. Out of the above, no amount is due for payment to Investor Education and Protection Fund.	0.00	0.00
046 ** Include Payable to Hospital, parties for stale cheques and other payable.	0.00	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 32 TO THE FS-CL-OTHER CURRENT LIABILITIES

( Amount in ₹ )

	As at	31.03.2020	31.03.2019
001	<b>OTHER CURRENT LIABILITIES</b>	<b>0.00</b>	<b>0.00</b>
002	Advances from customers and others	10,105,072.69	17,534,344.61
003	Deferred discount on forward exchange contact	0.00	0.00
004	Tax deducted at source and other statutory dues	87,940,416.32	49,206,348.58
005	Others	0.00	0.00
006	<b>Total</b>	<b>98,045,489.01</b>	<b>66,740,693.19</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 33 TO THE FS-CL-PROVISIONS**
**( Amount in ₹ )**

As at	31.03.2020	31.03.2019
001 <b>SHORT TERM PROVISIONS</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Provision for Employee Benefits</b>	<b>0.00</b>	<b>0.00</b>
003 Opening balance	0.00	0.00
004 Additions/ (adjustments) during the year	0.00	0.00
005 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
028 <b>Provisions for Obligations Incidental to Land Acquisition</b>	<b>0.00</b>	<b>0.00</b>
029 Opening balance	0.00	0.00
030 Additions during the year	0.00	0.00
031 Amounts paid during the year	0.00	0.00
032 Amounts reversed during the year	0.00	0.00
033 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
035 <b>Provision for Tariff Adjustment</b>	<b>0.00</b>	<b>0.00</b>
036 Opening balance	0.00	0.00
037 Additions during the year	0.00	0.00
038 Amounts adjusted during the year	0.00	0.00
039 Amounts reversed during the year	0.00	0.00
040 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
042 <b>Provision for shortage in Fixed Assets Pending Investigation &amp; Others</b>	<b>0.00</b>	<b>0.00</b>
043 Opening balance	196,021.10	196,021.10
044 Additions during the year	437,836.89	0.00
045 Amounts adjusted during the year	0.00	0.00
046 Amounts reversed during the year	0.00	0.00
047 <b>Closing Balance</b>	<b>633,857.99</b>	<b>196,021.10</b>
048 <b>Provision for Arbitration</b>	<b>0.00</b>	<b>0.00</b>
049 Opening balance	7,428,608.00	7,010,256.00
050 Additions during the year	418,352.00	418,352.00
051 Amounts used during the year	0.00	0.00
052 Amounts reversed during the year	0.00	0.00
053 <b>Closing Balance</b>	<b>7,846,960.00</b>	<b>7,428,608.00</b>
054 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
055 Opening balance	0.00	0.00
056 Additions during the year	0.00	0.00
057 Amounts used during the year	0.00	0.00
058 Amounts reversed during the year	0.00	0.00
059 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
102	0.00	0.00
103 <b>Total</b>	<b>8,480,817.99</b>	<b>7,624,629.10</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 34 TO THE FS-CL-CURRENT TAX LIABILITIES (NET)

( Amount in ₹ )

As at	31.03.2020	31.03.2019
001 <b>Current liabilities - current tax liabilities (net)</b>	<b>0.00</b>	<b>0.00</b>
002 Opening balance	0.00	0.00
003 Additions during the year	0.00	0.00
004 Amounts adjusted during the year	0.00	0.00
005 Less: Set off against taxes paid	0.00	0.00
006 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>





RIHAND SUPER THERMAL POWER STATION

NOTE NO. 35 TO THE FS--DEFERRED REVENUE

( Amount in ₹ )

As at		31.03.2020	31.03.2019
001	<b>Deferred Revenue</b>	<b>0.00</b>	<b>0.00</b>
002	On account of advance against depreciation	0.00	0.00
003	On account of income from foreign currency fluctuation	1,990,729,000.00	1,250,048,000.00
004	Government grants	0.00	0.00
005		0.00	0.00
006	<b>TOTAL</b>	<b>1,990,729,000.00</b>	<b>1,250,048,000.00</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 36 TO THE FS--REGULATORY DEFERRAL ACCOUNT CREDIT BALANCES

( Amount in ₹ )

As at	31.03.2020	31.03.2019
001 Regulatory deferral account credit balances	0.00	0.00
002 Exchange Differences	0.00	0.00
003	0.00	0.00
004 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 37 TO THE FS--REVENUE FROM OPERATIONS**
**( Amount in ₹ )**

	For the Year ended	31.03.2020	31.03.2019
001	<b>REVENUE FROM OPERATIONS</b>	<b>0.00</b>	<b>0.00</b>
002	<b>Sales</b>	<b>0.00</b>	<b>0.00</b>
003	Energy Sales (including Electricity Duty)	50,784,410,674.00	50,311,539,034.00
004	Less : Advance against depreciation deferred (net)	0.00	0.00
005	Add: Revenue recognized out of advance against depreciation	0.00	8,642,052.81
006	Add : Exchange fluctuation receivable from customers	-78,857,000.00	0.00
007	Sale of energy through trading	0.00	0.00
008	Commission (NVVN)	0.00	0.00
009	<b>Sub total</b>	<b>50,705,553,674.00</b>	<b>50,320,181,086.81</b>
010	Less: Rebate to customers	215,032,456.12	311,015,253.92
011	<b>Energy Sales (Total)</b>	<b>50,490,521,217.88</b>	<b>50,009,165,832.89</b>
012	Consultancy, project management and supervision fees	41,420.00	1,790,976.00
013	Lease rentals on assets on Operating lease	0.00	0.00
014	Sale of Captive Coal	0.00	0.00
015	Intra Company Elimination	0.00	0.00
017	<b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
018	<b>Total - Sales</b>	<b>50,490,562,637.88</b>	<b>50,010,956,808.89</b>
019	Sale of fly ash/ash products	9,410,400.00	0.00
020	Less: Transferred to fly ash utilisation reserve fund	-9,410,400.00	0.00
021	<b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
022	<b>Other Operating Income</b>	<b>0.00</b>	<b>0.00</b>
023	Interest from customers	44,084,590.00	7,596,298.00
024	Energy Internally Consumed *	30,711,686.00	29,705,242.00
025	Interest income on Assets under finance lease	0.00	0.00
026	Recognized from deferred revenue - government grant	0.00	0.00
027	Provision written back- Tariff Adjustment	0.00	0.00
028	Income form Trading of ESCerts	0.00	0.00
029	Income from E-Mobility Business	0.00	0.00
030		0.00	0.00
031	<b>Total</b>	<b>50,565,358,913.88</b>	<b>50,048,258,348.89</b>
040	* Valued at variable cost of generation and corresponding amount included in power charges ( Note No. 42)	0.00	0.00
041	Excise duty on sale of flyash,cenospere & ash products	0.00	0.00
042	Energy sales of principal nature (NVVN)	0.00	0.00
043	Energy sales of agency nature (NVVN)	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 38 TO THE FS--OTHER INCOME**
**( Amount in ₹ )**

	For the Year ended	31.03.2020	31.03.2019
001	<b>OTHER INCOME</b>	<b>0.00</b>	<b>0.00</b>
002	<b>Interest from</b>	<b>0.00</b>	<b>0.00</b>
004	<b>Financial assets at amortised cost</b>	<b>0.00</b>	<b>0.00</b>
005	Government Securities (8.5% Tax Free Bonds issued by the State Governments)	0.00	0.00
006	Other Bonds	0.00	0.00
007		0.00	0.00
008	Interest from Government of India Securities-Non-Trade	0.00	0.00
009	Less: Amortiation of premium	0.00	0.00
010	<b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
011	Interest from others	0.00	0.00
012	Loan to State Government in settlement of dues from customers	0.00	0.00
013	Loan to Subsidiary Companies	0.00	0.00
014	Loan to Employees	17,127,436.11	17,160,115.97
015	Deposit with banks	0.00	0.00
016	Foreign Banks	0.00	0.00
017	Interest from Contractors	2,488,597.00	2,162,933.00
018	Interest from Income Tax Refunds	0.00	0.00
019	Less : Refundable to Customers	0.00	0.00
020	<b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
021	Deposits with banks-flyash utilisation reserve fund	0.00	0.00
022	Less: transferred to flyash utilisation reserve fund	0.00	0.00
023	<b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
024	Deposits with banks- DDUGJY funds	0.00	0.00
025	Interest from Contractors- DDUGJY funds	0.00	0.00
026	Transfer to DDUGJY-Advance from customers	0.00	0.00
027	Sub-total	0.00	0.00
030	Others	0.00	1,445.00
031		0.00	0.00
032	<b>Dividend from</b>	<b>0.00</b>	<b>0.00</b>
033	<b>Longterm investments in</b>	<b>0.00</b>	<b>0.00</b>
034	Subsidiaries	0.00	0.00
035	Joint Ventures	0.00	0.00
036	Equity Instruments	0.00	0.00
037	<b>Current Investments in</b>	<b>0.00</b>	<b>0.00</b>
038	Mutual Funds measured at fairvalue through profit or loss	0.00	0.00
039	Current investments in mutual funds-flyash utilisation reserve fund	0.00	0.00
040	Less: transferred to flyash utilisation reserve fund	0.00	0.00
041	Lease Rent # Ash Brick Plant	0.00	0.00
042	Less: transferred to flyash utilisation reserve fund	0.00	0.00
043	Other non-operating income	0.00	0.00
044	Profit on disposal of PPE	90,379.35	472,425.34
045	Profit on redemption of GOI securities	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 38 TO THE FS--OTHER INCOME**
**( Amount in ₹ )**

	For the Year ended	31.03.2020	31.03.2019
046	Net gain on sale of investments	0.00	0.00
047	Surcharge received from customers	2,550,077,957.00	1,749,523,951.00
048	Hire charges for equipment	67,561.00	777,334.00
049	Gain on option contract / Discount on F.ExchContract	0.00	0.00
050	Provision written back-others	6,148,851.93	6,924,813.36
051	Fair value gains/(losses) on investments in mutual funds at fair value through profit or loss	0.00	0.00
052	Interest from Solar payment security account	0.00	0.00
053	Less : Transferred to SPSA fund	0.00	0.00
054	Interest on "Retention on A/c BG encashment (Solar)"	0.00	0.00
055	Less : Transferred to "Retention on A/c BG encashment (Solar)"	0.00	0.00
056	Miscellaneous Income	459,475,589.49	197,612,166.20
057	<b>Total</b>	<b>3,035,476,371.88</b>	<b>1,974,635,183.87</b>
058	Less:Transferred to Development of Coal Mines- Note 43A	0.00	0.00
059	Less:Transferred to Expenditure during Construction period (net)- Note 43	0.00	0.00
061		0.00	0.00
062	<b>Total</b>	<b>3,035,476,371.88</b>	<b>1,974,635,183.87</b>
063		0.00	0.00
064	<b>Details of Miscellaneous Income</b>	<b>0.00</b>	<b>0.00</b>
065	Vehicle Hire Charges.	110,000.00	112,080.00
066	Sale of by products & residuals	0.00	0.00
067	Township recoveries(exl. Hospital Recoveries).	22,749,254.28	27,025,043.43
068	Depreciation written back	0.00	0.00
069	Sale of Scrap.	39,568,148.02	67,929,628.85
070	Receipt under loss of profit policy.	0.00	0.00
071	Receipts under MBD/Fire Policy.	315,144,938.00	28,077,160.00
072	Management development programme.	0.00	0.00
073	Management Fee - Misc (NVVN)	0.00	0.00
074	Others	81,903,249.19	74,468,253.92
075		0.00	0.00
076	<b>Total (Miscellaneous Income)</b>	<b>459,475,589.49</b>	<b>197,612,166.20</b>
077		0.00	0.00
078	<b>Details of Provision written back others</b>	<b>0.00</b>	<b>0.00</b>
079	Doubtful debts	0.00	0.00
080	Doubtful Loans, Advances and Claims	42,405.00	0.00
081	Doubtful Construction Advances	0.00	0.00
082	Shortage in Construction Stores	3,559,179.34	2,727,742.97
083	Shortage in Stores	2,545,110.36	4,180,825.39
084	Obsolescence in Stores	2,157.23	16,245.00
085	Unserviceable capital works	0.00	0.00
086	Other Obligation	0.00	0.00
087	Shortage in Fixed Assets	0.00	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 38 TO THE FS--OTHER INCOME

( Amount in ₹ )

	31.03.2020	31.03.2019
088 Diminution in value of Investment	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION****NOTE NO. 38A TO THE FS--FUEL COST****( Amount in ₹ )**

For the Year ended		31.03.2020	31.03.2019
001	<b>FUEL COST</b>	<b>0.00</b>	<b>0.00</b>
002	Coal	0.00	0.00
003	Captive	0.00	0.00
004	Other than captive	30,178,971,766.14	28,421,008,281.56
005	Gas	0.00	0.00
006	Naptha	0.00	0.00
007	Oil	239,573,779.54	265,768,463.85
008	<b>Total</b>	<b>30,418,545,545.68</b>	<b>28,686,776,745.41</b>
009		0.00	0.00
010		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 39 TO THE FS--EMPLOYEE BENEFITS EXPENSE**
**( Amount in ₹ )**

	31.03.2020	31.03.2019
For the Year ended		
001 <b>EMPLOYEE BENEFITS EXPENSE</b>	<b>0.00</b>	<b>0.00</b>
002 Salaries and wages	1,650,643,540.59	1,753,166,094.90
003 Contribution to provident and other funds	173,843,153.43	255,676,601.51
004 Unwinding of deferred payroll expense	11,718,520.61	12,023,691.77
005 Staff welfare expenses	177,064,793.44	204,638,071.02
006 Less : Expenses transferred to Consultancy group	0.00	0.00
007	0.00	0.00
008 <b>Sub Total</b>	<b>2,013,270,008.07</b>	<b>2,225,504,459.20</b>
009 Less: Employee benefits expense inventorised	152,386,279.55	178,939,469.59
010 Less: Transferred/Allocated to development of coal mines	0.00	0.00
011	0.00	0.00
012 Less: Transferred to fly ash utilisation reserve fund	0.00	4,821,064.10
013 Less: Transferred to CSR Expenses	0.00	0.00
014 Reimbursements for employees on secondment	1,632.87	0.00
015 Less: Transferred to expenditure during construction period (net)- Note 43	6,752,468.23	0.00
016 <b>TOTAL</b>	<b>1,854,129,627.42</b>	<b>2,041,743,925.51</b>
017 <b>Managerial Remuneration paid/ payable to Directors included above (except for Directors fee which is included in Note 42)</b>	<b>0.00</b>	<b>0.00</b>
018 Salaries and wages	0.00	0.00
019 Contribution to provident and other funds	0.00	0.00
020 Staff welfare expenses	0.00	0.00
021 Directors fee	0.00	0.00
022	0.00	0.00
023	0.00	0.00



**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 40 TO THE FS--FINANCE COSTS**
**( Amount in ₹ )**

	For the Year ended	31.03.2020	31.03.2019
001	<b>FINANCE COSTS</b>	<b>0.00</b>	<b>0.00</b>
002	Finance charges on financial liabilities measured at amortised cost	0.00	0.00
003	Bonds	516,674,205.82	510,151,783.67
004	Government of India Loans	0.00	0.00
005	Foreign currency term loans	34,538,576.20	48,912,722.87
006	Rupee term loans	940,580,407.00	1,089,713,771.00
007	Public deposits	0.00	0.00
008	Foreign currency bonds/notes	625,074,179.63	614,796,657.21
009	Cash Credit	0.00	0.00
010	Unwinding of discount on account of vendor liabilities	6,650,468.54	4,434,514.06
011	Commercial Papers	0.00	0.00
012	Others	0.00	4,424.00
013	<b>Sub Total</b>	<b>2,123,517,837.19</b>	<b>2,268,013,872.81</b>
014	<b>Other Borrowing Costs</b>	<b>0.00</b>	<b>0.00</b>
015	Bonds servicing & public deposit exp.	768,686.21	1,084,786.97
016	Guarantee fee	0.00	0.00
017	Management fee	0.00	0.00
018	Committ charges/exposure premium	0.00	0.00
019	Bond issue expenses	0.00	0.00
020	Legal exp on foreign currency loans	0.00	0.00
021	Foreign currency bonds/notes exp.	0.00	0.00
022	Up-front fee	0.00	0.00
023	Insurance premium on foreign currency loans	0.00	0.00
024		0.00	0.00
025	Others	0.00	0.00
026	<b>Sub Total (Other Borrowing cost)</b>	<b>768,686.21</b>	<b>1,084,786.97</b>
027		0.00	0.00
028	<b>Exchange differences regarded as an adjustment to interest costs</b>	<b>13,092,857.00</b>	<b>0.00</b>
029	<b>Sub Total</b>	<b>2,137,379,380.40</b>	<b>2,269,098,659.78</b>
030	Less: Transferred to Expenditure during construction period (net) - Note 43	6,944,586.19	36,392,300.06
031	Less: Transferred to development of coal mines- Note 43A	0.00	0.00
032		0.00	0.00
033	<b>Total</b>	<b>2,130,434,794.21</b>	<b>2,232,706,359.72</b>

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 41 TO THE FS--DEPRECIATION, AMORTIZATION AND IMPAIRMENT EXPENSE**

( Amount in ₹ )

For the Year ended		31.03.2020	31.03.2019
001	<b>Depreciation, amortization and impairment expense</b>	<b>0.00</b>	<b>0.00</b>
002	On property, plant and equipment- Note 2	4,377,618,570.90	4,550,839,731.18
003	On intangible assets- Note 4	115,063.13	122,696.49
004	Sub-total	4,377,733,634.03	4,550,962,427.67
005	Less:	0.00	0.00
006	Inventorised	345,650,636.39	341,291,813.12
007	Transferred to Expenditure during Construction Period (net)- Note 43	0.00	0.00
008	Transferred/Allocated to development of coal mines	0.00	0.00
009	Adjustment with deferred revenue from deferred foreign currency fluctuation	117,252,000.00	102,349,000.00
010	<b>Total</b>	<b>3,914,830,997.64</b>	<b>4,107,321,614.55</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 42 TO THE FS--OTHER EXPENSE**
**( Amount in ₹ )**

	For the Year ended	31.03.2020	31.03.2019
001 <b>OTHER EXPENSES</b>		<b>0.00</b>	<b>0.00</b>
002 Power charges		30,711,686.00	29,705,242.00
003 Less: Recovered from contractors & employees		10,254,267.44	13,057,737.54
004 <b>Sub-Total(Power Charges)</b>		<b>20,457,418.56</b>	<b>16,647,504.46</b>
005 Water charges		139,871,221.00	130,291,077.00
006 Stores consumed		25,535,090.39	27,347,483.19
007 Rent		0.00	0.00
008 Less:Recoveries		0.00	0.00
009 <b>Sub-Total (Rent)</b>		<b>0.00</b>	<b>0.00</b>
010 Cost of extraction of Captive coal		0.00	0.00
011 <b>Repairs &amp; maintenance</b>		<b>0.00</b>	<b>0.00</b>
012 Buildings		155,238,832.21	141,546,169.08
013 Plant & machinery		0.00	0.00
014 Power stations		1,971,478,736.27	1,693,769,413.12
015 Construction equipment		0.00	0.00
016 Others		83,615,119.59	73,925,752.72
017 <b>Sub-total (Repairs &amp; maintenance)</b>		<b>2,210,332,688.07</b>	<b>1,909,241,334.92</b>
019 Load Dispatch Center Charges		31,162,794.00	22,270,407.00
021 Insurance		89,337,957.77	78,689,952.40
022 Interest to beneficiaries		0.00	0.00
023 Rates and taxes		15,456,955.21	16,070,520.39
024 Water cess & environment protection cess		0.00	0.00
025 Training & recruitment expenses		3,118,705.45	2,828,092.52
026 Less: Receipts		0.00	0.00
027 <b>Sub-total (Training and recruitment expenses)</b>		<b>3,118,705.45</b>	<b>2,828,092.52</b>
028 Communication expenses		22,862,791.41	23,125,419.90
029 Inland Travel		82,463,633.67	86,447,018.40
030 Foreign Travel		120,940.46	818,545.73
031 Tender expenses		0.00	2,527,824.00
032 Less: Receipt from sale of tenders		0.00	262,122.00
033 <b>Sub-total (Tender expenses)</b>		<b>0.00</b>	<b>2,265,702.00</b>
034 Payment to auditors		0.00	0.00
035 Audit fee		0.00	0.00
036 Tax audit fee		0.00	0.00
037 Other services		0.00	0.00
038 Reimbursement of expenses		0.00	119,556.00
039 <b>Sub-total (Payment to Auditors)</b>		<b>0.00</b>	<b>119,556.00</b>
040 Advertisement and publicity		1,212,507.00	1,883,491.00
041 Electricity duty		0.00	0.00
042 Security expenses		373,349,148.40	358,302,696.35
043 Entertainment expenses		28,763,376.25	24,227,675.39
044 Expenses for guest house		17,150,884.00	15,958,948.48
045 Less:Recoveries		0.00	0.00
046 <b>Sub-Total (Guest house expenses)</b>		<b>17,150,884.00</b>	<b>15,958,948.48</b>
047 Education expenses		55,250,389.00	44,681,502.00
049 Donations		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 42 TO THE FS--OTHER EXPENSE**
**( Amount in ₹ )**

	For the Year ended	31.03.2020	31.03.2019
050	Ash utilisation & marketing expenses	125,414,779.59	47,138,082.29
051	Directors sitting fee	0.00	0.00
053	Professional charges and consultancy fees	3,982,140.37	4,095,432.60
054	Legal expenses	15,785,425.50	15,169,675.00
055	EDP hire and other charges	2,894,018.79	4,809,590.85
056	Printing and stationery	3,525,595.39	4,990,438.36
057	Oil & gas exploration expenses	0.00	0.00
059	Hiring of vehicles	31,158,224.74	35,838,628.63
061	Reimbursement of L.C.charges on sales realisation	0.00	0.00
062		0.00	0.00
063	Cost of Hedging	0.00	0.00
064	Derivatives MTM loss/gain (Net)	0.00	0.00
065	Net loss/(gain) in foreign currency transactions & translations	42,094,396.89	-13,655,079.32
066	Transport Vehicle running expenses	912,881.50	1,163,665.91
067	Horticulture Expenses	59,606,958.76	46,914,308.67
068	Hire charges- helicopter/aircraft.	0.00	2,275,100.00
069	Hire charges of construction equipment	0.00	0.00
070	Demurrage Charges	0.00	0.00
072		0.00	0.00
073	Miscellaneous expenses	24,023,844.61	23,997,915.54
074	Loss on disposal/write-off of PPE	16,538,459.84	56,357,424.12
075	<b>Sub-Total</b>	<b>3,442,383,226.62</b>	<b>2,990,312,109.78</b>
076	Less: Other expenses inventorised	507,661,972.36	468,542,259.64
077	Less: Transferred/Allocated to development of coal mines	0.00	0.00
078	Less: Transferred to fly ash utilisation reserve fund	125,414,779.59	60,527,647.25
079	Less: Hedging cost Net recoverable/payable from/to beneficiaries	0.00	0.00
080		0.00	0.00
081	Less: Transferred to CSR Expenses	47,896,790.00	37,667,688.00
082	Less: Transferred to Expenditure during Construction period(net)-Note 43	805,829.61	0.00
083	<b>Net (Generation, Administration and Other expenses)</b>	<b>2,760,603,855.06</b>	<b>2,423,574,514.89</b>
084	Corporate Social Responsibility Expenses	102,505,554.21	126,786,061.86
085	Less: Grants-in-aid	0.00	0.00
086	<b>Sub-total (Corporate Social Responsibility Expenses)</b>	<b>102,505,554.21</b>	<b>126,786,061.86</b>
087	<b>Provisions</b>	<b>0.00</b>	<b>0.00</b>
088	Doubtful Debts	0.00	0.00
089	Doubtful loans, advances and claims	0.00	0.00
090	Doubtful Construction Advances	0.00	0.00
091	Shortage in stores	467,794.99	3,437,088.00
092	Obsolete/Diminution in the value of surplus stores	467,405.55	3,494,463.00
093	Shortage in construction stores	4,086,971.23	3,584,591.46
094	Diminution in value of long term investments	0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 42 TO THE FS--OTHER EXPENSE**
**( Amount in ₹ )**

	For the Year ended 31.03.2020	31.03.2019
095 Shortage in Fixed assets	437,836.89	0.00
096 Unfinished minimum work progress from oil & gas exploration	0.00	0.00
097 Unserviceable capital works	0.00	0.00
098 Tariff Adjustment	31,997,000.00	0.00
099 Others :	0.00	0.00
100 (i) Provision for arbitration cases	418,352.00	418,352.00
101 (ii) Other provisions	0.00	0.00
102 <b>Total (Provisions)</b>	<b>37,875,360.66</b>	<b>10,934,494.46</b>
103	0.00	0.00
104 <b>Total</b>	<b>2,900,984,769.93</b>	<b>2,561,295,071.21</b>
105	0.00	0.00
106 <b>Breakup of miscellaneous expenses.</b>	<b>0.00</b>	<b>0.00</b>
109 Hire charges of office equipment	71,228.00	295,857.77
111 Operating expenses of construction equipment	0.00	0.00
112 Operating expenses of D.G. sets	0.00	0.00
113 Furnishing expenses	2,160,679.12	222,088.01
114 Subscription to trade and other associations.	0.00	0.00
116 Visa and entry permit charges	0.00	0.00
117 Tree plantation exp.-NTPC Land	0.00	0.00
118 Research & development expenses .	0.00	0.00
119 Less : Grants received for Research & development expenses.	0.00	0.00
120 Sub-total (Research & development expenses)	0.00	0.00
121 Bank charges	244,632.08	493,075.18
122 Business Development Expenditure	0.00	0.00
123 Surcharge (NVVN)	0.00	0.00
124 Power Trading Expenses	1,343,810.00	2,913,317.00
125 Brokerage & commission	998,531.00	2,205,176.00
129 Books and periodicals	214,497.55	182,052.00
130 Claims/advances written off	0.00	0.00
131 Stores written off	0.00	0.00
132 Survey & Investigation expenses written off	0.00	0.00
133 Others	18,990,466.86	17,686,349.58
134 <b>Total</b>	<b>24,023,844.61</b>	<b>23,997,915.54</b>
135	0.00	0.00
136	0.00	0.00
137	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 43 TO THE FS--EXPENDITURE DURING CONSTRUCTION PERIOD (NET)**
**( Amount in ₹ )**

For the Year ended		31.03.2020	31.03.2019
001	<b>EXPENDITURE DURING CONSTRUCTION PERIOD (NET)</b>	<b>0.00</b>	<b>0.00</b>
002	A. Employee benefits expense	0.00	0.00
003	Salaries and wages	5,979,041.61	0.00
004	Contribution to provident and other funds	534,992.53	0.00
005	Unwinding of deffered payroll expenses	-3,973.41	0.00
006	Staff welfare expenses	242,407.50	0.00
007	<b>Total (A)</b>	<b>6,752,468.23</b>	<b>0.00</b>
008	<b>B. Finance Costs</b>	<b>0.00</b>	<b>0.00</b>
009	Finance charges on financial liabilities measured at amortised cost	0.00	0.00
010	Bonds	0.00	8,138,448.00
011	Foreign currency term loans	0.00	428,956.00
012	Rupee term loans	3,403,287.00	16,238,008.00
013	Foreign currency bonds/notes	0.00	10,617,123.00
014	Unwinding of discount on account of vendor liabilities	456,585.19	969,765.06
015	Others	0.00	0.00
016		0.00	0.00
017	Other Borrowings Costs	0.00	0.00
018	Guarantee Commission	0.00	0.00
019	Management Fees/Arrangers Fees	0.00	0.00
020	Commitment charges/Exposure Premium	0.00	0.00
021	Legal Expenses on foreign currency loans	0.00	0.00
022	Foreign currency bonds/notes expenses	0.00	0.00
023	Foreign Credit Insurance Premium	0.00	0.00
024	Upfront Fee	0.00	0.00
025	Exchange Differences	2,651,489.00	0.00
026	Others	0.00	0.00
027	Exchange differences regarded as adjustment to interest cost	433,225.00	0.00
028	<b>Total (B)</b>	<b>6,944,586.19</b>	<b>36,392,300.06</b>
029		0.00	0.00
030	C. Depreciation and amortisation	0.00	0.00
031	<b>D. Generation , administration and other expenses</b>	<b>0.00</b>	<b>0.00</b>
032	Power charges	239,312.00	0.00
033	Less: Recovered from contractors & employees	0.00	0.00
034	<b>Sub-total(Net power charges)</b>	<b>239,312.00</b>	<b>0.00</b>
035	Water charges	0.00	0.00
036	Rent	0.00	0.00
037	Repairs & maintenance	0.00	0.00
038	Buildings	0.00	-10,846,102.28
039	Construction equipment	0.00	0.00
040	Others	0.00	10,846,102.28
041		0.00	0.00
042	Insurance	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 43 TO THE FS--EXPENDITURE DURING CONSTRUCTION PERIOD (NET)**
**( Amount in ₹ )**

	For the Year ended	31.03.2020	31.03.2019
043	Rates and taxes	0.00	0.00
044	Communication expenses	46,289.00	0.00
045	Travelling expenses	489,962.71	0.00
046	Tender expenses	0.00	0.00
047	Less: Income from sale of tenders	0.00	0.00
048	<b>Sub-total (Net tender expenses)</b>	<b>0.00</b>	<b>0.00</b>
049	Advertisement and publicity	0.00	0.00
050	Security expenses	0.00	0.00
051	Entertainment expenses	29,187.94	0.00
052	Guest house expenses	0.00	0.00
053	Less: Receipt from guest house	0.00	0.00
054	<b>Sub-total (Net Guest House Expenses)</b>	<b>0.00</b>	<b>0.00</b>
055	Education expenses	0.00	0.00
056	Brokerage & Commission	0.00	0.00
057	Books and periodicals	0.00	0.00
058	Community development expenses	0.00	0.00
059	Professional charges and consultancy fee	0.00	0.00
060	Legal expenses	0.00	0.00
061	EDP Hire and other charges	0.00	0.00
062	Printing and stationery	0.00	0.00
063	Miscellaneous expenses	1,077.96	0.00
064	<b>Total (D)</b>	<b>805,829.61</b>	<b>0.00</b>
065	<b>Total (A+B+C+D)</b>	<b>14,502,884.03</b>	<b>36,392,300.06</b>
066	<b>E. Less: Other Income</b>	<b>0.00</b>	<b>0.00</b>
067	Interest from	0.00	0.00
068	Indian banks	0.00	0.00
069	Foreign banks	0.00	0.00
070	Others	0.00	0.00
071	Contractors	0.00	0.00
072	Hire charges	0.00	0.00
073	Sale of scrap	0.00	0.00
074	Exchange Differences	0.00	0.00
075	Miscellaneous income	0.00	0.00
076	<b>TOTAL (E)</b>	<b>0.00</b>	<b>0.00</b>
077	F. Net actuarial gain/loss OCI	0.00	0.00
078		0.00	0.00
079	<b>GRAND TOTAL (A+B+C+D-E+F)</b>	<b>14,502,884.03</b>	<b>36,392,300.06</b>
080		0.00	0.00
081	<b>* Balance carried to Capital Work-in-progress - (Note 3)</b>	<b>14,502,884.03</b>	<b>36,392,300.06</b>

**RIHAND SUPER THERMAL POWER STATION**  
**BALANCE SHEET**

( Amount in ₹ )

As at	Note	31.03.2021	31.03.2020
001 <b>ASSETS</b>		0.00	0.00
002		0.00	0.00
003 <b>Non-Current Assets</b>		0.00	0.00
004 Property, plant and equipment	2	53,619,450,765.67	58,728,501,510.10
005 Capital-Work-in-Progress	3	3,031,095,010.70	823,654,175.83
006 Intangible Assets	4	15,262.40	19,580.18
007 Intangible Assets under Development	5	0.00	0.00
008 <b>Financial Assets</b>		0.00	0.00
009 i) Investments in Subsidiaries and Joint Ventures	6	0.00	0.00
010 ii) Investments	7	0.00	0.00
011 iii) Trade receivables	8	0.00	0.00
012 iv) Loans	9	105,755,516.61	97,279,112.83
013 v) Other financial assets	10	0.00	0.00
014 Other non-current assets	11	2,224,648,606.02	2,510,570,989.29
015 <b>Total non-current assets</b>		<b>58,980,965,163.40</b>	<b>60,160,025,348.23</b>
016		0.00	0.00
017 <b>Current Assets</b>		0.00	0.00
018 Inventories	12	4,599,607,206.27	3,934,708,096.39
019 <b>Financial assets</b>		0.00	0.00
020 i) Investments	13	0.00	0.00
021 ii) Trade receivables	14	15,484,355.69	0.00
022 iii) Cash and cash equivalents	15	390,123.40	435,387.81
023 iv) Bank balances other than cash and cash equivalents	16	0.00	0.00
024 v) Loans	17	68,419,589.65	70,942,728.42
025 vi) Other financial assets	18	165,634,958.60	688,178,780.59
026 Current Tax Assets (net)		0.00	0.00
027		0.00	0.00
028 Other Current Assets	19	469,505,591.13	641,228,747.85
029		0.00	0.00
030 <b>Total Current Assets</b>		<b>5,319,021,824.74</b>	<b>5,335,493,741.06</b>
031 Regulatory deferral account debit balances	20	871,086,456.17	366,710,508.19
032 <b>TOTAL ASSETS</b>		<b>64,971,073,444.31</b>	<b>65,862,229,597.48</b>
034 <b>EQUITY AND LIABILITIES</b>		0.00	0.00
035 <b>Equity</b>		0.00	0.00
036 Equity Share capital	21	0.00	0.00
037 Other equity	22	167,459,875,592.17	156,372,525,419.96
040 <b>Total equity</b>		<b>167,459,875,592.17</b>	<b>156,372,525,419.96</b>
041		0.00	0.00
042 <b>Liabilities</b>		0.00	0.00
043 <b>Non-Current Liabilities</b>		0.00	0.00
044 <b>Financial liabilities</b>		0.00	0.00
045 i) Borrowings	23	0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION**

**BALANCE SHEET**

( Amount in ₹ )

As at	Note	31.03.2021	31.03.2020
046	ii) Trade payables	0.00	0.00
047	- Total outstanding dues of micro and small enterprises	18,336,269.21	15,622,396.62
048	- Total outstanding dues of creditors other than micro and small enterprises	6,373,476.89	5,712,598.82
049	iii) Other financial liabilities	661,741,354.25	34,379,901.73
050	Provisions	0.00	0.00
051	Deferred Tax Liabilities (net)	0.00	0.00
052	Other non-current liabilities	0.00	0.00
053		0.00	0.00
054	<b>Total non-current liabilities</b>	<b>704,451,100.35</b>	<b>55,714,897.17</b>
055		0.00	0.00
056	<b>Current Liabilities</b>	0.00	0.00
057	<b>Financial liabilities</b>	0.00	0.00
058	i) Borrowings	0.00	0.00
059	ii) Trade Payables	0.00	0.00
060	- Total outstanding dues of micro and small enterprises	227,641,821.80	347,533,123.95
061	- Total outstanding dues of creditors other than micro and small enterprises	1,688,677,134.68	1,929,276,543.35
062	iii) Other financial liabilities	2,089,371,382.23	2,174,040,601.24
063	Other current liabilities	95,628,402.86	98,045,489.01
064	Provisions	8,265,312.00	8,480,817.99
065	Current tax liabilities (net)	0.00	0.00
066		0.00	0.00
067	<b>Sub Total</b>	<b>4,109,584,053.57</b>	<b>4,557,376,575.54</b>
068		0.00	0.00
069	Deferred Revenue	1,550,313,000.00	1,990,729,000.00
070	Regulatory deferral account credit balances	0.00	0.00
071	Inter Unit Accounts	-108,853,150,301.78	-97,114,116,295.19
072		0.00	0.00
073	<b>TOTAL EQUITY AND LIABILITIES</b>	<b>64,971,073,444.31</b>	<b>65,862,229,597.48</b>
074	Significant Accounting Policies as per Note 1	0.00	0.00
075		0.00	0.00
076	The accompanying notes 1 to 44 form an integral part of these financial statements.	0.00	0.00
077		0.00	0.00
078		0.00	0.00

GOTAM  
KUMAR  
BAGARIYA

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BAGARIYA  
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( Auditor Initial & Stamp )

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Digitally Signed:

Signed by: Vinodra Malik,  
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31.03.2021-NTPC-Rihand  
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Date: 20-Apr-2021 21:31:35

( Head of Finance )

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29/04/2021

( Head of Unit )

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**RIHAND SUPER THERMAL POWER STATION**  
**STATEMENT OF PROFIT AND LOSS**

( Amount in ₹ )

	For the Year ended	Note	31.03.2021	31.03.2020
001	Revenue		0.00	0.00
002	Revenue from operations	37	51,486,298,435.08	52,545,076,725.88
003	Other income	38	2,544,908,615.45	3,035,476,371.88
005	<b>Total Revenue</b>		<b>54,011,207,050.53</b>	<b>55,580,553,097.76</b>
007	Expenses		0.00	0.00
008	Fuel including cost of captive coal	38A	31,224,710,698.23	30,416,545,545.88
009	Employee benefits expense	39	1,745,537,752.39	1,854,129,627.42
010	Electricity purchased for trading		0.00	0.00
011	Finance costs	40	1,929,476,341.86	2,130,434,794.21
012	Depreciation and amortization expenses	41	4,070,986,728.27	3,914,830,997.64
013			0.00	0.00
014	Other expenses	42	3,501,403,380.71	2,900,984,769.93
015	CC expenses charge to revenue		723,835,735.02	865,358,462.00
016	Less: Unit expenses transferred to CC		0.00	0.00
017	<b>Total expenses</b>		<b>43,195,950,636.48</b>	<b>42,084,284,196.88</b>
020	<b>Profit before exceptional items &amp; tax</b>		<b>10,815,256,414.05</b>	<b>13,496,268,900.88</b>
021	Exceptional items		0.00	0.00
024	<b>Profit before tax</b>		<b>10,815,256,414.05</b>	<b>13,496,268,900.88</b>
027	Tax expense:		0.00	0.00
028	Current tax		0.00	0.00
029	Deferred tax		0.00	0.00
030			0.00	0.00
031	<b>Total Tax expense</b>		<b>0.00</b>	<b>0.00</b>
032	<b>Profit for the period before regulatory deferral account balances</b>		<b>10,815,256,414.05</b>	<b>13,496,268,900.88</b>
033	<b>Movement in regulatory deferral account balances</b>		<b>0.00</b>	<b>0.00</b>
034	Regulatory deferred account - deferred		0.00	0.00
035	Others		304,375,947.98	16,012,648.15
036	Tax impact on Regulatory deferral account balances		0.00	0.00
037	<b>Movement in Regulatory deferral account balances (Net of Tax)</b>		<b>304,375,947.98</b>	<b>16,012,648.15</b>
038	<b>Profit for the period/ year</b>		<b>11,119,632,362.03</b>	<b>13,512,281,549.03</b>
039	Other comprehensive income		0.00	0.00
040	<b>(A) Items that will not be reclassified to profit or loss</b>		<b>0.00</b>	<b>0.00</b>
041	- Net gains/(losses) on fair value of equity instruments through other comprehensive income		0.00	0.00
042	Income tax on above that will not be reclassified to profit or loss		0.00	0.00
043	- Net actuarial gains/(losses) on defined benefit plans		-24,061,329.38	-53,349,231.17
044	Income tax on above that will not be reclassified to profit or loss		0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION**  
**STATEMENT OF PROFIT AND LOSS**

( Amount in ₹ )

	For the Year ended	Note	31.03.2021	31.03.2020
048			0.00	0.00
049	Other comprehensive income for the year, net of income tax		-24,061,329.38	-53,349,231.17
050			0.00	0.00
051	<b>Total Comprehensive Income for the year</b>		<b>11,095,571,032.65</b>	<b>13,458,932,317.86</b>
065			0.00	0.00
066	<b>Earnings per equity share:</b>		<b>0.00</b>	<b>0.00</b>
067	Basic & Diluted		0.00	0.00
068	Significant Accounting Policies		0.00	0.00
069	Expenditure during construction period (Net)/Dev. of coal mines (net) 43 /43A		0.00	0.00
070	The accompanying notes 1 to 44 form an integral part of these financial statements.		0.00	0.00

GOTAM  
KUMAR  
BAGARIYA

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GOTAM KUMAR  
BAGARIYA  
Date: 2021.04.29  
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( Auditor Initial & Stamp )

*eSign*

Digitally Signed  
Signed by: Vinodita Malik  
Reason: Financial  
Statements FY 2020-  
21 NTPC Shared.

( Head of Finance )

*Vinodita Malik*  
27/04/2021

( Head of Unit )

Note forming part of Balance Sheet  
**Note 2 : Property, Plant And Equipment**  
**Business Area :1005**

(Amount in Rupees)

Asset Class	Opening Gross Block As At 01.04.2020	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2021	Opening Depreciation As At 01.04.2020	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2021	Net Block As At 31.03.2021	Net Block As At 31.03.2020
<b>1 TANGIBLE ASSETS</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>2 Land : (including development expenses)</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>3 Freehold</b>	355016843.25	0.00	0.00	355016843.25	0.00	0.00	0.00	0.00	355016843.25	355016843.25
<b>4 Right of Use</b>	312564894.63	0.00	0.00	312564894.63	64677732.17	10521536.67	0.00	75199268.84	237365625.79	247887162.46
<b>5 Submergence</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>6 Right of use - Coal Bearing Area Land</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>7 Roads,bridges, culverts &amp; helipads</b>	636446916.44	0.00	159951.50	636606867.94	109536598.01	23550768.85	0.00	133087366.86	503519501.08	526910318.43
<b>8 Building :</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 Freehold</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>10 Main plant</b>	1852956664.03	0.00	0.00	1852956664.03	312864958.08	62855519.69	0.00	375720477.77	1477236186.26	1540091705.95
<b>11 Others</b>	2533965283.89	651849.77	14352916.02	2548970049.68	389425925.65	94083092.43	0.00	483509018.08	2065461031.60	2144539358.24
<b>12 Right of Use</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>13 Temporary erection</b>	231168.13	0.00	0.00	231168.13	231168.13	0.00	0.00	231168.13	0.00	0.00
<b>14 Water Supply, drainage &amp; sewerage system</b>	543971851.56	0.00	2075861.99	546047713.55	98294100.27	24336758.92	0.00	122630859.19	423416854.36	445677751.29
<b>15 Hydraulic works, barrages, dams, tunnels and power channel</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>16 MGR track and signalling system</b>	1331637054.56	0.00	22735072.00	1354372126.56	282788992.51	70801086.59	0.00	353590079.10	1000782047.46	1048848062.05
<b>17 Railway siding</b>	1528212.48	0.00	0.00	1528212.48	583464.81	64482.46	0.00	647947.27	880265.21	944747.67
<b>18 Earth dam reservoir</b>	1456921.40	0.00	0.00	1456921.40	0.00	0.00	0.00	0.00	1456921.40	1456921.40
<b>19 Plant and machinery(including associated civil works)</b>	72150091047.97	1749417411.66	(444538934.06)	73454969525.57	22338498577.64	4250997908.53	(124764520.90)	26464731965.27	46990237560.30	49811592470.33
<b>Owned Asset</b>										



अनिल कुमार (अभिनिवेश)  
 Anil Kumar (Anabhisheva)  
 एन सी सी लिमिटेड/NPCL LIMITED

**Note forming part of Balance Sheet**  
**Note 2 : Property, Plant And Equipment**  
**Business Area :1005**

Asset Class	Opening Gross Block As At 01.04.2020	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2021	Opening Depreciation As At 01.04.2020	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2021	Net Block As At 31.03.2021	Net Block As At 31.03.2020
20 Plant and machinery(including associated civil works) -Right of use Asset	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21 Furniture and fixtures	174462877.14	132121.00	141236.26	174736234.40	55993361.73	9718284.42	0.00	65711646.15	109024588.25	118469515.41
22 Assets under 5 Km Scheme	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23 Vehicles including speedboats / helicopter- Owned	6558165.35	0.00	0.00	6558165.35	2026920.89	579121.79	0.00	2606042.68	3952122.67	4531244.46
24 Vehicles including speedboats / helicopter - Leased	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25 Office equipment	87710203.22	10332475.39	(2328.66)	98040349.95	42281672.36	7149396.76	25013.36	49456082.48	48584267.47	45428530.86
26 EDP, WP machines and satcom equipment	88746642.53	4701880.50	(2207618.37)	91240904.66	66678476.50	8358261.38	(2207618.37)	72829119.51	18411785.15	22068166.03
27 Construction equipments	65110895.86	0.00	0.00	65110895.86	25019015.46	2027521.73	0.00	27046537.19	38064358.67	40091880.40
28 Electrical Installations	331097542.54	0.00	(15297.60)	331082244.94	93983599.49	24483870.32	0.00	118467469.81	212614775.13	237113943.05
29 Communication equipments	31934747.30	0.00	0.00	31934747.30	21139449.21	2682540.80	0.00	23821990.01	8112757.29	10795298.09
30 Hospital equipments	23403542.97	8015882.70	(498500.00)	30920925.67	6303043.52	1526214.95	(145000.00)	7684258.47	23236667.20	17100499.45
31 Laboratory and workshop equipments	145928386.77	0.00	(192816.00)	145735570.77	35991295.49	7667668.15	0.00	43658963.64	102076607.13	109937091.28
32 Capital expenditure on assets not owned by the Company	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33 Assets of Government	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

  
 Chief Financial Officer (Accounting)  
 Add. General Manager (Accounting)  
 एन सी ई लिमिटेड/NPEC LIMITED

Note forming part of Balance Sheet  
**Note 2 : Property, Plant And Equipment**  
**Business Area :1005**

Asset Class	Opening Gross Block As At 01.04.2020	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2021	Opening Depreciation As At 01.04.2020	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2021	Net Block As At 31.03.2021	Net Block As At 31.03.2020
34 Less:Grants from Government	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35 Less: Recoverable from GOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36 Assets for ash utilisation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37 (Less):-Adjusted from fly ash utilisation reserve fund	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38 Site Restoration Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39 Mining Properties	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Grand Total (Tangible)</b>	80674819862.02	1773251621.02	(407990456.92)	82040081026.12	23946318351.92	4601404034.44	(127092125.91)	28420630260.45	53619450765.67	56728501510.10
<b>Grand Total Prev Year (Tangible)</b>	78534642964.26	1186875116.04	953301781.72	80674819862.02	19591618043.24	4377618570.90	(22918262.22)	23946318351.92	56728501510.10	58943024921.02

  
 Chief General Manager (Commercial)  
 एन टी सी लिमिटेड/NTPL LIMITED

**Note forming part of Balance Sheet**  
**Note 2 : Property, Plant And Equipment**  
**Business Area :1005**

**Details of Adjustments of Gross Block and Depreciation/Amortization**

Particulars	Gross Block		Depreciation/Amortization	
	Tangible As At: 31.03.2021	Tangible As At: 31.03.2020	Tangible As At: 31.03.2021	Tangible As At: 31.03.2020
Disposal of assets	(2046638.78)	(2114197.00)	(2032443.32)	(2071876.78)
Retirement of assets	(360826985.21)	(69448632.25)	(129619476.73)	(19577026.64)
Cost adjustments	(61206706.58)	1021726514.10	0.00	0.00
Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Depreciation on construction equipment capitalised as EDC	0.00	0.00	0.00	0.00
Prior Period Depreciation due to Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Special Depreciation (As per New Policy)	0.00	0.00	0.00	0.00
Transfer in /out because of Inter Unit transfers	16089873.65	3138096.87	4559794.14	(1269358.80)
Others	0.00	0.00	0.00	0.00
<b>TOTAL</b>	<b>(407990456.92)</b>	<b>953301781.72</b>	<b>(127092125.91)</b>	<b>(22918262.22)</b>

  
 Chief Financial Officer (Accounting)  
 Add: General Manager (Commercial)  
 एन टी सी लिमिटेड/NTFC LIMITED

## Note forming part of Balance Sheet

## Note 3: Capital-Work-in-Progress

## Business Area: RIHAND SUPER THERMAL POWER STATION

SI No	Asset Class	As At 01.04.2020	Addition	Deduction/ Adjustment	Capitalized	As At 31.03.2021
	1	2	3	4	5	6
1	CAPITAL WORK-IN-PROGRESS					
2	Development of land					
3	Roads, bridges, culverts & helipads		159951.50	(159951.50)		
4	Piling and foundation					
5	Buildings :					
6	Main plant					
7	Others	3994483.75	41494542.99	(14352916.02)	651849.77	30484260.95
8	Temporary erection					
9	Water supply, drainage and sewerage system	2950000.00	2169334.09	(2169334.09)	1966765.00	983235.00
10	Hydraulic works, barrages, dams, tunnels and power channel					
11	MGR track and signalling system	20000000.00	2735072.00	(22735072.00)		
12	Railway siding					
13	Earth dam reservoir					
14	Plant and equipment	716862112.61	2701347755.13	(441523046.74)	459253795.13	2517433025.87
15	Furniture and fixtures		202930.66	(178285.51)		24645.15
16	Vehicles					
17	Office equipment		35588.00			35588.00
18	EDP/WP machines & satcom equipment	1367798.00		(1.00)	1367797.00	
19	Construction equipments					
20	Electrical installations					
21	Communication equipment					
22	Hospital equipments		256888.29			256888.29
23	Laboratory and workshop equipments					
24	Assets under 5Km Scheme of the GOI					
25	Capital expenditure on assets not owned by the company					
26	Expenditure towards development of coal mines					
27	Survey,Investigation,Consultancy & Supervision Cha	2987667.50				2987667.50
28	Difference in exchange on foreign currency loans					



## Note forming part of Balance Sheet

## Note 3: Capital-Work-in-Progress

## Business Area: RIHAND SUPER THERMAL POWER STATION

SI No	Asset Class	As At 01.04.2020	Addition	Deduction/ Adjustment	Capitalized	As At 31.03.2021
	1	2	3	4	5	6
29	Expenditure towards diversion of forest land					
30	Pre-commissioning expenses (net)					
31	ExpPendAlloca-oth ex attribut Project					
32	Expenditure During Construction Period (net)*		48056989.43	19803119.69		67860109.12
33	LESS : Allocated to related works		67860109.12			67860109.12
34	LESS : Provision for Unservicable works					
35	<b>Construction stores (At Cost)</b>					
36	Steel	28823481.94	10797591.45	(9388238.80 )		30232834.59
37	Cement	2154161.66		(126029.78 )		2028131.88
38	Others	48601441.60	9455643.30	395822571.17		453879656.07
39	<b>Sub-total</b>	<b>79579085.20</b>	<b>20253234.75</b>	<b>386308302.59</b>		<b>486140622.54</b>
40	LESS : Provision for shortages	4086971.23		3163951.37		7250922.60
41	<b>Sub-total</b>	<b>75492113.97</b>	<b>20253234.75</b>	<b>383144351.22</b>		<b>478889699.94</b>
42	<b>Total CWIP</b>	<b>823654175.83</b>	<b>2748852177.72</b>	<b>(78171135.95 )</b>	<b>463240206.90</b>	<b>3031095010.70</b>
43						
44						
45	<b>PREVIOUS YEAR TOTAL</b>	<b>526168443.09</b>	<b>1282428590.34</b>	<b>(448034605.07 )</b>	<b>526463585.59</b>	<b>823654175.83</b>

Note forming part of Balance Sheet  
**Note-4 Non Current Assets- Intangible Assets**  
**Business Area :1005**

Asset Class	Opening Gross Block As At 01.04.2020	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2021	Opening Depreciation As At 01.04.2020	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2021	Net Block As At 31.03.2021	Net Block As At 31.03.2020
<b>INTANGIBLE ASSETS</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>1 Right to Use- Land</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>2 -Others</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>3 -Software</b>	4773867.26	0.00	0.00	4773867.26	4754287.08	4317.78	0.00	4758604.86	15262.40	19580.18
<b>Grand Total (Intangible)</b>	4773867.26	0.00	0.00	4773867.26	4754287.08	4317.78	0.00	4758604.86	15262.40	19580.18
<b>Grand Total Prev Year (Intangible)</b>	4773867.26	0.00	0.00	4773867.26	4639223.95	115063.13	0.00	4754287.08	19580.18	134643.31

  
 Chief Financial Officer (Accounting)  
 Add. General Manager (Commercial)  
 एन टी सी लिमिटेड/NTSC LIMITED

Note forming part of Balance Sheet  
**Note-4 Non Current Assets- Intangible Assets**  
**Business Area :1005**

<b>Details of Adjustments of Gross Block and Depreciation/Amortization</b>				
<b>Particulars</b>	<b>Gross Block</b>		<b>Depreciation/Amortization</b>	
	<b>InTangible As At: 31.03.2021</b>	<b>InTangible As At: 31.03.2020</b>	<b>InTangible As At: 31.03.2021</b>	<b>InTangible As At: 31.03.2020</b>
Disposal of assets	0.00	0.00	0.00	0.00
Retirement of assets	0.00	0.00	0.00	0.00
Cost adjustments	0.00	0.00	0.00	0.00
Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Depreciation on construction equipment capitalised as EDC	0.00	0.00	0.00	0.00
Prior Period Depreciation due to Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Special Depreciation (As per New Policy)	0.00	0.00	0.00	0.00
Transfer in /out because of Inter Unit transfers	0.00	0.00	0.00	0.00
Others	0.00	0.00	0.00	0.00
<b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

  
 Chief Financial Officer (Accounting)  
 Add. General Manager (Commercial)  
 एन टी सी लिमिटेड/NTPC LIMITED

## Note forming part of Balance Sheet

## Note 5: Intangible Assets under Development

## Business Area: RIHAND SUPER THERMAL POWER STATION

SI No	Asset Class	As At 01.04.2020	Addition	Deduction/ Adjustment	Capitalized	As At 31.03.2021
	1	2	3	4	5	6
1	INTANGIBLE ASSETS UNDER DEVELOPMENT					
2	Software					
3	Right to use Others					
4	Exploration and Evaluation Expenditure - Coal Mini					
5	Exploratory wells-in-progress					
6	<b>Less: Provision for exploratory wells-in-progress</b>					
7	<b>Total</b>					
8	<b>PREVIOUS YEAR TOTAL-I</b>					



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 6 TO THE FS-NCA-INVESTMENTS IN SUBSIDIARIES & JOINT VENTURES

( Amount in ₹ )

As at	No. of shares	Face value	31.03.2021	31.03.2020
001	<b>NON CURRENT INVESTMENTS-</b>		<b>0.00</b>	<b>0.00</b>
	<b>Investments in subsidiaries and joint ventures</b>			
012	<b>Equity Instruments - Unquoted-(fully paid up unless otherwise stated, at cost)</b>		<b>0.00</b>	<b>0.00</b>
013	<b>Subsidiary Companies</b>		<b>0.00</b>	<b>0.00</b>
014	Patraru Vidyut Utpadan Nigam Ltd.		0.00	0.00
015	NTPC Electric Supply Company Ltd.		0.00	0.00
016	NTPC Vidyut Vyapar Nigam Ltd.		0.00	0.00
017	Nabinagar Power Generating Company Ltd.		0.00	0.00
018	Kanti Bijlee Utpadan Nigam Ltd.		0.00	0.00
019	Bhartiya Rail Bijlee Company Ltd.		0.00	0.00
020	NTPC Mining Ltd (NML)		0.00	0.00
021	THDC India Ltd.		0.00	0.00
022	NEEPCO LTD.		0.00	0.00
023	NTPC EDMC Waste Solutions Pvt Ltd		0.00	0.00
024	NTPC Renewables Energy Ltd		0.00	0.00
025	Ratnagiri Gas & Power Pvt. Limited (RGPPL)		0.00	0.00
026			0.00	0.00
027			0.00	0.00
028			0.00	0.00
029			0.00	0.00
030	<b>Sub Total</b>		<b>0.00</b>	<b>0.00</b>
055	<b>Joint Venture Companies</b>		<b>0.00</b>	<b>0.00</b>
056	Utility Powertech Ltd.		0.00	0.00
057	NTPC GE Power Services Pvt.Ltd.		0.00	0.00
058	NTPC-SAIL Power Company Ltd.		0.00	0.00
059	NTPC-Tamil Nadu Energy Company Ltd.		0.00	0.00
060	Ratnagiri Gas & Power Pvt. Limited (RGPPL)		0.00	0.00

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 Chief General Manager (Accounts)  
 एन टी सी लिमिटेड / NTPC LIMITED



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 6 TO THE FS-NCA-INVESTMENTS IN SUBSIDIARIES & JOINT VENTURES

( Amount in ₹ )

As at	No. of shares	Face value	31.03.2021	31.03.2020
061	Aravali Power Company Private Ltd.		0.00	0.00
062			0.00	0.00
063	NTPC BHEL Power Projects Private Ltd.		0.00	0.00
064	Meja Urja Nigam Private Limited		0.00	0.00
065	BF-NTPC Energy Systems Ltd.		0.00	0.00
066			0.00	0.00
067	Nabinagar Power Generating Company Ltd.		0.00	0.00
068	Transformer and Electrical Kerala Ltd.		0.00	0.00
069	National High Power Test Laboratory Private Ltd.		0.00	0.00
070			0.00	0.00
071	CIL NTPC Urja Private Ltd.		0.00	0.00
072	Anushakti Vidhyut Nigam Ltd.		0.00	0.00
073	Energy Efficiency Services Ltd.		0.00	0.00
074			0.00	0.00
075	Trincomalee Power Company Ltd.		0.00	0.00
076	Bangladesh-India Friendship Power Company (Pvt.) Ltd.		0.00	0.00
077	Hindustan Urvarak & Rasayan Limited		0.00	0.00
078	Konkan LNG Ltd		0.00	0.00
079			0.00	0.00
081	<b>Sub Total</b>		<b>0.00</b>	<b>0.00</b>
109	Aggregate amount of impairment in the value of investments		0.00	0.00
110	Total (net of impairment) of JV		0.00	0.00
111	Gross Total of Investments		0.00	0.00
134	<b>Total</b>		<b>0.00</b>	<b>0.00</b>
135	Details of Investments		0.00	0.00
136	Aggregate amount of Unquoted Investments		0.00	0.00

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 अधिकारी (आर्थिक) /  
 Addl. General Manager (Accounts)  
 एन टी सी लिमिटेड / NTPC LIMITED



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 6 TO THE FS-NCA-INVESTMENTS IN SUBSIDIARIES & JOINT VENTURES

( Amount in ₹ )

As at	No. of shares	Face value	31.03.2021	31.03.2020
141			0.00	0.00
142			0.00	0.00
143			0.00	0.00
144			0.00	0.00
145			0.00	0.00
153	Valuation of Investments as per Note 1.		0.00	0.00
154			0.00	0.00
202			0.00	0.00
233			0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 7 TO THE FS-NCA-INVESTMENTS**
**( Amount in ₹ )**

	As at	No. of shares	Face value	31.03.2021	31.03.2020
001	Non-current financial assets (investments)			0.00	0.00
006	<b>Long Term - Trade</b>			<b>0.00</b>	<b>0.00</b>
007	<b>Equity Instruments (fully paid up-unless otherwise stated)</b>			<b>0.00</b>	<b>0.00</b>
008	<b>Quoted</b>			<b>0.00</b>	<b>0.00</b>
009	<b>Joint Venture Companies</b>			<b>0.00</b>	<b>0.00</b>
010	PTC India Ltd.			0.00	0.00
070	International Coal Ventures Private Ltd.			0.00	0.00
075	BF-NTPC Energy Systems Ltd.			0.00	0.00
098				0.00	0.00
110	Cooperative Societies			0.00	0.00
111	<b>Sub Total</b>			<b>0.00</b>	<b>0.00</b>
112	Aggregate amount of impairment in the value of investments			0.00	0.00
115	<b>Total</b>			<b>0.00</b>	<b>0.00</b>
120				0.00	0.00
146	NTPC Employees Consumers and Thrift Co-operative Society Ltd. Korba			0.00	0.00
147	NTPC Employees Consumers and Thrift Cooperative Society Ltd. RSTPP			0.00	0.00
148	NTPC Employees Consumers Cooperative Society Ltd. Farakka			0.00	0.00
149	NTPC Employees Consumers Cooperative Society Ltd. Vindhyachal			0.00	0.00
150	NTPC Employees Consumers Cooperative Society Ltd. Anta			0.00	0.00
151	NTPC Employees Consumers Cooperative Society Ltd. Kawas			0.00	0.00
152	NTPC Employees Consumers Cooperative Society Ltd. Kaniha			0.00	0.00





RIHAND SUPER THERMAL POWER STATION

NOTE NO. 8 TO THE FS-NCA-TRADE RECEIVABLES

( Amount in ₹ )

As at	31.03.2021	31.03.2020
001 Non-current financial assets - Trade receivables	0.00	0.00
002 Unsecured, considered good	0.00	0.00
003 Credit impaired	0.00	0.00
004	0.00	0.00
005	0.00	0.00
006 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 9 TO THE FS-NCA-LOANS**
**( Amount in ₹ )**

As at	31.03.2021	31.03.2020
001 <b>Loans (Non Current)</b>	<b>0.00</b>	<b>0.00</b>
004 Related Parties	0.00	0.00
005 Secured	0.00	0.00
006 Un-Secured	0.00	0.00
007 With significant increase in Credit Risk	0.00	0.00
008 Credit impaired	0.00	0.00
009	0.00	0.00
010 Employees(including accrued interest)	0.00	0.00
011 Secured	81,640,635.94	78,971,858.25
012 Unsecured	53,590,775.89	47,554,685.79
013 With significant increase in Credit Risk	0.00	0.00
014 Credit impaired	0.00	0.00
015 Less : Employee Loans Discounting	0.00	0.00
016 Secured	22,067,890.23	21,268,252.60
017 Unsecured	7,408,004.99	7,979,178.61
018 Loan to State Government in settlement of dues from customers (Unsecured)	0.00	0.00
019 Others	0.00	0.00
020 Secured	0.00	0.00
021 Unsecured	0.00	0.00
022 With significant increase in Credit Risk	0.00	0.00
023 Credit impaired	0.00	0.00
024 Less: Allowance for credit impaired loans	0.00	0.00
025 <b>Sub Total</b>	<b>105,755,516.61</b>	<b>97,279,112.83</b>
026	0.00	0.00
027 <b>Total</b>	<b>105,755,516.61</b>	<b>97,279,112.83</b>
028	0.00	0.00
029	0.00	0.00
030 <b>Due from Directors and Officers of the Company</b>	<b>0.00</b>	<b>0.00</b>
031 Directors	0.00	0.00
032 Officers	0.00	0.00
033	<b>0.00</b>	<b>0.00</b>
034 <b>Loans to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
035 i)Key management personel	0.00	0.00
036 ii)Subsidiary companies	0.00	0.00
037 iii)Joint Venture companies	0.00	0.00
038 iv)Others	0.00	0.00
039	<b>0.00</b>	<b>0.00</b>
054 Other loans represent loans given to	0.00	0.00
055 a) APIIC	0.00	0.00
060	0.00	0.00
061 RPD	0.00	0.00
062 i)Key management personel	0.00	0.00
063 ii)Subsidiary companies	0.00	0.00
064 iii)Joint Venture companies	0.00	0.00
065 iv)Others	0.00	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 9 TO THE FS-NCA-LOANS

( Amount in ₹ )

	As at	31.03.2021	31.03.2020
066	<b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 10 TO THE FS-NCA-OTHER FINANCIAL ASSETS**
**( Amount in ₹ )**

As at	31.03.2021	31.03.2020
001 <b>Other Financial Assets (non current)</b>	<b>0.00</b>	<b>0.00</b>
002	0.00	0.00
003 <b>Share application money pending allotment in (Subsidiary Companies) :</b>	<b>0.00</b>	<b>0.00</b>
004 NTPC Electric Supply Company Ltd.	0.00	0.00
005 NTPC Vidyut Vyapar Nigam Ltd.	0.00	0.00
006 Nabinagar Power Generating Company Ltd.	0.00	0.00
007 Kanti Bijlee Utpadan Nigam Ltd.	0.00	0.00
008 Bhartiya Rail Bijlee Company Ltd.	0.00	0.00
009 Patratu Vidyut Utpadan Nigam Ltd.	0.00	0.00
010 NTPC Mining Limited	0.00	0.00
011 THDC Ltd.	0.00	0.00
012 NEEPCO Ltd	0.00	0.00
013	0.00	0.00
014 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
015 <b>Share application money pending allotment (Joint Venture)</b>	<b>0.00</b>	<b>0.00</b>
016 Utility Powertech Ltd.	0.00	0.00
017 NTPC GE Power Services Pvt.Ltd.	0.00	0.00
018 NTPC-SAIL Power Company Ltd.	0.00	0.00
019 NTPC-Tamil Nadu Energy Company Ltd.	0.00	0.00
020 Ratnagiri Gas & Power Private Ltd.	0.00	0.00
021 Aravali Power Company Private Ltd.	0.00	0.00
022	0.00	0.00
023 NTPC BHEL Power Projects Private Ltd.	0.00	0.00
024 Meja Urja Nigam Private Limited	0.00	0.00
025 BF-NTPC Energy Systems Ltd.	0.00	0.00
026 Anushakti Vidhyut Nigam Ltd.	0.00	0.00
027 Nabinagar Power Generating Company Ltd.	0.00	0.00
028 Energy Efficiency Services Ltd.	0.00	0.00
029 National High Power Test Labortory Private Ltd.	0.00	0.00
030	0.00	0.00
031 CIL NTPC Urja Private Ltd.	0.00	0.00
032 Trincomalee Power Company Ltd.	0.00	0.00
033 Hindustan Urvarak & Rasayan Limited	0.00	0.00
034 Bangladesh-India Friendship Power Company Private Ltd.	0.00	0.00
035 <b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
036	0.00	0.00
037 Claims Recoverable	0.00	0.00
038 Finance Lease Recoverable	0.00	0.00
039 Mine Closure Deposit	0.00	0.00
041 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 11 TO THE FS-NCA-OTHER NON-CURRENT ASSETS**
**( Amount in ₹ )**

As at	31.03.2021	31.03.2020
001 <b>Other Non-current Assets</b>	<b>0.00</b>	<b>0.00</b>
002	<b>0.00</b>	<b>0.00</b>
003 <b>CAPITAL ADVANCES</b>	<b>0.00</b>	<b>0.00</b>
004 Secured	0.00	0.00
005 Unsecured	0.00	0.00
006 Covered by Bank Guarantee	374,937,145.32	323,177,345.00
007 Others	23,546,752.62	89,609,598.63
008 Considered doubtful	0.00	0.00
009 Less: Allowance for bad & doubtful advances	0.00	0.00
010 <b>Sub-Total</b>	<b>398,483,897.94</b>	<b>412,786,943.63</b>
011	0.00	0.00
012 Advances other than capital advances	0.00	0.00
013 Security deposits	1,436,400.00	1,436,400.00
019 Advances to Related parties	0.00	0.00
022 <b>Advances to Contractors &amp; Suppliers</b>	<b>0.00</b>	<b>0.00</b>
023 Secured	0.00	0.00
024 Unsecured	0.00	0.00
025 Considered Doubtful	0.00	0.00
026 Less: Allowance for bad & doubtful advances	0.00	0.00
027 <b>Sub Total</b>	<b>1,436,400.00</b>	<b>1,436,400.00</b>
028 Receivable from MCP Escrow A/c	0.00	0.00
039 Advance tax & tax deducted at source	2,447,428.10	1,374,625.00
040 Less:- Provision for current tax	0.00	0.00
041	0.00	0.00
042 <b>Sub Total</b>	<b>2,447,428.10</b>	<b>1,374,625.00</b>
043 Deferred Payroll Expenses (Secured)	17,618,156.45	18,035,323.47
044 Deferred Payroll Expenses (Unsecured)	5,186,725.53	5,842,677.19
045 <b>Sub Total</b>	<b>22,804,881.98</b>	<b>23,878,000.66</b>
046 Deferred Foreign Currency Fluctuation Asset	1,799,476,000.00	2,071,095,000.00
048 <b>Total</b>	<b>2,224,648,608.02</b>	<b>2,510,570,969.29</b>
049	0.00	0.00
050	0.00	0.00
061 Advances include amount due from the following Private Companies in which Directors of the Company are also Directors in such Companies	0.00	0.00
063	0.00	0.00
064 NTPC GE Power Services Pvt.Ltd.	0.00	0.00
065	0.00	0.00
066 Ratnagiri Gas & Power Private Ltd.	0.00	0.00
067 Aravali Power Company Private Ltd.	0.00	0.00
068 NTPC-SCCL Global Ventures Private Ltd.	0.00	0.00
069 NTPC BHEL Power Projects Private Ltd.	0.00	0.00
070 Meja Urja Nigam Private Limited	0.00	0.00
071 Nabinagar Power Generating Company Ltd.	0.00	0.00
072 National High Power Test Labortory Private Ltd.	0.00	0.00
074 CIL NTPC Urja Private Ltd.	0.00	0.00
076	0.00	0.00

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RIHAND SUPER THERMAL POWER STATION

NOTE NO. 11 TO THE FS-NCA-OTHER NON-CURRENT ASSETS

( Amount in ₹ )

As at	31.03.2021	31.03.2020
077 <b>Related Party (Adv)</b>	<b>0.00</b>	<b>0.00</b>
078 Key Management personel	0.00	0.00
079 Subsidiary companies	0.00	0.00
080 Joint Venture companies	0.00	0.00
081 Contractors	0.00	0.00
082 Others	0.00	0.00
084	0.00	0.00
085 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 12 TO THE FS-CA-INVENTORIES**
**( Amount in ₹ )**

As at	31.03.2021	31.03.2020
001 <b>INVENTORIES</b>	<b>0.00</b>	<b>0.00</b>
002	<b>0.00</b>	<b>0.00</b>
003 Coal	1,293,481,712.46	530,693,477.72
004 Fuel oil	221,275,469.56	213,916,508.70
005 Naphtha	0.00	0.00
006 Stores and spares	2,434,045,104.96	2,507,691,473.02
007 Chemicals & consumables	84,873,916.88	82,869,440.00
008 Loose tools	1,320,987.78	1,481,824.88
009 Steel Scrap	10,032,350.58	4,556,896.18
010 Others*	578,527,487.01	618,290,642.20
011 <b>Sub Total</b>	<b>4,623,557,029.23</b>	<b>3,959,500,262.70</b>
012 Less: Provision for shortages	1,116,991.43	1,959,334.78
013 Less: Provision for obsolete/ unservicable/dimuntion in value of surplus inventory	22,832,831.53	22,832,831.53
014	0.00	0.00
015 <b>Total</b>	<b>4,599,607,206.27</b>	<b>3,934,708,096.39</b>
016 <b>Inventories include material in transit</b>	<b>0.00</b>	<b>0.00</b>
017 Coal	0.00	0.00
018 Fuel oil	0.00	0.00
019 Naphtha	0.00	0.00
020 Stores and spares	14,287,641.72	24,889,533.24
021 Chemicals & consumables	0.00	30,471.33
022 Loose tools	0.00	0.00
023 Others	0.00	527,190.00
024	<b>0.00</b>	<b>0.00</b>
025 Inventory items other than steel scrap have been valued considering Note 1.	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 13 TO THE FS-CA-INVESTMENTS**
**( Amount in ₹ )**

	As at	No. of shares	Face value	31.03.2021	31.03.2020
001	<b>CURRENT INVESTMENTS</b>			<b>0.00</b>	<b>0.00</b>
002	<b>(Valuation as per Note 1)</b>			<b>0.00</b>	<b>0.00</b>
003				0.00	0.00
033	Investment in Mutual Funds (Details as under)			0.00	0.00
034	SBI-Magnum Insta Cash Fund-DDR			0.00	0.00
035	SBI Premier Liquid Fund Super-IP-DDR			0.00	0.00
036	SBI-SHF Ultra Short Term Fund-IP-DDR			0.00	0.00
037	UTI Money Market- IP-Direct-Growth			0.00	0.00
038	IDBI-Liquid plan- Direct-Growth			0.00	0.00
039	Canara Robeco Liquid Fund Super-IP-DDR			0.00	0.00
040	Canara Robeco Treasury Advantage Fund Super-IP-DDR			0.00	0.00
041	IDBI Liquid Fund-DDR			0.00	0.00
042	SBI Premier Liquid fund-Direct DDR (Ash Fund)			0.00	0.00
043	UTI Liquid CashPlan - IP - DDR (Ash Funds)			0.00	0.00
044	IDBI Liquid Fund - DDR - (Ash Funds)			0.00	0.00
045	Baroda Liquid Fund - Direct - Growth			0.00	0.00
046	<b>Sub Total</b>			<b>0.00</b>	<b>0.00</b>
047				<b>0.00</b>	<b>0.00</b>
052	<b>Unquoted Investments</b>			<b>0.00</b>	<b>0.00</b>
054				0.00	0.00
066	<b>TOTAL</b>			<b>0.00</b>	<b>0.00</b>
067				0.00	0.00





RIHAND SUPER THERMAL POWER STATION  
NOTE NO. 14 TO THE FS-CA-TRADE RECEIVABLES

( Amount in ₹ )

As at	31.03.2021	31.03.2020
001 <b>TRADE RECEIVABLES (current)*</b>	<b>0.00</b>	<b>0.00</b>
002	0.00	0.00
003 Secured, Considered Good	0.00	0.00
004 Unsecured , considered good	15,464,355.69	0.00
005 Credit impaired	0.00	0.00
006 <b>Sub-Total</b>	<b>15,464,355.69</b>	<b>0.00</b>
007 <b>Total</b>	<b>15,464,355.69</b>	<b>0.00</b>
008 Less: Allowance for credit impaired receivables	0.00	0.00
009 <b>Total</b>	<b>15,464,355.69</b>	<b>0.00</b>
010 Less: Discom Clearing	0.00	0.00
012 <b>Grand Total</b>	<b>15,464,355.69</b>	<b>0.00</b>
013 * After adjustment for Unbilled Revenue	0.00	0.00
014 Long-term trade receivables	0.00	0.00
015 TCS Clearing	0.00	0.00
016 Discom Clearing	0.00	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 15 TO THE FS-CA-CASH AND CASH EQUIVALENTS

( Amount in ₹ )

As at	31.03.2021	31.03.2020
001 <b>CASH &amp; BANK BALANCES</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Cash &amp; Cash Equivalents</b>	<b>0.00</b>	<b>0.00</b>
003 Balances with Banks	240,123.40	435,387.81
004 Cheques & Drafts on hand	150,000.00	0.00
005 Cash on hand	0.00	0.00
006 Others (stamps in hand)	0.00	0.00
007 Bank deposits with original maturity upto three months	0.00	0.00
008 Balances with RBI	0.00	0.00
009	0.00	0.00
010 <b>Total</b>	<b>390,123.40</b>	<b>435,387.81</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 16 TO THE FS-CA-BANK BALANCES OTHER THAN CASH AND CASH EQUIVALENTS ( Amount in ₹ )**

As at	31.03.2021	31.03.2020
001 <b>Other Bank Balances</b>	<b>0.00</b>	<b>0.00</b>
002 Deposits with original maturity of more than three months but not more than twelve months	0.00	0.00
003 Earmarked balances with banks*	0.00	0.00
004 <b>SubTotal</b>	<b>0.00</b>	<b>0.00</b>
005 Interest accrued on deposits	0.00	0.00
006	0.00	0.00
007 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
008	0.00	0.00
009 <b>Earmarked balances with banks consist of :</b>	<b>0.00</b>	<b>0.00</b>
010 Unpaid dividend account balance	0.00	0.00
011 Towards public deposit repayment reserve	0.00	0.00
012 Towards redemption of bonds due for repayment within one year	0.00	0.00
013 Security with Government/other authorities	0.00	0.00
014 Unpaid refund/interest account balance - Tax free bonds/ Bonus Debentures	0.00	0.00
015 Earmarked for RGGVY/DDUGJY/SAUBHAGYA Fund	0.00	0.00
016 Earmarked for Flyash Utilisation Reserve Fund	0.00	0.00
017 Deposits with original maturity upto three months as per court orders	0.00	0.00
018 Payment Security Scheme of MNRE NSM (NTPC)	0.00	0.00
019 Payment Security Scheme of MNRE NSM (NVVN)	0.00	0.00
020 Enforcement Directorate of Solar Plant(NVVN)	0.00	0.00
021 Bank guarantee Fund of MNRE (NVVN)	0.00	0.00
022 Others	0.00	0.00
023	0.00	0.00
024	0.00	0.00
025	0.00	0.00
026 <b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
030 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
031	0.00	0.00
032 Bank deposits with original maturity of less than three months- other than earmarked	0.00	0.00
033 Bank deposits with original maturity of more than three months but not more than twelve months- other than earmarked	0.00	0.00
034 Earmarked bank balances (current account)	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 17 TO THE FS-CA-LOANS**
**( Amount in ₹ )**

As at	31.03.2021	31.03.2020
001 <b>Current financial assets - Loans</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Loans (current)-including interest accrued</b>	<b>0.00</b>	<b>0.00</b>
004 <b>Related Parties</b>	<b>0.00</b>	<b>0.00</b>
005 Secured	0.00	0.00
006 Un-Secured	0.00	0.00
007 With significant increase in Credit Risk	0.00	0.00
008 Credit impaired	0.00	0.00
009	<b>0.00</b>	<b>0.00</b>
010 <b>Employees</b>	<b>0.00</b>	<b>0.00</b>
011 Secured	18,612,569.77	18,700,977.43
012 Unsecured	49,807,019.88	52,241,750.99
013 With significant increase in Credit Risk	0.00	0.00
014 Credit impaired	0.00	0.00
015 Less : Employee Loans Discounting	0.00	0.00
016 <b>Loan to State Government in settlement of dues from customers (Unsecured)</b>	<b>0.00</b>	<b>0.00</b>
017	0.00	0.00
018 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
019 Secured	0.00	0.00
020 Unsecured	0.00	0.00
021 With significant increase in Credit Risk	0.00	0.00
022 Credit impaired	0.00	0.00
023	<b>0.00</b>	<b>0.00</b>
024 Less: Allowance for credit impaired loans	0.00	0.00
025 <b>Total (Loans)</b>	<b>68,419,589.65</b>	<b>70,942,728.42</b>
026	<b>0.00</b>	<b>0.00</b>
027 <b>Due from Directors and Officers of the Company</b>	<b>0.00</b>	<b>0.00</b>
028 Directors	0.00	0.00
029 Officers	0.00	0.00
030	<b>0.00</b>	<b>0.00</b>
031 <b>Loans to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
032 i)Key management personel	0.00	0.00
033 ii)Subsidiary companies	0.00	0.00
034 KBUNL	0.00	0.00
035 RGPPL	0.00	0.00
036 NVVN	0.00	0.00
037 iii)Joint Venture companies	0.00	0.00
038 iv)others	0.00	0.00
039	0.00	0.00
059 RPD	0.00	0.00
060 i)Key management personel	0.00	0.00
061 ii)Subsidiary companies	0.00	0.00
062 iii)Joint Venture companies	0.00	0.00
063 iv)Others	0.00	0.00
064	0.00	0.00
065 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

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**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 18 TO THE FS-CA-OTHER FINANCIAL ASSETS**
**( Amount in ₹ )**

As at	31.03.2021	31.03.2020
001 <b>Other Financial Assets (current)</b>	<b>0.00</b>	<b>0.00</b>
002	0.00	0.00
003 <b>ADVANCES</b>	<b>0.00</b>	<b>0.00</b>
004	<b>0.00</b>	<b>0.00</b>
005 <b>Related Parties</b>	<b>0.00</b>	<b>0.00</b>
006 Secured	0.00	0.00
007 Un-Secured	75,433,495.80	583,008,854.62
008 Considered doubtful	0.00	0.00
009	<b>0.00</b>	<b>0.00</b>
010 <b>Employees</b>	<b>0.00</b>	<b>0.00</b>
012 Unsecured	2,693,948.65	3,465,523.87
013 Considered Doubtful	0.00	0.00
014	<b>0.00</b>	<b>0.00</b>
020 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
021 Secured	0.00	0.00
022 Unsecured	0.00	0.00
023 Considered Doubtful	0.00	0.00
024	<b>0.00</b>	<b>0.00</b>
025 Less: Allowance for bad & doubtful advances	0.00	0.00
026	<b>0.00</b>	<b>0.00</b>
033 <b>Total (Advances)</b>	<b>78,127,444.45</b>	<b>586,474,378.49</b>
044	<b>0.00</b>	<b>0.00</b>
045 <b>Claims Recoverable</b>	<b>0.00</b>	<b>0.00</b>
046 Secured	0.00	0.00
047 Unsecured, considered good	3,413,667.00	95,503,503.01
048 Considered Doubtful	0.00	0.00
049 Less:- Allowance for doubtful claims	0.00	0.00
050 Others-Claims Recoverable	0.00	0.00
051	<b>0.00</b>	<b>0.00</b>
052 Unbilled Revenue	0.00	0.00
053 Hedging cost recoverable from beneficiaries	0.00	0.00
054 Derivative MTM Asset	0.00	0.00
055 Finance Lease Receivable	0.00	0.00
056 Mine Closure Deposit	0.00	0.00
057 <b>Other Accrued Income</b>	<b>0.00</b>	<b>0.00</b>
058 Secured,Considered Good	0.00	0.00
059 Unsecured , considered good	84,093,847.15	6,200,899.09
060 Credit impaired	0.00	0.00
061 Sub-Total	84,093,847.15	6,200,899.09
062 Less: Allowance for credit impaired receivables	0.00	0.00
063 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
064	0.00	0.00
065 Others*	0.00	0.00
066 <b>Total</b>	<b>165,634,958.60</b>	<b>688,178,780.59</b>
067 * Other include amount recoverable from contractors and other parties towards hire charges, rent/electricity etc.	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 18 TO THE FS-CA-OTHER FINANCIAL ASSETS**
**( Amount in ₹ )**

As at	31.03.2021	31.03.2020
068 <b>Advances to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
069 i)Key management personel	0.00	0.00
070 ii)Subsidiary companies	0.00	0.00
071 iii)Joint Venture companies	0.00	0.00
072 iv)Contractors	0.00	0.00
073 v)Others	0.00	0.00
074	<b>0.00</b>	<b>0.00</b>
075 Advances include amount due from the following Private Companies in which Directors of the Company are also Directors in such Companies	0.00	0.00
076	<b>0.00</b>	<b>0.00</b>
077	0.00	0.00
078 NTPC GE Power Services Pvt.Ltd.	0.00	0.00
079 Ratnagiri Gas & Power Private Ltd.	0.00	0.00
080 Aravali Power Company Private Ltd.	0.00	0.00
081 NTPC-SCCL Global Ventures Private Ltd.	0.00	0.00
082 NTPC BHEL Power Projects Private Ltd.	0.00	0.00
083 Meja Urja Nigam Private Limited	0.00	0.00
084 Nabinagar Power Generating Company Ltd.	0.00	0.00
085 National High Power Test Labortory Private Ltd.	0.00	0.00
086 International Coal Ventures Private Ltd.	0.00	0.00
087 CIL NTPC Urja Private Ltd.	0.00	0.00
089 Bangladesh-India Friendship Power Co. Pvt.Ltd	0.00	0.00
090 TCS Clearing	0.00	0.00
091 Related Party (Adv)- Employee	0.00	0.00
092 Related Party (Adv)- Subsidiaries	0.00	0.00
093 Related Party (Adv)- Joint Ventures	0.00	0.00
094 Related Party (Adv)- Contractors	0.00	0.00
095 Related Party (Adv)- Others	75,433,495.80	583,008,854.62
096	0.00	0.00
097	0.00	0.00
098	0.00	0.00
099	0.00	0.00
100 <b>Total</b>	<b>75,433,495.80</b>	<b>583,008,854.62</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 19 TO THE FS-CA-OTHER CURRENT ASSETS**
**( Amount in ₹ )**

As at	31.03.2021	31.03.2020
<b>001 OTHER CURRENT ASSETS</b>	<b>0.00</b>	<b>0.00</b>
002 Security Deposits (Unsecured)	0.00	0.00
003 Deposit with Customs, port trust & others*	900,636.00	191,392,850.00
<b>004 ADVANCES</b>	<b>0.00</b>	<b>0.00</b>
005	<b>0.00</b>	<b>0.00</b>
<b>006 Related Parties</b>	<b>0.00</b>	<b>0.00</b>
007 Secured	0.00	0.00
008 Un-Secured	19,099,073.00	22,267,172.00
009 Considered doubtful	0.00	0.00
010	<b>0.00</b>	<b>0.00</b>
<b>011 Employees(including imprest)</b>	<b>0.00</b>	<b>0.00</b>
012 Secured	0.00	0.00
013 Unsecured	310,414.00	313,974.00
014 Considered Doubtful	0.00	0.00
015	<b>0.00</b>	<b>0.00</b>
<b>016 Contractors &amp; Suppliers</b>	<b>0.00</b>	<b>0.00</b>
017 Secured	0.00	0.00
018 Unsecured	185,761,689.46	195,835,792.94
019 Considered Doubtful	0.00	0.00
020	0.00	0.00
<b>021 Others**</b>	<b>0.00</b>	<b>0.00</b>
022 Secured	0.00	0.00
023 Unsecured	24,275,748.00	12,449,859.00
024 Considered Doubtful	0.00	0.00
025 Less: Allowance for bad & doubtful advances	0.00	0.00
026 Receivable from MCP Escrow A/c	0.00	0.00
027 Deferred Payroll Expenses (Secured)	2,319,227.24	2,488,898.40
028 Deferred Payroll Expenses (Unsecured)	3,778,654.23	3,815,730.86
<b>029 Sub-total</b>	<b>6,097,881.47</b>	<b>6,304,629.26</b>
<b>030 Interest accrued on :</b>	<b>0.00</b>	<b>0.00</b>
031 Advances to contractors	0.00	0.00
032	<b>0.00</b>	<b>0.00</b>
<b>033 Claims Recoverable</b>	<b>0.00</b>	<b>0.00</b>
034 Secured	0.00	0.00
035 Unsecured, considered good	227,947,046.81	207,959,344.25
036 Considered Doubtful	26,600,000.00	26,600,000.00
037 Less:- Allowance for doubtful claims	26,600,000.00	26,600,000.00
038	<b>0.00</b>	<b>0.00</b>
039 Deferred premium on forward exchange contract/ Option Assets	0.00	0.00
041 Assets Held for Disposal	42,084.39	197,831.40
042 Others	5,071,018.00	4,507,295.00
043	0.00	0.00
<b>044 Total (Other Current Assets)</b>	<b>469,505,591.13</b>	<b>641,228,747.85</b>
045 **Include Prepaid Expenses	24,275,748.00	12,449,859.00
046 *Includes sales tax/Entry tax/VAT deposited under protest with Sales Tax Authorities	812,756.00	812,756.00

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**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 19 TO THE FS-CA-OTHER CURRENT ASSETS**
**( Amount in ₹ )**

As at	31.03.2021	31.03.2020
047 *Includes deposited with courts	0.00	0.00
048 *Includes deposited with LIC for annuity payments	0.00	0.00
049 * Includes deposits with WRD / against BG in r/o finance lease	0.00	0.00
050 Other include amount recoverable from contractors and other parties towards hire charges, rent/electricity etc.	0.00	0.00
<b>052 Advances to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
053 i)Key management personel	0.00	0.00
054 ii)Subsidiary companies	0.00	0.00
055 iii)Joint Venture companies	0.00	0.00
056 Contractors	0.00	0.00
057 Others	0.00	0.00
058	0.00	0.00
059 Advances include amount due from the following Private Companies in which Directors of the Company are also Directors in such Companies	0.00	0.00
060	<b>0.00</b>	<b>0.00</b>
061	0.00	0.00
062 Related Party (Adv)- Employee	0.00	0.00
063 Related Party (Adv)- Subsidiaries	0.00	0.00
064 Related Party (Adv)- Joint Venture	1,407,513.00	0.00
065 Related Party (Adv)- Contractors	17,340,591.00	21,706,489.00
066 Related Party (Adv)- Others	350,969.00	560,683.00
067 <b>Total</b>	<b>19,099,073.00</b>	<b>22,267,172.00</b>
068	0.00	0.00





RIHAND SUPER THERMAL POWER STATION

NOTE NO. 20 TO THE FS--REGULATORY DEFERRAL ACCOUNT DEBIT BALANCES

( Amount in ₹ )

As at	31.03.2021	31.03.2020
001 On account of Exchange Differences	-23,349,137.66	-15,205,072.81
002 On account of employee benefit exp	381,915,581.00	381,915,581.00
003 Regulatory deferred account - deferred	0.00	0.00
004 Deferred asset for ash transportation	312,520,012.83	0.00
005 Deferred asset for Arbitration Award	0.00	0.00
006 <b>Total</b>	<b>671,086,456.17</b>	<b>366,710,508.19</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 21 TO THE FS-EQUITY-EQUITY SHARE CAPITAL**
**( Amount in ₹ )**

As at	31.03.2021	31.03.2020
001 <b>SHARE CAPITAL</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Equity Share Capital</b>	<b>0.00</b>	<b>0.00</b>
003 <b>Authorised</b>	<b>0.00</b>	<b>0.00</b>
004 10,000,000,000 equity shares of Rs.10/- each (Previous year 10,000,000,000 eq shares of Rs.10/- each)	0.00	0.00
005 <b>Issued,Subscribed and fully Paid-up</b>	<b>0.00</b>	<b>0.00</b>
006 9,69,66,66,134 equity shares of Rs.10/- (Pv. Year 9,894,557,280 equity shares of Rs.10/- each)	0.00	0.00
007	<b>0.00</b>	<b>0.00</b>
008 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
009 During FY 2018-19, the company has issued 1,649,092,880 equity shares of Rs.10/- each as fully paid bonus shares	0.00	0.00
010 The holders of the equity shares are entitled to receive dividends as declared from time to time, and are entitled to one vote per share at meetings of the company.	0.00	0.00
011 Details of shareholders holding more than 5% shares in the company	0.00	0.00
012 - President of India	0.00	0.00
013 No. of Shares	0.00	0.00
014 % of holding	0.00	0.00
015 - Life Insurance Corporation of India/ICICI Prudential Mutual Fund	0.00	0.00
016 No. of Shares	0.00	0.00
017 % of holding	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 22 TO THE FS-EQUITY-OTHER EQUITY**
**( Amount in ₹ )**

	As at	31.03.2021	31.03.2020
001	RESERVE AND SURPLUS	0.00	0.00
002		<b>0.00</b>	<b>0.00</b>
003	<b>Capital Reserve</b>	<b>0.00</b>	<b>0.00</b>
004	As per last financial statements	0.00	0.00
006	Add : Grants received during the year	0.00	0.00
007	Add: Transfer from Surplus	0.00	0.00
008	Less: Write back during the year/period	0.00	0.00
009	Less: Adjustments during the year/period	0.00	0.00
010	<b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
011	<b>Securities Premium Account</b>	<b>0.00</b>	<b>0.00</b>
012	As per last financial statements	0.00	0.00
013	Add: Additions during the year/period	0.00	0.00
014	Less: Adjustments during the year/period	0.00	0.00
015	<b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
016	<b>Bonds Redemption Reserve</b>	<b>0.00</b>	<b>0.00</b>
017	As per last financial statements	0.00	0.00
018	Add: Transfer from Surplus	0.00	0.00
019	Less: Transfer to surplus on redemption	0.00	0.00
020	Less: Adjustments during the year/ period	0.00	0.00
021	<b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
022	<b>Capital Redemption Reserve</b>	<b>0.00</b>	<b>0.00</b>
023	As per last financial statements	0.00	0.00
024	Add: Transfer from Surplus	0.00	0.00
025	Less: Transfer to surplus on redemption	0.00	0.00
026	Less: Adjustments during the year/ period	0.00	0.00
027	<b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
028	<b>Share Application money Allotment</b>	<b>0.00</b>	<b>0.00</b>
029	As per last financial statements	0.00	0.00
030	Add: Addition during the year	0.00	0.00
031	Less: Utilised for allotment during the year	0.00	0.00
032	Less: Adjustments during the year/ period	0.00	0.00
033	<b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
034	<b>Fly-ash utilisation reserve Fund</b>	<b>0.00</b>	<b>0.00</b>
035	As per last financial statements	8,220,860.44	0.00
036	Transferred to CC	0.00	0.00
037	Add:Transfer from revenue from operations	15,712,224.90	9,410,400.00
038	Add:Transfer from other income	0.00	0.00
039	Less: Utilised during the year	0.00	0.00
040	Tangible assets	0.00	0.00
041	Employee benefit expenses	0.00	0.00
042	Generation,adm. and other expenses	-23,933,085.34	-1,189,539.56
043	Tax Expenses	0.00	0.00
044	<b>Sub-Total</b>	<b>0.00</b>	<b>8,220,860.44</b>
045	<b>Special allowance Reserve Fund</b>	<b>0.00</b>	<b>0.00</b>
046	As per last financial statements	0.00	0.00
047	Add: Addition during the year	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 22 TO THE FS-EQUITY-OTHER EQUITY**
**( Amount in ₹ )**

As at	31.03.2021	31.03.2020
048 Less: Utilised for allotment during the year	0.00	0.00
049 Less: Adjustments during the year/ period	0.00	0.00
050 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
053 <b>Corporate social responsibility (CSR) reserve</b>	<b>0.00</b>	<b>0.00</b>
054 As per last financial statements	0.00	0.00
055 Add : Transfer from surplus	0.00	0.00
056 Less:-Write back during the year	0.00	0.00
057 <b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
058 <b>General Reserve</b>	<b>0.00</b>	<b>0.00</b>
059 As per last financial statements	0.00	0.00
060 Add: Transfer from Surplus	0.00	0.00
061 Less: Transfer to Surplus	0.00	0.00
062 Less: Write back during the year /period	0.00	0.00
063 Less: Adjustments during the year /period	0.00	0.00
064 <b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
065	<b>0.00</b>	<b>0.00</b>
066 <b>Retained earnings</b>	<b>0.00</b>	<b>0.00</b>
067 As per last financial statements	156,537,113,839.05	143,024,832,290.02
068 Add(Less):-Changes in accounting policy / prior period errors	0.00	0.00
069 Add(Less):-Profit (Loss) after tax for the year from Statement of Profit & Loss	11,119,632,362.03	13,512,281,549.03
070	0.00	0.00
071 Add: Write back from Bond Redemption Reserve	0.00	0.00
072 Add: Write back from Capital Reserve	0.00	0.00
073 Add: Write back from Foreign Project Reserve	0.00	0.00
074 Add: Write back from CSR Reserve	0.00	0.00
075 Add: Write back from General Reserve	0.00	0.00
076 Less: Transfer to Bonds Redemption Reserve	0.00	0.00
077 Less: Transfer to Special Allowance Reserve Fund	0.00	0.00
078 Less: Transfer to Foreign Project Reserve	0.00	0.00
080 Less:Transfer to Capital Reserve	0.00	0.00
081 Less:Transfer to CSR Reserve	0.00	0.00
082 Less:Transfer to General Reserve	0.00	0.00
083 Less:Interim Dividend Paid	0.00	0.00
084 Less:Tax on Interim Dividend Paid	0.00	0.00
085 Less:Final Dividend Paid	0.00	0.00
086 Less:Tax on Final Dividend Paid	0.00	0.00
087 Less: Issue of bonus debenture	0.00	0.00
088 Less: Tax on issue of bonus debenture	0.00	0.00
089 <b>Sub-Total</b>	<b>167,656,746,201.08</b>	<b>156,537,113,839.05</b>
090	0.00	0.00
091 <b>Remeasurement of defined benefit plans</b>	<b>0.00</b>	<b>0.00</b>
092 As per last financial statements	-172,809,279.53	-119,460,048.36
093 Add/(Less):- Actuarial Gains/loss through OCI	-24,061,329.38	-53,349,231.17
094 <b>Sub-Total</b>	<b>-196,870,608.91</b>	<b>-172,809,279.53</b>
095	0.00	0.00

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RIHAND SUPER THERMAL POWER STATION

NOTE NO. 22 TO THE FS-EQUITY-OTHER EQUITY

( Amount in ₹ )

As at	31.03.2021	31.03.2020
096 <b>FVTOCI Reserve</b>	<b>0.00</b>	<b>0.00</b>
097 As per last financial statements	0.00	0.00
098 Add(Less):-Net gain/loss of equity instruments through OCI	0.00	0.00
099 <b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
100	<b>0.00</b>	<b>0.00</b>
101 <b>Total Other equity</b>	<b>167,459,875,592.17</b>	<b>156,372,525,419.96</b>
102	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

	As at	31.03.2021	31.03.2020
001	<b>LONG TERM BORROWINGS</b>	<b>0.00</b>	<b>0.00</b>
002	<b>Bonds</b>	<b>0.00</b>	<b>0.00</b>
003	<b>Secured</b>	<b>0.00</b>	<b>0.00</b>
004	7.37 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2035 (Fifty Sixth Issue - Public Issue - Series 3A).	0.00	0.00
005	7.62 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2035 (Fifty Sixth Issue - Public Issue - Series 3 B).	0.00	0.00
006	8.61% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4th March 2034 (Fifty First Issue C - Private Placement)	0.00	0.00
007	8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2033 ( Fiftieth Issue - Public Issue - Series 3A)	0.00	0.00
008	8.91% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2033 ( Fiftieth Issue - Public Issue - Series 3B)	0.00	0.00
009	7.37% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 14th December 2031 (Sixty Sixth Issue - Private Placement)	0.00	0.00
010	7.49% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 7th November 2031 (Sixty Fourth Issue - Private Placement)	0.00	0.00
011	7.28 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2030 (Fifty Sixth Issue - Public Issue - Series	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at	31.03.2021	31.03.2020
2A)		
012 7.53 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2030 (Fifty Sixth Issue - Public Issue - Series 2 B).	0.00	0.00
013 7.32% Secured non-cumulative non-convertible redeemable taxable bonds of Rs 10,00,000/- each redeemable at par in full on 17 July 2029 (Sixty Ninth Issue - Private Placement)	0.00	0.00
014 8.63% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4th March 2029 (Fifty First Issue B - Private Placement)	0.00	0.00
015 8.30% Secured non-cumulative non-convertible redeemable taxable bonds of Rs 10,00,000/- each redeemable at par in full on 15 January 2029 (Sixty Seventh Issue - Private Placement)	0.00	0.00
016 8.48% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2028 ( Fiftieth Issue - Public Issue - Series 2A)	0.00	0.00
017 8.73% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2028 ( Fiftieth Issue - Public Issue - Series 2B)	0.00	0.00
018 7.47% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 16th September 2026 (Sixty Third Issue - Private Placement)	0.00	0.00
019 7.58% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at		31.03.2021	31.03.2020
full on 23rd August 2026 (Sixty Second Issue - Private Placement)			
020	8.05% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 5th May 2026 (Sixtieth Issue - Private Placement)	0.00	0.00
021	8.19% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 15th December 2025 (Fifty Seventh Issue - Private Placement)	0.00	0.00
022	7.11 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2025 (Fifty Sixth Issue - Public Issue - Series 1A).	0.00	0.00
023	7.36 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2025 (Fifty Sixth Issue - Public Issue - Series 1 B).	0.00	0.00
024	7.15% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of Rs. 10,00,000/- each redeemable at par in full on 21st August 2025 (Fifty Fifth Issue - Private Placement)	0.00	0.00
025	9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 22nd September 2024 (53rd Issue - private placement).	0.00	0.00
026	9.34% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 24th March 2024 (Fifty Second Issue - private placement)	0.00	0.00
027	8.19% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 10,00,000/- each redeemable at	0.00	0.00



**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at		31.03.2021	31.03.2020
par in full on 4th March 2024 (Fifty First Issue A - Private Placement)			
028	8.41% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2023 ( Fiftieth Issue - Public Issue - Series 1A)	0.00	0.00
029	8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2023 ( Fiftieth Issue - Public Issue - Series 1B)	0.00	0.00
030	9.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 4th May 2023 and ending on 4th May 2027 (Forty fourth issue - private placement)VII	0.00	0.00
031	8.48% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 1st May 2023 (Seventeenth issue - private placement)I	0.00	0.00
032	8.80% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4th April 2023 (Forty ninth issue -private placement	0.00	0.00
033	8.49% Secured non-cumulative non-convertible redeemable taxable fully paid-up bonus debentures of Rs. 12.50 each redeemable at par in three annual installments of Rs. 2.50, Rs. 5.00 and Rs. 5.00 at the end of 8th year, 9th year and 10th year on 25th March 2023, 25th March 2024 and 25th March 2025 respectively (Fifty Fourth Issue -Bonus Debentures)X - (refer Note 5 d)	0.00	0.00
034	8.73% Secured non-cumulative	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at		31.03.2021	31.03.2020
	non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 07th March 2023 (Forty eighth issue - private placement)		
035	9.00% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 25th January 2023 and ending on 25th January 2027 (Forty second issue- private placement)III	0.00	0.00
036	8.84% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4th October 2022 (Forty seventh issue- private placement)VII	0.00	0.00
037	7.93% Secured non-cumulative non-convertible redeemable taxable bonds of ` 10,00,000/- each redeemable at par in full on 03 May 2022 (68th Issue - Private Placement)	0.00	0.00
038	6.72% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 24th November 2021 (Sixty Fifth Issue - Private Placement)	0.00	0.00
039	8.10% Secured Non-Cumulative Non-Convertible Redeemable Taxable Bonds of Rs. 30,00,000/- each redeemable at par in three equal separately transferable redeemable principal parts (STRPP) at the end of 5th year, 10th year & 15th year on 27th May 2021, 27th May 2026 and 27th May 2031 respectively (Sixty First Issue- Private Placement)	0.00	0.00
040	8.33% Secured non-cumulative non-convertible redeemable taxable bonds of Rs.10,00,000/- each redeemable at par in full on 24th February 2021	0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at				31.03.2021	31.03.2020
(Fifty Ninth Issue - Private Placement).					
042	8.93%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 19th January 2021 Thirty seventh issue - private placement)III	0.00	0.00
043	8.18%	Secured	non-cumulative non-convertible redeemable taxable bonds of Rs.10,00,000/- each redeemable at par in full on 31st December 2020 (Fifty Eight Issue - Private Placement).	0.00	0.00
044	8.73 %	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 31st March 2020 (Thirty third issue- private placement)III	0.00	0.00
045	8.78 %	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 9th March 2020 (Thirty first issue- private placement)III	0.00	0.00
046	11.25%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in five equal annual installments commencing from 6th Nov 2019 and ending on 6th Nov 2023 (Twenty seventh issue - private placement)III	0.00	0.00
047	7.89%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 5th May 2019 (Thirtieth issue - private placement)III	0.00	0.00
048	8.65%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4th February 2019 (Twenty ninth issue - private placement)III	0.00	0.00
049	7.50%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at			31.03.2021	31.03.2020
on 12th January 2019 (Nineteenth issue - private placement)II				
050	11%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 21st November 2018 (Twenty eighth issue - private placement)III	0.00	0.00
051	9.3473%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 20th July 2018 and ending on 20th July 2032 (Forty sixth issue - private placement)VII	0.00	0.00
052	9.4376%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 16th May 2018 and ending on 16th May 2032 (Forty fifth issue - private placement)VII	0.00	0.00
053	8.00%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 10th April 2018 (Sixteenth issue -private placement)I	0.00	0.00
054	9.2573%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 2nd March 2018 and ending on 2nd March 2032 (Forty third issue - private placement)III	0.00	0.00
055	9.6713%	Secured non-cumulative non-convertible redeemable taxable bonds	0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at	31.03.2021	31.03.2020
of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 23rd December 2017 and ending on 23rd December 2031 (Forty first issue - private placement)III		
056 9.558% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 29th July 2017 and ending on 29th July 2031(Fourtieth issue-private placement)III	0.00	0.00
057 9.3896% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 9th June 2017 and ending on 9th June 2031(Thirty ninth issue-private placement)III	0.00	0.00
058 9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 22nd March 2017 and ending on 22nd March 2031(Thirty eighth issue-private placement)III	0.00	0.00
059 8.8086% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at	31.03.2021	31.03.2020
year and in annual installments thereafter upto the end of 20th year respectively commencing from 15th December 2016 and ending on 15th December 2030 (Thirty sixth issue - private placement)III		
060 8.785% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15th September 2016 and ending on 15th September 2030 (Thirty fifth issue - private placement)III	0.00	0.00
061 8.71% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 10th June 2016 and ending on 10th June 2030 (Thirty fourth issue - private placement)III	0.00	0.00
062 8.8493% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 25th March 2016 and ending on 25th March 2030 (Thirty second issue - private placement)III	0.00	0.00
063 9.37% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 70,00,000/- each with fourteen separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 4th June 2012 and ending on 4th December 2018 (Twenty fifth issue -	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at		31.03.2021	31.03.2020
private placement)III			
065	9.06% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 70,00,000/- each with fourteen separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 4th June 2012 and ending on 4th December 2018 (Twenty sixth issue - private placement)III	0.00	0.00
066	8.6077% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 9th September 2011 and ending on 9th March 2021 (Twenty fourth issue - private placement)IV	0.00	0.00
067	8.3796% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 5th August 2011 and ending on 5th February 2021 (Twenty third issue - private placement)IV	0.00	0.00
068	8.1771% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2nd July 2011 and ending on 2nd January 2021 (Twenty second issue - private placement)IV	0.00	0.00
069	7.7125% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2nd August 2010 and ending on 2nd February 2020 (Twenty first issue - private placement)V	0.00	0.00
070	7.552% Secured non-cumulative non-convertible redeemable taxable bonds	0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at		31.03.2021	31.03.2020
of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 23rd September 2009 and ending on 23rd March 2019 (Twentieth issue - private placement)VI			
071	9.55% Secured non-cumulative non-convertible taxable redeemable bonds of ₹ 10,00,000/- each with ten equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of the 6th year and in annual installments thereafter upto the end of 15th year respectively from 30th April 2002 (Thirteenth issue - Part B - private placement)VIII	0.00	0.00
072	9.55% Secured non-cumulative non-convertible taxable redeemable bonds of ₹ 10,00,000/- each redeemable at par in ten equal annual installments commencing from the end of 6th year and upto the end of 15th year respectively from 18th April 2002 (Thirteenth issue -Part A - private placement)VIII	0.00	0.00
073		0.00	0.00
074		0.00	0.00
075		0.00	0.00
076		0.00	0.00
077	<b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
078	<b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
079	6.55% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 17 April 2023 (Seventieth Issue - Private Placement)	0.00	0.00
080	6.29% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 11 April 2031 (Seventy First Issue - Private Placement)	0.00	0.00
081	5.45% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 October 2025 (Seventy Second Issue - Private Placement)	0.00	0.00



**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at	31.03.2021	31.03.2020
082 6.43% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 27 January 2031 (Seventy Third Issue - Private Placement)	0.00	0.00
083	0.00	0.00
084	0.00	0.00
085	0.00	0.00
086 <b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
087 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
088 <b>Foreign Currency Notes-Unsecured</b>	<b>0.00</b>	<b>0.00</b>
089 4.50% Fixed Rate Notes Due for repayment on 19th March 2028	0.00	0.00
090 2.75% Fixed rate notes due for repayment on 1st February 2027	0.00	0.00
091 4.25 % Fixed rate notes due for repayment on 26th February 2026	0.00	0.00
092 4.375% Fixed Rate Note due for repayment on 26th November 2024	0.00	0.00
093 4.75 % Fixed Rate Notes due for repayment on 3rd Oct 2022	0.00	0.00
094 7.25 % Fixed green global INR denominated bonds due on 3 May 2022	0.00	0.00
095 7.375 % Fixed green global INR denominated bonds due on 10 August 2021	0.00	0.00
096 5.625% Fixed Rate Notes due for repayment on 14th July 2021	0.00	0.00
097 3.75 % Fixed rate notes due for repayment on 03 April 2024	0.00	0.00
098	0.00	0.00
099	0.00	0.00
100	0.00	0.00
101	0.00	0.00
102 <b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
103 Long term maturities of Finance Lease Obligations (Secured) IX	0.00	0.00
104 Long term maturities of Finance Lease Obligations (Unsecured) X	0.00	0.00
105 <b>Term Loans</b>	<b>0.00</b>	<b>0.00</b>
106 <b>From Banks</b>	<b>0.00</b>	<b>0.00</b>
107 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
108 Rupee Loans	0.00	0.00
109 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
110 Foreign Currency Loans	0.00	0.00
111 Rupee Loans	0.00	0.00
112 <b>From Others</b>	<b>0.00</b>	<b>0.00</b>
113 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
114 Rupee Loans	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at	31.03.2021	31.03.2020
115 Foreign Currency loans (guaranteed by GOI)	0.00	0.00
116 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
117 Foreign Currency loans (guaranteed by GOI)	0.00	0.00
118 Other Foreign currency loans	0.00	0.00
119 Rupee Loans	0.00	0.00
120 <b>Deposits</b>	<b>0.00</b>	<b>0.00</b>
121 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
122 Fixed Deposits	0.00	0.00
123 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
124 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
125 Bonds Application Money Pending Allotment	0.00	0.00
126 <b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
127 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
128	0.00	0.00
129 Less:- Interst accrued but not due on borrowings	0.00	0.00
130 Less:- Current maturities of long term borrowings	0.00	0.00
131 Bonds-Secured	0.00	0.00
132 Fixed Rate Notes	0.00	0.00
133 Foreign currency loans from Banks- unsecured	0.00	0.00
134 Rupee loans from banks- Secured	0.00	0.00
135 Rupee loans from banks- unsecured	0.00	0.00
136 Rupee Term loan from Others - Secured	0.00	0.00
137 Foreign currency loans from others- unsecured (Guaranteed by GOI)	0.00	0.00
138 Other foreign currency loans from others- unsecured	0.00	0.00
139 Rupee loans from others- unsecured	0.00	0.00
140 Finance Lease obligations - secured	0.00	0.00
141 Finance Lease obligations - unsecured	0.00	0.00
200 <b>Total</b>	<b>0.00</b>	<b>0.00</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 24 TO THE FS-NCL-TRADE PAYABLES

( Amount in ₹ )

	As at	31.03.2021	31.03.2020
001	<b>TRADE PAYABLES(NON CURRENT)</b>	<b>0.00</b>	<b>0.00</b>
002	<b>For Goods and Services</b>	<b>0.00</b>	<b>0.00</b>
003	- Micro & Small Enterprises	16,336,269.21	15,622,396.62
004	- Others	6,373,476.89	5,712,598.82
005		0.00	0.00
006	<b>Total</b>	<b>22,709,746.10</b>	<b>21,334,995.44</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 25 TO THE FS-NCL-OTHER FINANCIAL LIABILITIES

( Amount in ₹ )

As at	31.03.2021	31.03.2020
001 <b>OTHER FINANCIAL LIABILITIES (NON-CURRENT)</b>	<b>0.00</b>	<b>0.00</b>
002 Payable for Capital Expenditure	0.00	0.00
003 - Micro & Small Enterprises	100,024.63	36,951.05
004 - Others	681,641,329.62	34,267,850.68
005 Others	0.00	0.00
006 Deposits from contractors and others	0.00	75,100.00
007	0.00	0.00
008	0.00	0.00
009 <b>Total</b>	<b>681,741,354.25</b>	<b>34,379,901.73</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 26 TO THE FS-NCL-PROVISIONS

( Amount in ₹ )

As at	31.03.2021	31.03.2020
001 <b>LONG TERM PROVISIONS</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Provision for Employee Benefits</b>	<b>0.00</b>	<b>0.00</b>
003 Opening Balance	0.00	0.00
004 Additions/ (adjustments) during the year	0.00	0.00
005 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
013	<b>0.00</b>	<b>0.00</b>
014 <b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>

**NOTE NO. 27 TO THE FS-NCL-DEFERRED TAX LIABILITIES (NET)**
**( Amount in ₹ )**

As at	Opening Balance on 01.04.2020	Addition	Closing Balance on 31.03.2021
001 <b>DEFERRED TAX LIABILITIES (NET)</b>			
002 Difference of book depreciation and tax depreciation	0.00	0.00	0.00
003 Less: Deferred tax assets			
004 Provisions & Other disallowances for tax purposes	0.00	0.00	0.00
005 Unabsorbed Depreciation	0.00	0.00	0.00
006 Disallowances u/s 43B of the Income Tax Act, 1961	0.00	0.00	0.00
007	0.00	0.00	0.00
008	0.00	0.00	0.00
009	0.00	0.00	0.00
010	0.00	0.00	0.00
011 MAT credit entitlement	0.00	0.00	0.00
012	0.00	0.00	0.00
013 <b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
014	0.00	0.00	0.00
015 <b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
016 Breakup of deferred tax assets	0.00	0.00	0.00
017 Provision	0.00	0.00	0.00
018 Statutory dues	0.00	0.00	0.00
019 Leave encashment	0.00	0.00	0.00
020 Others	0.00	0.00	0.00
021	0.00	0.00	0.00
022	0.00	0.00	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 28 TO THE FS-NCL-OTHER NON-CURRENT LIABILITIES

( Amount in ₹ )

As at	31.03.2021	31.03.2020
001 Other Non current Liabilities	0.00	0.00
002 Advances from customers and others	0.00	0.00
003 Deposits from contractors and others	0.00	0.00
004 Grants	0.00	0.00
005 <b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION****NOTE NO. 29 TO THE FS-CL-BORROWINGS****( Amount in ₹ )**

As at	31.03.2021	31.03.2020
001 <b>Short Term Borrowings</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Loans repayable on demand</b>	<b>0.00</b>	<b>0.00</b>
003 <b>From Banks</b>	<b>0.00</b>	<b>0.00</b>
004 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
005 Cash Credit	0.00	0.00
006 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
007 Cash Credit	0.00	0.00
008 <b>Other loans-unsecured</b>	<b>0.00</b>	<b>0.00</b>
009 Commercial Papers	0.00	0.00
010 Less: Unamortised discount on Commercial Papers	0.00	0.00
011 <b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
012 <b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>





RIHAND SUPER THERMAL POWER STATION  
NOTE NO. 30 TO THE FS-CL-TRADE PAYABLES

( Amount in ₹ )

	As at	31.03.2021	31.03.2020
001	<b>TRADE PAYABLES</b>	<b>0.00</b>	<b>0.00</b>
002	For Goods and Services	0.00	0.00
003	- Micro & Small Enterprises	227,641,821.80	347,533,123.95
004	- Others	1,688,677,134.68	1,929,276,543.35
005		0.00	0.00
006	<b>Total</b>	<b>1,916,318,956.48</b>	<b>2,276,809,667.30</b>
007		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 31 TO THE FS-CL-OTHER FINANCIAL LIABILITIES**
**( Amount in ₹ )**

As at	31.03.2021	31.03.2020
001 <b>OTHER FINANCIAL LIABILITIES (CURRENT)</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Current maturity of long term borrowings</b>	<b>0.00</b>	<b>0.00</b>
003 Bonds-Secured	0.00	0.00
004 Foreign Currency Fixed Rate Notes	0.00	0.00
005 <b>From Banks</b>	<b>0.00</b>	<b>0.00</b>
006 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
007 Rupee Term Loan	0.00	0.00
008 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
009 Foreign currency loans	0.00	0.00
010 Rupee term loans	0.00	0.00
011 <b>From Others</b>	<b>0.00</b>	<b>0.00</b>
012 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
013 Rupee Term Loan	0.00	0.00
014 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
015 Foreign currency loans (Guaranteed by Government of India)	0.00	0.00
016 Other foreign currency loans	0.00	0.00
017 Rupee term loans	0.00	0.00
018 Fixed deposits	0.00	0.00
019 Sub Total	0.00	0.00
020 Current maturity of finance lease obligations (secured)	0.00	0.00
021 Current maturity of finance lease obligations (unsecured)	0.00	0.00
022 Interest accrued but not due on borrowings	0.00	0.00
023 Unpaid Dividends*	0.00	0.00
024 Unpaid matured deposits and interest accrued thereon*	0.00	0.00
025 Unpaid matured bonds and interest accrued thereon*	0.00	0.00
026 Unpaid bond refund money-Tax free bonds *	0.00	0.00
027 Book Overdraft	0.00	0.00
028 Payable to Customers	0.00	0.00
029 Liability under forward exchange contact	0.00	0.00
030 Hedging cost payable to beneficiaries	0.00	0.00
031 Derivative MTM Liability	0.00	0.00
032 <b>Payable for Capital Expenditure</b>	<b>0.00</b>	<b>0.00</b>
033 - Micro & Small Enterprises	114,779,286.53	118,466,640.74
034 - Others	1,769,755,357.39	1,851,731,237.95
035 <b>Others Payables</b>	<b>0.00</b>	<b>0.00</b>
036 Deposits from contractors and others	53,078,458.78	55,965,895.78
037 Gratuity Obligations	0.00	0.00
038 Payable to employees	10,896,978.39	21,909,288.36
039 Payable to holding company	0.00	0.00
040 Retention on A/c BG encashment (Solar)	0.00	0.00
041 Payable to Solar Payment Security Account	0.00	0.00
042 Others **	140,861,301.14	125,967,538.41



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 31 TO THE FS-CL-OTHER FINANCIAL LIABILITIES

( Amount in ₹ )

As at	31.03.2021	31.03.2020
043 Unspent CSR balance on ongoing Approved CSR projects	0.00	0.00
044 <b>Total</b>	<b>2,089,371,382.23</b>	<b>2,174,040,601.24</b>
045 * Represents the amounts which have not been claimed by the investor/holders of the bonds/fixed deposits. Out of the above, no amount is due for payment to Investor Education and Protection Fund.	0.00	0.00
046 ** Include Payable to Hospital and other payable.	0.00	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 32 TO THE FS-CL-OTHER CURRENT LIABILITIES

( Amount in ₹ )

	As at	31.03.2021	31.03.2020
001	<b>OTHER CURRENT LIABILITIES</b>	<b>0.00</b>	<b>0.00</b>
002	Advances from customers and others	35,638,788.25	10,105,072.69
003	Deferred discount on forward exchange contact	0.00	0.00
004	Tax deducted at source and other statutory dues	59,989,614.61	87,940,416.32
005	Others	0.00	0.00
006	<b>Total</b>	<b>95,628,402.86</b>	<b>98,045,489.01</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 33 TO THE FS-CL-PROVISIONS**
**( Amount in ₹ )**

As at	31.03.2021	31.03.2020
001 <b>SHORT TERM PROVISIONS</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Provision for Employee Benefits</b>	<b>0.00</b>	<b>0.00</b>
003 Opening balance	0.00	0.00
004 Additions/ (adjustments) during the year	0.00	0.00
005 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
028 <b>Provisions for Obligations Incidental to Land Acquisition</b>	<b>0.00</b>	<b>0.00</b>
029 Opening balance	0.00	0.00
030 Additions during the year	0.00	0.00
031 Amounts paid during the year	0.00	0.00
032 Amounts reversed during the year	0.00	0.00
033 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
035 <b>Provision for Tariff Adjustment</b>	<b>0.00</b>	<b>0.00</b>
036 Opening balance	0.00	0.00
037 Additions during the year	0.00	0.00
038 Amounts adjusted during the year	0.00	0.00
039 Amounts reversed during the year	0.00	0.00
040 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
042 <b>Provision for shortage in Fixed Assets Pending Investigation &amp; Others</b>	<b>0.00</b>	<b>0.00</b>
043 Opening balance	633,857.99	196,021.10
044 Additions during the year	0.00	437,836.89
045 Amounts adjusted during the year	54,258.29	0.00
046 Amounts reversed during the year	579,599.70	0.00
047 <b>Closing Balance</b>	<b>0.00</b>	<b>633,857.99</b>
048 <b>Provision for Arbitration</b>	<b>0.00</b>	<b>0.00</b>
049 Opening balance	7,846,960.00	7,428,608.00
050 Additions during the year	418,352.00	418,352.00
051 Amounts used during the year	0.00	0.00
052 Amounts reversed during the year	0.00	0.00
053 <b>Closing Balance</b>	<b>8,265,312.00</b>	<b>7,846,960.00</b>
054 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
055 Opening balance	0.00	0.00
056 Additions during the year	0.00	0.00
057 Amounts used during the year	0.00	0.00
058 Amounts reversed during the year	0.00	0.00
059 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
102	0.00	0.00
103 <b>Total</b>	<b>8,265,312.00</b>	<b>8,480,817.99</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 34 TO THE FS-CL-CURRENT TAX LIABILITIES (NET)

( Amount in ₹ )

As at	31.03.2021	31.03.2020
001 <b>Current liabilities - current tax liabilities (net)</b>	<b>0.00</b>	<b>0.00</b>
002 Opening balance	0.00	0.00
003 Additions during the year	0.00	0.00
004 Amounts adjusted during the year	0.00	0.00
005 Less: Set off against taxes paid	0.00	0.00
006 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 35 TO THE FS--DEFERRED REVENUE

( Amount in ₹ )

As at	31.03.2021	31.03.2020
001 <b>Deferred Revenue</b>	<b>0.00</b>	<b>0.00</b>
002 On account of advance against depreciation	0.00	0.00
003 On account of income from foreign currency fluctuation	1,550,313,000.00	1,990,729,000.00
004 Government grants	0.00	0.00
005	0.00	0.00
006 <b>TOTAL</b>	<b>1,550,313,000.00</b>	<b>1,990,729,000.00</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 36 TO THE FS--REGULATORY DEFERRAL ACCOUNT CREDIT BALANCES

( Amount in ₹ )

As at	31.03.2021	31.03.2020
001 Regulatory deferral account credit balances	0.00	0.00
002 Exchange Differences	0.00	0.00
003	0.00	0.00
004 <b>Total</b>	<b>0.00</b>	<b>0.00</b>



**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 37 TO THE FS--REVENUE FROM OPERATIONS**
**( Amount in ₹ )**

	For the Year ended	31.03.2021	31.03.2020
001	<b>REVENUE FROM OPERATIONS</b>	<b>0.00</b>	<b>0.00</b>
002	<b>Sales</b>	<b>0.00</b>	<b>0.00</b>
003	Energy Sales (including Electricity Duty)	52,226,950,763.00	52,789,447,080.00
004	Less : Advance against depreciation deferred (net)	0.00	0.00
005	Add: Revenue recognized out of advance against depreciation	0.00	0.00
006	Add : Exchange fluctuation receivable from customers	0.00	-78,857,000.00
007	Sale of energy through trading	0.00	0.00
008	Commission (NVVN)	0.00	0.00
009	<b>Sub total</b>	<b>52,226,950,763.00</b>	<b>52,710,590,080.00</b>
010	Less: Rebate to customers	792,896,443.92	240,351,050.12
011	<b>Energy Sales (Total)</b>	<b>51,434,054,319.08</b>	<b>52,470,239,029.88</b>
012	Consultancy, project management and supervision fees	0.00	41,420.00
013	Lease rentals on assets on Operating lease	0.00	0.00
014	Sale of Captive Coal	0.00	0.00
015	Intra Company Elimination	0.00	0.00
017	<b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
018	<b>Total - Sales</b>	<b>51,434,054,319.08</b>	<b>52,470,280,449.88</b>
019	Sale of fly ash/ash products	15,712,224.90	9,410,400.00
020	Less: Transferred to fly ash utilisation reserve fund	-15,712,224.90	-9,410,400.00
021	<b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
022	<b>Other Operating Income</b>	<b>0.00</b>	<b>0.00</b>
023	Interest from customers	0.00	44,084,590.00
024	Energy Internally Consumed *	32,244,116.00	30,711,686.00
025	Interest income on Assets under finance lease	0.00	0.00
026	Recognized from deferred revenue - government grant	0.00	0.00
027	Provision written back- Tariff Adjustment	0.00	0.00
028	Income form Trading of ESCerts	0.00	0.00
029	Income from E-Mobility Business & others	0.00	0.00
030		0.00	0.00
031	<b>Total</b>	<b>51,466,298,435.08</b>	<b>52,545,076,725.88</b>
040	* Valued at variable cost of generation and corresponding amount included in power charges ( Note No. 42)	0.00	0.00
041	Excise duty on sale of flyash,cenospere & ash products	0.00	0.00
042	Energy sales of principal nature (NVVN)	0.00	0.00
043	Energy sales of agency nature (NVVN)	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 38 TO THE FS--OTHER INCOME**
**( Amount in ₹ )**

	For the Year ended	31.03.2021	31.03.2020
001	<b>OTHER INCOME</b>	<b>0.00</b>	<b>0.00</b>
002	<b>Interest from</b>	<b>0.00</b>	<b>0.00</b>
004	<b>Financial assets at amortised cost</b>	<b>0.00</b>	<b>0.00</b>
005	Government Securities (8.5% Tax Free Bonds issued by the State Governments)	0.00	0.00
006	Other Bonds	0.00	0.00
007		0.00	0.00
008	Interest from Government of India Securities-Non-Trade	0.00	0.00
009	Less: Amortiation of premium	0.00	0.00
010	<b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
011	Interest from others	0.00	0.00
012	Loan to State Government in settlement of dues from customers	0.00	0.00
013	Loan to Subsidiary Companies	0.00	0.00
014	Loan to Employees	15,321,469.09	17,127,436.11
015	Deposit with banks	0.00	0.00
016	Foreign Banks	0.00	0.00
017	Interest from Contractors	1,013,678.30	2,488,597.00
018	Interest from Income Tax Refunds	0.00	0.00
019	Less : Refundable to Customers	0.00	0.00
020	<b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
021	Deposits with banks-flyash utilisation reserve fund	0.00	0.00
022	Less: transferred to flyash utilisation reserve fund	0.00	0.00
023	<b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
024	Deposits with banks- DDUGJY funds	0.00	0.00
025	Interest from Contractors- DDUGJY funds	0.00	0.00
026	Transfer to DDUGJY-Advance from customers	0.00	0.00
027	Sub-total	0.00	0.00
030	Others	0.00	0.00
031		0.00	0.00
032	<b>Dividend from</b>	<b>0.00</b>	<b>0.00</b>
033	<b>Longterm investments in</b>	<b>0.00</b>	<b>0.00</b>
034	Subsidiaries	0.00	0.00
035	Joint Ventures	0.00	0.00
036	Equity Instruments	0.00	0.00
037	<b>Current Investments in</b>	<b>0.00</b>	<b>0.00</b>
038	Mutual Funds measured at fairvalue through profit or loss	0.00	0.00
039	Current investments in mutual funds-flyash utilisation reserve fund	0.00	0.00
040	Less: transferred to flyash utilisation reserve fund	0.00	0.00
041	Lease Rent # Ash Brick Plant	0.00	0.00
042	Less: transferred to flyash utilisation reserve fund	0.00	0.00
043	Other non-operating income	0.00	0.00
044	Profit on disposal of PPE	20,849.70	90,379.35
045	Profit on redemption of GOI securities	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 38 TO THE FS--OTHER INCOME**
**( Amount in ₹ )**

	For the Year ended	31.03.2021	31.03.2020
046	Net gain on sale of investments	0.00	0.00
047	Surcharge received from customers	2,124,147,852.00	2,550,077,957.00
048	Hire charges for equipment	151,491.00	67,561.00
049	Gain on option contract / Discount on F.ExchContract	0.00	0.00
050	Provision written back-others	4,648,573.24	6,148,851.93
051	Fair value gains/(losses) on investments in mutual funds at fair value through profit or loss	0.00	0.00
052	Interest from Solar payment security account	0.00	0.00
053	Less : Transferred to SPSA fund	0.00	0.00
054	Interest on "Retention on A/c BG encashment (Solar)"	0.00	0.00
055	Less : Transferred to "Retention on A/c BG encashment (Solar)"	0.00	0.00
056	Miscellaneous Income	399,678,154.90	459,475,589.49
057	<b>Total</b>	<b>2,544,982,068.23</b>	<b>3,035,476,371.88</b>
058	Less:Transferred to Development of Coal Mines- Note 43A	0.00	0.00
059	Less:Transferred to Expenditure during Construction period (net)- Note 43	73,452.78	0.00
061	Less: Others	0.00	0.00
062	<b>Total</b>	<b>2,544,908,615.45</b>	<b>3,035,476,371.88</b>
063		0.00	0.00
064	<b>Details of Miscellaneous Income</b>	<b>0.00</b>	<b>0.00</b>
065	Vehicle Hire Charges.	100,000.00	110,000.00
066	Sale of by products & residuals	0.00	0.00
067	Township recoveries(exl. Hospital Recoveries).	26,531,613.68	22,749,254.28
068	Depreciation written back	0.00	0.00
069	Sale of Scrap.	146,790,506.41	39,568,148.02
070	Receipt under loss of profit policy.	0.00	0.00
071	Receipts under MBD/Fire Policy.	105,876,803.99	315,144,938.00
072	Management development programme.	0.00	0.00
073	Management Fee - Misc (NVVN)	0.00	0.00
074	Others	120,379,230.82	81,903,249.19
075		0.00	0.00
076	<b>Total (Miscellaneous Income)</b>	<b>399,678,154.90</b>	<b>459,475,589.49</b>
077		0.00	0.00
078	<b>Details of Provision written back others</b>	<b>0.00</b>	<b>0.00</b>
079	Doubtful debts	0.00	0.00
080	Doubtful Loans, Advances and Claims	0.00	42,405.00
081	Doubtful Construction Advances	0.00	0.00
082	Shortage in Construction Stores	3,069,811.99	3,559,179.34
083	Shortage in Stores	999,161.55	2,545,110.36
084	Obsolescence in Stores	0.00	2,157.23
085	Unserviceable capital works	0.00	0.00
086	Other Obligation including Arbitration	0.00	0.00
087	Shortage in Fixed Assets	579,599.70	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 38 TO THE FS--OTHER INCOME

( Amount in ₹ )

	31.03.2021	31.03.2020
088 Diminution in value of Investment	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION****NOTE NO. 38A TO THE FS--FUEL COST****( Amount in ₹ )**

	For the Year ended	31.03.2021	31.03.2020
001 <b>FUEL COST</b>		<b>0.00</b>	<b>0.00</b>
002 Coal		0.00	0.00
003 Captive		0.00	0.00
004 Other than captive		30,976,987,392.52	30,178,971,766.14
005 Gas		0.00	0.00
006 Naptha		0.00	0.00
007 Oil		247,723,305.71	239,573,779.54
008 <b>Total</b>		<b>31,224,710,698.23</b>	<b>30,418,545,545.68</b>
009		0.00	0.00
010		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 39 TO THE FS--EMPLOYEE BENEFITS EXPENSE**
**( Amount in ₹ )**

For the Year ended		31.03.2021	31.03.2020
001	<b>EMPLOYEE BENEFITS EXPENSE</b>	<b>0.00</b>	<b>0.00</b>
002	Salaries and wages	1,515,897,759.31	1,650,643,540.59
003	Contribution to provident and other funds	192,912,222.56	173,843,153.43
004	Unwinding of deferred payroll expense	10,267,426.36	11,718,520.61
005	Staff welfare expenses	170,031,632.85	177,064,793.44
006	Less : Expenses transferred to Consultancy group	0.00	0.00
007		0.00	0.00
008	<b>Sub Total</b>	<b>1,889,109,041.08</b>	<b>2,013,270,008.07</b>
009	Less: Employee benefits expense allocated to fuel inventory	121,440,512.65	152,386,279.55
010	Less: Transferred/Allocated to development of coal mines	0.00	0.00
011	Less: Others	0.00	0.00
012	Less: Transferred to fly ash utilisation reserve fund	0.00	0.00
013	Less: Transferred to CSR Expenses	0.00	0.00
014	Reimbursements for employees on secondment	2,735,946.17	1,632.87
015	Less: Transferred to expenditure during construction period (net)- Note 43	19,394,829.87	6,752,468.23
016	<b>TOTAL</b>	<b>1,745,537,752.39</b>	<b>1,854,129,627.42</b>
017	<b>Managerial Remuneration paid/ payable to Directors included above (except for Directors fee which is included in Note 42)</b>	<b>0.00</b>	<b>0.00</b>
018	Salaries and wages	0.00	0.00
019	Contribution to provident and other funds	0.00	0.00
020	Staff welfare expenses	0.00	0.00
021	Directors fee	0.00	0.00
022		0.00	0.00
023		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 40 TO THE FS--FINANCE COSTS**
**( Amount in ₹ )**

	For the Year ended	31.03.2021	31.03.2020
001	<b>FINANCE COSTS</b>	<b>0.00</b>	<b>0.00</b>
002	Finance charges on financial liabilities measured at amortised cost	0.00	0.00
003	Bonds	585,552,890.58	516,674,205.82
004	Government of India Loans	0.00	0.00
005	Foreign currency term loans	19,316,822.83	34,538,576.20
006	Rupee term loans	690,539,220.00	940,580,407.00
007	Public deposits	0.00	0.00
008	Foreign currency bonds/notes	642,399,406.03	625,074,179.63
009	Cash Credit	0.00	0.00
010	Unwinding of discount on account of vendor liabilities	13,871,577.85	6,650,468.54
011	Commercial Papers	0.00	0.00
012	<b>Sub Total</b>	<b>1,951,679,917.29</b>	<b>2,123,517,837.19</b>
013	Interest on non financial items	0.00	0.00
014	<b>Other Borrowing Costs</b>	<b>0.00</b>	<b>0.00</b>
015	Bonds servicing & public deposit exp.	717,948.54	768,686.21
016	Guarantee fee	0.00	0.00
017	Management fee	0.00	0.00
018	Committ charges/exposure premium	0.00	0.00
019	Bond issue expenses	0.00	0.00
020	Legal exp on foreign currency loans	0.00	0.00
021	Foreign currency bonds/notes exp.	0.00	0.00
022	Up-front fee	0.00	0.00
023	Insurance premium on foreign currency loans	0.00	0.00
024		0.00	0.00
025	Others	0.00	0.00
026	<b>Sub Total (Other Borrowing cost)</b>	<b>717,948.54</b>	<b>768,686.21</b>
027		0.00	0.00
028	<b>Exchange differences regarded as an adjustment to borrowing costs</b>	<b>-16,523.48</b>	<b>13,092,857.00</b>
029	<b>Sub Total</b>	<b>1,952,381,342.35</b>	<b>2,137,379,380.40</b>
030	Less: Transferred to Expenditure during construction period (net) - Note 43	22,905,000.49	6,944,586.19
031	Less: Transferred to development of coal mines- Note 43A	0.00	0.00
032		0.00	0.00
033	<b>Total</b>	<b>1,929,476,341.86</b>	<b>2,130,434,794.21</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 41 TO THE FS--DEPRECIATION AND AMORTIZATION EXPENSES**
**( Amount in ₹ )**

	For the Year ended	31.03.2021	31.03.2020
001	<b>Depreciation and amortization expenses</b>	<b>0.00</b>	<b>0.00</b>
002	On property, plant and equipment- Note 2	4,601,404,034.44	4,377,618,570.90
003	On intangible assets- Note 4	4,317.78	115,063.13
004	Sub-total	4,601,408,352.22	4,377,733,634.03
005	Less:	0.00	0.00
006	Allocated to fuel inventory	361,624,623.95	345,650,636.39
007	Transferred to Expenditure during Construction Period (net)- Note 43	0.00	0.00
008		0.00	0.00
009	Transferred/Allocated to development of coal mines	0.00	0.00
010	Adjustment with deferred revenue from deferred foreign currency fluctuation	168,797,000.00	117,252,000.00
011		0.00	0.00
012	<b>Total</b>	<b>4,070,986,728.27</b>	<b>3,914,830,997.64</b>



**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 42 TO THE FS--OTHER EXPENSE**
**( Amount in ₹ )**

	For the Year ended	31.03.2021	31.03.2020
001 <b>OTHER EXPENSES</b>		<b>0.00</b>	<b>0.00</b>
002 Power charges		32,244,116.00	30,711,686.00
003 Less: Recovered from contractors & employees		10,218,976.19	10,254,267.44
004 <b>Sub-Total(Power Charges)</b>		<b>22,025,139.81</b>	<b>20,457,418.56</b>
005 Water charges		139,871,225.00	139,871,221.00
006 Stores consumed		30,362,577.69	25,535,090.39
007 Rent		0.00	0.00
008 Less:Recoveries		0.00	0.00
009 <b>Sub-Total (Rent)</b>		<b>0.00</b>	<b>0.00</b>
010 Cost of captive coal produced		0.00	0.00
011 <b>Repairs &amp; maintenance</b>		<b>0.00</b>	<b>0.00</b>
012 Buildings		157,598,147.58	155,238,832.21
013 Plant & machinery		0.00	0.00
014 Power stations		2,012,457,618.12	1,971,478,736.27
015 Construction equipment		0.00	0.00
016 Others		71,233,169.46	83,615,119.59
017 <b>Sub-total (Repairs &amp; maintenance)</b>		<b>2,241,288,935.16</b>	<b>2,210,332,688.07</b>
019 Load Dispatch Center Charges		16,378,065.00	31,162,794.00
021 Insurance		135,670,380.27	89,337,957.77
022 Interest to beneficiaries		0.00	0.00
023 Rates and taxes		14,719,674.88	15,456,955.21
024 Water cess & environment protection cess		0.00	0.00
025 Training & recruitment expenses		2,517,189.00	3,118,705.45
026 Less: Receipts		0.00	0.00
027 <b>Sub-total (Training and recruitment expenses)</b>		<b>2,517,189.00</b>	<b>3,118,705.45</b>
028 Communication expenses		20,286,959.05	22,862,791.41
029 Inland Travel		60,029,239.63	82,463,633.67
030 Foreign Travel		0.00	120,940.46
031 Tender expenses		0.00	0.00
032 Less: Receipt from sale of tenders		0.00	0.00
033 <b>Sub-total (Tender expenses)</b>		<b>0.00</b>	<b>0.00</b>
034 Payment to auditors		0.00	0.00
035 Audit fee		0.00	0.00
036 Tax audit fee		0.00	0.00
037 Other services		0.00	0.00
038 Reimbursement of expenses		0.00	0.00
039 <b>Sub-total (Payment to Auditors)</b>		<b>0.00</b>	<b>0.00</b>
040 Advertisement and publicity		657,415.36	1,212,507.00
041 Electricity duty		0.00	0.00
042 Security expenses		460,687,189.93	373,349,148.40
043 Entertainment expenses		26,655,551.12	28,763,376.25
044 Expenses for guest house		17,271,947.40	17,150,884.00
045 Less:Recoveries		0.00	0.00
046 <b>Sub-Total (Guest house expenses)</b>		<b>17,271,947.40</b>	<b>17,150,884.00</b>
047 Education expenses		79,480,752.00	55,250,389.00
049 Donations		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 42 TO THE FS--OTHER EXPENSE**
**( Amount in ₹ )**

	For the Year ended	31.03.2021	31.03.2020
050	Ash utilisation & marketing expenses	432,245,428.81	125,414,779.59
051	Directors sitting fee	0.00	0.00
053	Professional charges and consultancy fees	3,302,664.23	3,982,140.37
054	Legal expenses	15,480,086.00	15,785,425.50
055	EDP hire and other charges	1,336,546.59	2,894,018.79
056	Printing and stationery	1,376,617.64	3,525,595.39
057	Oil & gas exploration expenses	0.00	0.00
059	Hiring of vehicles	20,600,619.14	31,158,224.74
061	Reimbursement of L.C.charges on sales realisation	0.00	0.00
062		0.00	0.00
063	Cost of Hedging	166,468.00	0.00
064	Derivatives MTM loss/gain (Net)	0.00	0.00
065	Net loss/(gain) in foreign currency transactions & translations	-11,861,227.40	42,094,396.89
066	Transport Vehicle running expenses	936,937.36	912,881.50
067	Horticulture Expenses	59,411,651.45	59,606,958.76
068	Hire charges- helicopter/aircraft.	0.00	0.00
069	Hire charges of construction equipment	0.00	0.00
070	Demurrage Charges	0.00	0.00
072		0.00	0.00
073	Miscellaneous expenses	21,346,532.03	24,023,844.61
074	Loss on disposal/write-off of PPE	231,316,192.66	16,538,459.84
075	<b>Sub-Total</b>	<b>4,043,560,757.81</b>	<b>3,442,383,226.62</b>
076	Less: Other expenses allocated to fuel inventory	567,027,646.89	507,661,972.36
077	Less: Transferred/Allocated to development of coal mines	0.00	0.00
078	Less: Transferred to fly ash utilisation reserve fund	119,725,415.98	125,414,779.59
079	Less: Hedging cost Net recoverable/payable from/to beneficiaries	0.00	0.00
080	Less: Others	0.00	0.00
081	Less: Transferred to CSR Expenses	71,755,551.00	47,896,790.00
082	Less: Transferred to Expenditure during Construction period(net)-Note 43	5,629,081.66	805,829.61
083	<b>Net (Generation, Administration and Other expenses)</b>	<b>3,279,423,062.28</b>	<b>2,760,603,855.06</b>
084	Corporate Social Responsibility Expenses	117,469,384.87	102,505,554.21
085	Less: Grants-in-aid	0.00	0.00
086	<b>Sub-total (Corporate Social Responsibility Expenses)</b>	<b>117,469,384.87</b>	<b>102,505,554.21</b>
087	<b>Provisions</b>	<b>0.00</b>	<b>0.00</b>
088	Doubtful Debts	0.00	0.00
089	Doubtful loans, advances and claims	0.00	0.00
090	Doubtful Construction Advances	0.00	0.00
091	Shortage in stores	156,818.20	467,794.99
092	Obsolete/Diminution in the value of surplus stores	0.00	467,405.55
093	Shortage in construction stores	6,233,763.36	4,086,971.23
094	Diminution in value of long term investments	0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 42 TO THE FS--OTHER EXPENSE**
**( Amount in ₹ )**

	For the Year ended	31.03.2021	31.03.2020
095	Shortage in Fixed assets	0.00	437,836.89
096	Unfinished minimum work progress from oil & gas exploration	0.00	0.00
097	Unserviceable capital works	0.00	0.00
098	Tariff Adjustment	97,702,000.00	31,997,000.00
099	Others :	0.00	0.00
100	(i) Provision for arbitration cases	418,352.00	418,352.00
101	(ii) Other provisions	0.00	0.00
102	<b>Total (Provisions)</b>	<b>104,510,933.56</b>	<b>37,875,360.66</b>
103		0.00	0.00
104	<b>Total</b>	<b>3,501,403,380.71</b>	<b>2,900,984,769.93</b>
105		0.00	0.00
106	<b>Breakup of miscellaneous expenses.</b>	<b>0.00</b>	<b>0.00</b>
109	Hire charges of office equipment	1,215,364.67	71,228.00
111	Operating expenses of construction equipment	0.00	0.00
112	Operating expenses of D.G. sets	0.00	0.00
113	Furnishing expenses	0.00	2,160,679.12
114	Subscription to trade and other associations.	0.00	0.00
116	Visa and entry permit charges	0.00	0.00
117	Tree plantation exp.-NTPC Land	0.00	0.00
118	Research & development expenses .	0.00	0.00
119	Less : Grants received for Research & development expenses.	0.00	0.00
120	Sub-total (Research & development expenses)	0.00	0.00
121	Bank charges	141,681.42	244,632.08
122	Business Development Expenditure	0.00	0.00
123	Surcharge (NVVN)	0.00	0.00
124	Power Trading Expenses	6,458,871.00	1,343,810.00
125	Brokerage & commission	1,951,671.00	998,531.00
129	Books and periodicals	88,572.00	214,497.55
130	Claims/advances written off	0.00	0.00
131	Stores written off	0.00	0.00
132	Survey & Investigation expenses written off	0.00	0.00
133	Others	11,490,371.94	18,990,466.86
134	<b>Total</b>	<b>21,346,532.03</b>	<b>24,023,844.61</b>
135		0.00	0.00
136		0.00	0.00
137		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 43 TO THE FS--EXPENDITURE DURING CONSTRUCTION PERIOD (NET)**
**( Amount in ₹ )**

For the Year ended		31.03.2021	31.03.2020
001	<b>EXPENDITURE DURING CONSTRUCTION PERIOD (NET)</b>	<b>0.00</b>	<b>0.00</b>
002	A. Employee benefits expense	0.00	0.00
003	Salaries and wages	16,690,366.44	5,979,041.61
004	Contribution to provident and other funds	1,990,589.37	534,992.53
005	Unwinding of deferred payroll expenses	-9,214.56	-3,973.41
006	Staff welfare expenses	723,088.62	242,407.50
007	<b>Total (A)</b>	<b>19,394,829.87</b>	<b>6,752,468.23</b>
008	<b>B. Finance Costs</b>	<b>0.00</b>	<b>0.00</b>
009	Finance charges on financial liabilities measured at amortised cost	0.00	0.00
010	Bonds	991,703.48	0.00
011	Foreign currency term loans	202,998.16	0.00
012	Rupee term loans	12,796,466.00	3,403,287.00
013	Foreign currency bonds/notes	0.00	0.00
014	Unwinding of discount on account of vendor liabilities	8,870,269.79	456,585.19
015	Others	0.00	0.00
016		0.00	0.00
017	Other Borrowings Costs	0.00	0.00
018	Guarantee Commission	0.00	0.00
019	Management Fees/Arrangers Fees	0.00	0.00
020	Commitment charges/Exposure Premium	0.00	0.00
021	Legal Expenses on foreign currency loans	0.00	0.00
022	Foreign currency bonds/notes expenses	0.00	0.00
023	Foreign Credit Insurance Premium	0.00	0.00
024	Upfront Fee	0.00	0.00
025	Exchange Differences	0.00	2,651,489.00
026	Others	476,690.72	0.00
027	Exchange differences regarded as adjustment to interest cost	-433,127.66	433,225.00
028	<b>Total (B)</b>	<b>22,905,000.49</b>	<b>6,944,586.19</b>
029		0.00	0.00
030	C. Depreciation and amortisation	0.00	0.00
031	<b>D. Generation , administration and other expenses</b>	<b>0.00</b>	<b>0.00</b>
032	Power charges	2,653,635.00	239,312.00
033	Less: Recovered from contractors & employees	18,237.39	0.00
034	<b>Sub-total(Net power charges)</b>	<b>2,635,397.61</b>	<b>239,312.00</b>
035	Water charges	0.00	0.00
036	Rent	0.00	0.00
037	Repairs & maintenance	0.00	0.00
038	Buildings	0.00	0.00
039	Construction equipment	0.00	0.00
040	Others	161,732.04	0.00
041		0.00	0.00
042	Insurance	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 43 TO THE FS--EXPENDITURE DURING CONSTRUCTION PERIOD (NET)**
**( Amount in ₹ )**

For the Year ended		31.03.2021	31.03.2020
043	Rates and taxes	0.00	0.00
044	Communication expenses	202,309.00	46,289.00
045	Travelling expenses	1,061,207.26	489,962.71
046	Tender expenses	0.00	0.00
047	Less: Income from sale of tenders	0.00	0.00
048	<b>Sub-total (Net tender expenses)</b>	<b>0.00</b>	<b>0.00</b>
049	Advertisement and publicity	0.00	0.00
050	Security expenses	0.00	0.00
051	Entertainment expenses	96,997.19	29,187.94
052	Guest house expenses	0.00	0.00
053	Less: Receipt from guest house	0.00	0.00
054	<b>Sub-total (Net Guest House Expenses)</b>	<b>0.00</b>	<b>0.00</b>
055	Education expenses	0.00	0.00
056	Brokerage & Commission	0.00	0.00
057	Books and periodicals	0.00	0.00
058	Community development expenses	0.00	0.00
059	Professional charges and consultancy fee	0.00	0.00
060	Legal expenses	0.00	0.00
061	EDP Hire and other charges	0.00	0.00
062	Printing and stationery	0.00	0.00
063	Miscellaneous expenses	1,471,438.56	1,077.96
064	<b>Total (D)</b>	<b>5,629,081.66</b>	<b>805,829.61</b>
065	<b>Total (A+B+C+D)</b>	<b>47,928,912.02</b>	<b>14,502,884.03</b>
066	<b>E. Less: Other Income</b>	<b>0.00</b>	<b>0.00</b>
067	Interest from	0.00	0.00
068	Indian banks	0.00	0.00
069	Foreign banks	0.00	0.00
070	Others	0.00	0.00
071	Contractors	0.00	0.00
072	Hire charges	0.00	0.00
073	Sale of scrap	0.00	0.00
074	Exchange Differences	0.00	0.00
075	Miscellaneous income	73,452.78	0.00
076	<b>TOTAL (E)</b>	<b>73,452.78</b>	<b>0.00</b>
077	F. Net actuarial gain/loss OCI	201,530.19	0.00
078		0.00	0.00
079	<b>GRAND TOTAL (A+B+C+D-E+F)</b>	<b>48,056,989.43</b>	<b>14,502,884.03</b>
080		0.00	0.00
081	<b>* Balance carried to Capital Work-in-progress - (Note 3)</b>	<b>48,056,989.43</b>	<b>14,502,884.03</b>

**RIHAND SUPER THERMAL POWER STATION  
BALANCE SHEET**

(Amount in ₹)

As at	Note	31.03.2022	31.03.2021	
001	<b>ASSETS</b>	0.00	0.00	
002		0.00	0.00	
003	<b>NON-CURRENT ASSETS</b>	0.00	0.00	
004	PROPERTY, PLANT & EQUIPMENT	2	50,524,836,213.05	53,519,450,765.67
005	CAPITAL WORK-IN-PROGRESS	3	6,758,465,834.90	3,031,095,010.70
006	INTANGIBLE ASSETS	4	15,262.40	15,262.40
007	INTANGIBLE ASSETS UNDER DEVELOPMENT	5	0.00	0.00
008	<b>FINANCIAL ASSETS</b>	0.00	0.00	
009	I) INVESTMENTS IN SUBSIDIARIES AND JOINT VENTURES	6	0.00	0.00
010	II) INVESTMENTS	7	0.00	0.00
011	III) TRADE RECEIVABLES	8	0.00	0.00
012	IV) LOANS	9	114,504,593.97	105,360,479.31
013	V) OTHER FINANCIAL ASSETS	10	0.00	0.00
015	OTHER NON-CURRENT ASSETS	11	1,021,504,054.55	2,225,545,606.02
016	<b>TOTAL NON-CURRENT ASSETS</b>		<b>58,419,228,958.88</b>	<b>58,980,576,136.10</b>
017			0.00	0.00
018	<b>CURRENT ASSETS</b>	0.00	0.00	
019	INVENTORIES	12	6,407,743,216.55	4,599,507,206.27
020	<b>FINANCIAL ASSETS</b>	0.00	0.00	
021	I) INVESTMENTS	13	0.00	0.00
022	II) TRADE RECEIVABLES	14	1,733,397.09	15,464,355.69
023	III) CASH AND CASH EQUIVALENTS	15	0.00	395,123.40
024	IV) BANK BALANCES OTHER THAN CASH AND CASH EQUIVALENTS	16	0.00	0.00
025	V) LOANS	17	75,812,587.55	68,814,526.95
026	VI) OTHER FINANCIAL ASSETS	18	149,290,961.93	158,476,059.43
027	CURRENT TAX ASSETS (NET)		0.00	0.00
028			0.00	0.00
029	OTHER CURRENT ASSETS	19	455,009,517.62	459,505,591.13
030			0.00	0.00
031	<b>TOTAL CURRENT ASSETS</b>		<b>7,089,563,680.84</b>	<b>5,322,257,962.87</b>
032	REGULATORY DEFERRAL ACCOUNT DEBIT BALANCES	20	1,151,297,074.19	671,086,456.17
034	<b>TOTAL ASSETS</b>		<b>66,660,115,723.91</b>	<b>64,973,914,545.14</b>
035	<b>EQUITY AND LIABILITIES</b>	0.00	0.00	
036	<b>EQUITY</b>	0.00	0.00	
037	EQUITY SHARE CAPITAL	21	0.00	0.00
038	OTHER EQUITY	22	177,939,235,212.48	166,407,994,973.17
041	<b>TOTAL EQUITY</b>		<b>177,939,235,212.48</b>	<b>166,407,994,973.17</b>
042			0.00	0.00
043	<b>LIABILITIES</b>	0.00	0.00	
044	<b>NON-CURRENT LIABILITIES</b>	0.00	0.00	
045	<b>FINANCIAL LIABILITIES</b>	0.00	0.00	
046	I) BORROWINGS	23	0.00	0.00
047	II) LEASE LIABILITIES	23A	0.00	0.00
048	III) TRADE PAYABLES		0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION**  
**BALANCE SHEET**

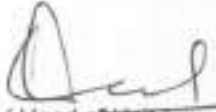
( Amount in ₹ )

As at	Note	31.03.2022	31.03.2021
049 - TOTAL OUTSTANDING DUES OF MICRO AND SMALL ENTERPRISES	24	7,830,370.14	16,336,269.21
050 - TOTAL OUTSTANDING DUES OF CREDITORS OTHER THAN MICRO AND SMALL ENTERPRISES	24	11,108,850.81	5,373,476.89
051 IV) OTHER FINANCIAL LIABILITIES	25	213,937,434.72	681,741,354.25
052 PROVISIONS	26	0.00	0.00
053 DEFERRED TAX LIABILITIES (NET)	27	0.00	0.00
054 OTHER NON-CURRENT LIABILITIES	28	0.00	0.00
055		0.00	0.00
056 TOTAL NON-CURRENT LIABILITIES		232,876,455.67	794,451,190.35
057		0.00	0.00
058 CURRENT LIABILITIES		0.00	0.00
059 FINANCIAL LIABILITIES		0.00	0.00
060 I) BORROWINGS	29	0.00	0.00
061 II) LEASE LIABILITIES	25A	0.00	0.00
062 II) Trade Payables		0.00	0.00
063 - TOTAL OUTSTANDING DUES OF MICRO AND SMALL ENTERPRISES	30	220,046,789.16	227,041,821.80
064 - TOTAL OUTSTANDING DUES OF CREDITORS OTHER THAN MICRO AND SMALL ENTERPRISES	30	3,104,879,539.52	1,688,677,134.68
065 III) OTHER FINANCIAL LIABILITIES	31	3,800,418,199.66	2,089,371,382.23
066 OTHER CURRENT LIABILITIES	32	150,807,804.34	95,628,402.86
067 PROVISIONS	33	8,683,664.00	8,265,312.00
068 CURRENT TAX LIABILITIES (NET)	34	0.00	0.00
069		0.00	0.00
070 TOTAL CURRENT LIABILITIES		7,284,835,996.68	4,109,584,953.57
071		0.00	0.00
072 DEFERRED REVENUE	35	1,521,059,000.00	1,580,313,000.00
073 REGULATORY DEFERRAL ACCOUNT CREDIT BALANCES	36	0.00	0.00
074 INTER UNIT ACCOUNTS		-120,317,930,940.92	-107,790,428,581.85
075		0.00	0.00
076 TOTAL EQUITY AND LIABILITIES		66,660,115,723.91	64,673,914,545.14
077 Significant Accounting Policies as per Note 1		0.00	0.00
078		0.00	0.00
079 The accompanying notes 1 to 44 form an integral part of these financial statements.		0.00	0.00
080		0.00	0.00

( Auditor Initial & Stamp )

NARENDER KUMAR CHATRATH  
( Head of Finance )

Digitally signed by  
NARENDER KUMAR  
CHATRATH  
Date: 2022.04.27  
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( Head of Unit )

देवव्रत पॉल/DEBABRATA PAUL  
मुख्य महासंचालक/Chief General Manager  
एनटीपीसी लिमिटेड/NTPC Ltd.  
रिहंद सुपर थर्मल पावर प्रोजेक्ट/RH-STPP  
रिहंद नगर, सोनमढ़, बिहार/Sonebhadra 231223

**RIHAND SUPER THERMAL POWER STATION**  
**STATEMENT OF PROFIT AND LOSS**

( Amount in ₹ )

	For the Year ended	Note	31.03.2022	31.03.2021
001	Revenue		0.00	0.00
002	Revenue from operations	37	52,147,559,605.11	50,204,578,917.91
003	Other income	38	1,201,322,056.93	2,757,456,514.45
005	<b>Total income</b>		<b>53,348,881,662.04</b>	<b>52,962,035,432.36</b>
007	Expenses		0.00	0.00
008	Fuel including cost of captive coal	36A	30,643,568,568.19	31,227,551,790.05
009	Employee benefits expense	39	1,807,965,286.44	1,745,537,752.29
010	Electricity purchased for trading		0.00	0.00
011	Finance costs	40	1,466,105,749.88	1,529,476,341.85
012	Depreciation and amortization expenses	41	4,182,729,574.91	4,079,986,728.27
013			0.00	0.00
014	Other expenses	42	3,380,456,005.46	3,501,403,380.71
015	CC expenses charge to revenue		807,250,921.12	723,635,735.02
016	Less: Unit expenses transferred to CC		0.00	0.00
017	<b>Total expenses</b>		<b>42,288,126,406.00</b>	<b>43,198,791,737.31</b>
020	<b>Profit before exceptional items &amp; tax</b>		<b>11,060,755,256.04</b>	<b>9,763,375,795.05</b>
021	Exceptional items		0.00	0.00
024	<b>Profit before tax</b>		<b>11,060,755,256.04</b>	<b>9,763,375,795.05</b>
027	Tax expense:		0.00	0.00
028	Current tax		0.00	0.00
031	Deferred tax		0.00	0.00
034			0.00	0.00
035	<b>Total Tax expense</b>		<b>0.00</b>	<b>0.00</b>
036	<b>Profit for the period before regulatory deferral account balances</b>		<b>11,060,755,256.04</b>	<b>9,763,375,795.05</b>
037	Movement in regulatory deferral account balances		0.00	0.00
038	Regulatory deferred account - deferred		0.00	0.00
039	Others		480,210,618.02	304,375,947.88
040	Tax impact on Regulatory deferral account balances		0.00	0.00
041	<b>Movement in Regulatory deferral account balances (Net of Tax)</b>		<b>480,210,618.02</b>	<b>304,375,947.88</b>
042	<b>Profit for the period/ year</b>		<b>11,540,965,874.06</b>	<b>10,067,751,742.93</b>
043	Other comprehensive income		0.00	0.00
044	(A) Items that will not be reclassified to profit or loss		0.00	0.00
045	- Net gains/(losses) on fair value of equity instruments through other comprehensive income		0.00	0.00
046	Income tax on above that will not be reclassified to profit or loss		0.00	0.00
047	- Net actuarial gains/(losses) on defined benefit plans		-8,725,634.75	-24,061,329.38
048	Income tax on above that will not be reclassified to profit or loss		0.00	0.00
052		43	0.00	0.00
053	<b>Other comprehensive income for the year, net of income tax</b>		<b>-8,725,634.75</b>	<b>-24,061,329.38</b>
054			0.00	0.00
055	<b>Total Comprehensive income for the year</b>		<b>11,531,240,239.31</b>	<b>10,043,690,413.55</b>
069			0.00	0.00

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A Maharatna Company

RIHAND SUPER THERMAL POWER STATION  
STATEMENT OF PROFIT AND LOSS

( Amount in ₹ )

For the Year ended	Note	31.03.2022	31.03.2021
070 Earnings per equity share:		0.00	0.00
071 Basic & Diluted		0.00	0.00
072 Significant Accounting Policies		0.00	0.00
073 Expenditure during construction period (Net)Dev. of coal mines (net) 43,43A		0.00	0.00
074 The accompanying notes 1 to 44 form an integral part of these financial statements.		0.00	0.00

( Auditor Initial & Stamp )

NARENDER KUMAR CHATRATH  
Digitally signed by NARENDER KUMAR CHATRATH  
DN: c=IN, o=NTPC, ou=RIHAND, email=NARENDER.KUMAR.CHATRATH@ntpc.co.in, cn=NARENDER KUMAR CHATRATH  
( Head of Finance )

( Head of Unit )

देबब्रत पॉल/DEBABRATA PAU  
मुख्य महासंचालक/Chief General Manager  
एनटीपीसी लिमिटेड/NTPC Ltd  
रिहंद सुपर थर्मल पावर प्रोजेक्ट/RIHAND SUPER  
थर्मल पावर प्रोजेक्ट/Rihand Super Thermal Power Project

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मुख्य महासंचालक (एनटीपीसी)  
Chief General Manager (NTPC)  
एन टी पी सी लिमिटेड/NTPC LIMITED

RIHAND SUPER THERMAL POWER STATION

OTHER COMPREHENSIVE INCOME

( Amount in ₹ )

	For the Year ended	31.03.2022	31.03.2021
001		0.00	0.00
002	<b>Other comprehensive income</b>	<b>0.00</b>	<b>0.00</b>
003	<b>(A) Items that will not be reclassified to profit or loss</b>	<b>0.00</b>	<b>0.00</b>
004	- Net gains/(losses) on fair value of equity instruments through other comprehensive income	0.00	0.00
005	Income tax on above that will not be reclassified to profit or loss	0.00	0.00
006	- Net actuarial gains/(losses) on defined benefit plans	-9,725,634.75	-24,061,329.38
007	Income tax on above that will not be reclassified to profit or loss	0.00	0.00
008		0.00	0.00
009	<b>(B) Items that will be reclassified to profit or loss</b>	<b>0.00</b>	<b>0.00</b>
010	Income tax relating to above items that will be reclassified to profit or loss	0.00	0.00
011		0.00	0.00
012	<b>Other comprehensive income for the year, net of income tax</b>	<b>-9,725,634.75</b>	<b>-24,061,329.38</b>
013		0.00	0.00
014	<b>Total comprehensive income for the year (A+B)</b>	<b>-9,725,634.75</b>	<b>-24,061,329.38</b>

Note forming part of Balance Sheet  
**Note 2 : Property, Plant And Equipment**  
**Business Area :1005**

Asset Class	Opening Gross Block As At 01.04.2021	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2022	Opening Depreciation As At 01.04.2021	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2022	Net Block As At 31.03.2022	Net Block As At 31.03.2021
<b>1 TANGIBLE ASSETS</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>2 Land : (including development expenses)</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>3 Freehold</b>	355016843.25	0.00	0.00	355016843.25	0.00	0.00	0.00	0.00	355016843.25	355016843.25
<b>4 Right of Use</b>	312564894.63	0.00	0.00	312564894.63	75199268.84	10281521.39	0.00	85480790.23	227084104.40	237365625.79
<b>5 Submergence</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>6 Right of use - Coal Bearing Area Land</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>7 Roads,bridges, culverts &amp; helipads</b>	636606867.94	(269253.24)	0.00	636337614.70	133087366.86	23512878.36	0.00	156600245.22	479737369.48	503519501.08
<b>8 Building :</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 Freehold</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>10 Main plant</b>	1852956664.03	0.00	0.00	1852956664.03	375720477.77	62828072.55	0.00	438548550.32	1414408113.71	1477236186.26
<b>11 Others</b>	2548970049.68	12664437.15	0.00	2561634486.83	483509018.08	94762460.79	0.00	578271478.87	1983363007.96	2065461031.60
<b>12 Right of Use</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>13 Temporary erection</b>	231168.13	0.00	0.00	231168.13	231168.13	0.00	0.00	231168.13	0.00	0.00
<b>14 Water Supply, drainage &amp; sewerage system</b>	546047713.55	174330.49	0.00	546222044.04	122630859.19	24515723.17	0.00	147146582.36	399075461.68	423416854.36
<b>15 Hydraulic works, barrages, dams, tunnels and power channel</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>16 MGR track and signalling system</b>	1354372126.56	(593252.00)	0.00	1353778874.56	353590079.10	72484055.87	0.00	426074134.97	927704739.59	1000782047.46
<b>17 Railway siding</b>	1528212.48	0.00	0.00	1528212.48	647947.27	64482.46	0.00	712429.73	815782.75	880265.21
<b>18 Earth dam reservoir</b>	1456921.40	0.00	0.00	1456921.40	0.00	0.00	0.00	0.00	1456921.40	1456921.40
<b>19 Plant and machinery(including associated civil works)</b>	73454969525.57	1419281937.84	(709636889.90)	74164614573.51	26464731965.27	4360969561.58	(891144942.35)	29934556584.50	44230057989.01	46990237560.30
<b>Owned Asset</b>										

  
 Anil Kumar (Accountant)  
 Anil Kumar (Accountant)  
 Anil Kumar (Accountant)

**Note forming part of Balance Sheet**  
**Note 2 : Property, Plant And Equipment**  
**Business Area :1005**

Asset Class	Opening Gross Block As At 01.04.2021	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2022	Opening Depreciation As At 01.04.2021	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2022	Net Block As At 31.03.2022	Net Block As At 31.03.2021
20 Plant and machinery(including associated civil works) -Right of use Asset	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21 Furniture and fixtures	174736234.40	328989.06	(100504.92)	174964718.54	65711646.15	12929549.78	(46237.44)	78594958.49	96369760.05	109024588.25
22 Assets under 5 Km Scheme	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23 Vehicles including speedboats / helicopter- Owned	6558165.35	639950.00	0.00	7198115.35	2606042.68	601648.03	0.00	3207690.71	3990424.64	3952122.67
24 Vehicles including speedboats / helicopter - Leased	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25 Office equipment	98040349.95	4307450.36	(2030608.41)	100317191.90	49456082.48	11847049.85	(1608611.96)	59694520.37	40622671.53	48584267.47
26 EDP, WP machines and satcom equipment	91240904.66	2416725.00	(12113429.83)	81544199.83	72829119.51	5817477.91	(12113429.83)	66533167.59	15011032.24	18411785.15
27 Construction equipments	65110895.86	0.00	0.00	65110895.86	27046537.19	2027521.74	0.00	29074058.93	36036836.93	38064358.67
28 Electrical Installations	331082244.94	0.00	(4203.95)	331078040.99	118467469.81	21541198.64	(928.05)	140007740.40	191070300.59	212614775.13
29 Communication equipments	31934747.30	21600.00	0.00	31956347.30	23821990.01	782560.36	0.00	24604550.37	7351796.93	8112757.29
30 Hospital equipments	30920925.67	4058616.65	(40145.34)	34939396.98	7684258.47	9759155.28	(12511.80)	17430901.95	17508495.03	23236667.20
31 Laboratory and workshop equipments	145735570.77	3673430.05	0.00	149409000.82	43658963.64	7793475.30	0.00	51452438.94	97956561.88	102076607.13
32 Capital expenditure on assets not owned by the Company	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33 Assets of Government	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

  
 Anil Kumar  
 Add. General Manager (Commercial)  
 एन टी सी लिमिटेड/NTPC LIMITED



**Note forming part of Balance Sheet**  
**Note 2 : Property, Plant And Equipment**  
**Business Area :1005**

**Details of Adjustments of Gross Block and Depreciation/Amortization**

Particulars	Gross Block		Depreciation/Amortization	
	Tangible As At: 31.03.2022	Tangible As At: 31.03.2021	Tangible As At: 31.03.2022	Tangible As At: 31.03.2021
Disposal of assets	(352672.50)	(2046638.78)	(352672.50)	(2032443.32)
Retirement of assets	(995236466.75)	(360826985.21)	(926400049.04)	(129619476.73)
Cost adjustments	154890055.40	(61206706.58)	0.00	0.00
Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Depreciation on construction equipment capitalised as EDC	0.00	0.00	0.00	0.00
Prior Period Depreciation due to Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Special Depreciation (As per New Policy)	0.00	0.00	0.00	0.00
Transfer in /out because of Inter Unit transfers	116773301.50	16089873.65	21826060.11	4559794.14
Others	0.00	0.00	0.00	0.00
<b>TOTAL</b>	<b>(723925782.35)</b>	<b>(407990456.92)</b>	<b>(904926661.43)</b>	<b>(127092125.91)</b>

Note:- Additions during the year includes capital expenditure towards CSR (in Rs.) : 0.00

  
 Anil Kumar (Anil Kumar)  
 Anil Kumar (Anil Kumar)  
 Anil Kumar (Anil Kumar)

## Note forming part of Balance Sheet

## Note 3: Capital-Work-in-Progress

## Business Area: RIHAND SUPER THERMAL POWER STATION

SI No	Asset Class	As At 01.04.2021	Addition	Deduction/ Adjustment	Capitalized	As At 31.03.2022
	1	2	3	4	5	6
1	CAPITAL WORK-IN-PROGRESS					
2	Development of land					
3	Roads, bridges, culverts & helipads		369117.82	(369117.82)		
4	Piling and foundation					
5	Buildings :					
6	Main plant					
7	Others	30484260.95	69392323.59	(6172504.26)	9794375.87	83909704.41
8	Temporary erection					
9	Water supply, drainage and sewerage system	983235.00	174330.49	(174330.49)	983235.00	
10	Hydraulic works, barrages, dams, tunnels and power channel					
11	MGR track and signalling system					
12	Railway siding					
13	Earth dam reservoir					
14	Plant and equipment	2517433025.87	4706070908.49	(53446737.16)	864768104.75	6305289092.45
15	Furniture and fixtures	24645.15	14449.15	(0.30)	39094.00	
16	Vehicles					
17	Office equipment	35588.00			35588.00	
18	EDP/WP machines & satcom equipment					
19	Construction equipments					
20	Electrical installations					
21	Communication equipment					
22	Hospital equipments	256888.29		(0.29)	256888.00	
23	Laboratory and workshop equipments					
24	Assets under 5Km Scheme of the GOI					
25	Capital expenditure on assets not owned by the company					
26	Expenditure towards development of coal mines					
27	Survey,Investigation,Consultancy & Supervision Cha	2987667.50	(2987667.50)			
28	Difference in exchange on foreign currency loans					

## Note forming part of Balance Sheet

## Note 3: Capital-Work-in-Progress

## Business Area: RIHAND SUPER THERMAL POWER STATION

SI No	Asset Class	As At 01.04.2021	Addition	Deduction/ Adjustment	Capitalized	As At 31.03.2022
	1	2	3	4	5	6
29	Expenditure towards diversion of forest land					
30	Pre-commissioning expenses (net)					
31	ExpPendAlloca-oth ex attribut Project					
32	Expenditure During Construction Period (net)*		120562893.48	(658525.44)		119904368.04
33	LESS : Allocated to related works		119904368.04			119904368.04
34	LESS : Provision for Unservicable works					
35	<b>Construction stores (At Cost)</b>					
36	Steel	30232834.59		(27684050.92)		2548783.67
37	Cement	2028131.88		(133175.58)		1894956.30
38	Others	453879656.07	35319846.24	(122905473.69)		366294028.62
39	<b>Sub-total</b>	<b>486140622.54</b>	<b>35319846.24</b>	<b>(150722700.19)</b>		<b>370737768.59</b>
40	LESS : Provision for shortages	7250922.60		(5781192.05)		1469730.55
41	<b>Sub-total</b>	<b>478889699.94</b>	<b>35319846.24</b>	<b>(144941508.14)</b>		<b>369268038.04</b>
42	<b>Total CWIP</b>	<b>3031095010.70</b>	<b>4809011833.72</b>	<b>(205762723.90)</b>	<b>875877285.62</b>	<b>6758466834.90</b>
43						
44						
45	<b>PREVIOUS YEAR TOTAL</b>	<b>823654175.83</b>	<b>2730008295.62</b>	<b>(461315487.17)</b>	<b>463240206.90</b>	<b>3031095010.70</b>

Note:- Additions during the year includes capital expenditure towards CSR (in Rs.) :

0.00



Note forming part of Balance Sheet  
**Note-4 Non Current Assets- Intangible Assets**  
**Business Area :1005**

Asset Class	Opening Gross Block As At 01.04.2021	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2022	Opening Depreciation As At 01.04.2021	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2022	Net Block As At 31.03.2022	Net Block As At 31.03.2021
<b>INTANGIBLE ASSETS</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>1 Right to Use- Land</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>2 -Others</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>3 -Software</b>	4773867.26	0.00	0.00	4773867.26	4758604.86	0.00	0.00	4758604.86	15262.40	15262.40
<b>Grand Total (Intangible)</b>	4773867.26	0.00	0.00	4773867.26	4758604.86	0.00	0.00	4758604.86	15262.40	15262.40
<b>Grand Total Prev Year (Intangible)</b>	4773867.26	0.00	0.00	4773867.26	4754287.08	4317.78	0.00	4758604.86	15262.40	19580.18

  
 Chief Financial Officer (Accounting)  
 Add. General Manager (Commercial)  
 एन टी सी लिमिटेड/NTSC LIMITED

Note forming part of Balance Sheet  
**Note-4 Non Current Assets- Intangible Assets**  
**Business Area :1005**

<b>Details of Adjustments of Gross Block and Depreciation/Amortization</b>				
<b>Particulars</b>	<b>Gross Block</b>		<b>Depreciation/Amortization</b>	
	<b>InTangible As At: 31.03.2022</b>	<b>InTangible As At: 31.03.2021</b>	<b>InTangible As At: 31.03.2022</b>	<b>InTangible As At: 31.03.2021</b>
Disposal of assets	0.00	0.00	0.00	0.00
Retirement of assets	0.00	0.00	0.00	0.00
Cost adjustments	0.00	0.00	0.00	0.00
Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Depreciation on construction equipment capitalised as EDC	0.00	0.00	0.00	0.00
Prior Period Depreciation due to Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Special Depreciation (As per New Policy)	0.00	0.00	0.00	0.00
Transfer in /out because of Inter Unit transfers	0.00	0.00	0.00	0.00
Others	0.00	0.00	0.00	0.00
<b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Note:- Additions during the year includes capital expenditure towards CSR (in Rs.) : 0.00

  
 Anil Kumar (Anil Kumar)  
 Anil Kumar (Anil Kumar)  
 Anil Kumar (Anil Kumar)

## Note forming part of Balance Sheet

## Note 5: Intangible Assets under Development

## Business Area: RIHAND SUPER THERMAL POWER STATION

SI No	Asset Class	As At 01.04.2021	Addition	Deduction/ Adjustment	Capitalized	As At 31.03.2022
	1	2	3	4	5	6
1	INTANGIBLE ASSETS UNDER DEVELOPMENT					
2	Software					
3	Right to use Others					
4	Exploration and Evaluation Expenditure - Coal Mini					
5	Exploratory wells-in-progress					
6	<b>Less: Provision for exploratory wells-in-progress</b>					
7	<b>Total</b>					
8	<b>PREVIOUS YEAR TOTAL-I</b>					

Note:- Additions during the year includes capital expenditure towards CSR (in Rs.) :

0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 6 TO THE FS-NCA-INVESTMENTS IN SUBSIDIARIES & JOINT VENTURES**

( Amount in ₹ )

As at	No. of shares	Face value	31.03.2022	31.03.2021
001	<b>NON CURRENT INVESTMENTS- INVESTMENTS IN SUBSIDIARIES AND JOINT VENTURES</b>		<b>0.00</b>	<b>0.00</b>
012	<b>EQUITY INSTRUMENTS - UNQUOTED-(FULLY PAID UP UNLESS OTHERWISE STATED, AT COST)</b>		<b>0.00</b>	<b>0.00</b>
013	<b>SUBSIDIARY COMPANIES</b>		<b>0.00</b>	<b>0.00</b>
014	PATRATU VIDYUT UTPADAN NIGAM LTD.		0.00	0.00
015	NTPC ELECTRIC SUPPLY COMPANY LTD.		0.00	0.00
016	NTPC VIDYUT VYAPAR NIGAM LTD.		0.00	0.00
017	NABINAGAR POWER GENERATING COMPANY LTD.		0.00	0.00
018	KANTI BIJLEE UTPADAN NIGAM LTD.		0.00	0.00
019	BHARTIYA RAIL BIJLEE COMPANY LTD.		0.00	0.00
020	NTPC MINING LTD (NML)		0.00	0.00
021	THDC INDIA LTD.		0.00	0.00
022	NEEPCO LTD.		0.00	0.00
023	NTPC EDMC Waste Solutions Pvt Ltd		0.00	0.00
024	NTPC Renewables Energy Ltd		0.00	0.00
025	Ratnagiri Gas & Power Pvt. Limited (RGPPL)		0.00	0.00
026			0.00	0.00
027			0.00	0.00
028			0.00	0.00
029			0.00	0.00
030	<b>SUB TOTAL</b>		<b>0.00</b>	<b>0.00</b>
055	<b>JOINT VENTURE COMPANIES</b>		<b>0.00</b>	<b>0.00</b>
056	Utility Powertech Ltd.		0.00	0.00
057	NTPC GE Power Services Pvt.Ltd.		0.00	0.00
058	NTPC-SAIL Power Company Ltd.		0.00	0.00
059	NTPC-Tamil Nadu Energy Company Ltd.		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 6 TO THE FS-NCA-INVESTMENTS IN SUBSIDIARIES & JOINT VENTURES**

( Amount in ₹ )

As at	No. of shares	Face value	31.03.2022	31.03.2021
060	Ratnagiri Gas & Power Pvt. Limited (RGPPL)		0.00	0.00
061	ARAVALI POWER COMPANY PRIVATE LTD.		0.00	0.00
062			0.00	0.00
063	NTPC BHEL POWER PROJECTS PRIVATE LTD.		0.00	0.00
064	MEJA URJA NIGAM PRIVATE LIMITED		0.00	0.00
065	BF-NTPC ENERGY SYSTEMS LTD.		0.00	0.00
066			0.00	0.00
067	NABINAGAR POWER GENERATING COMPANY LTD.		0.00	0.00
068	TRANSFORMER AND ELECTRICAL KERALA LTD.		0.00	0.00
069	NATIONAL HIGH POWER TEST LABORTORY PRIVATE LTD.		0.00	0.00
070			0.00	0.00
071	CIL NTPC URJA PRIVATE LTD.		0.00	0.00
072	ANUSHAKTI VIDHYUT NIGAM LTD.		0.00	0.00
073	ENERGY EFFICIENCY SERVICES LTD.		0.00	0.00
074			0.00	0.00
075	TRINCOMALEE POWER COMPANY LTD.		0.00	0.00
076	BANGLADESH-INDIA FRIENDSHIP POWER COMPANY (PVT.) LTD.		0.00	0.00
077	HINDUSTAN URVARAK & RASAYAN LIMITED		0.00	0.00
078	KONKAN LNG LTD		0.00	0.00
081	<b>SUB TOTAL</b>		<b>0.00</b>	<b>0.00</b>
109	AGGREGATE AMOUNT OF IMPAIRMENT IN THE VALUE OF INVESTMENTS		0.00	0.00
110	TOTAL (NET OF IMPAIRMENT) OF JV		0.00	0.00
111	<b>Gross Total of Investments</b>		<b>0.00</b>	<b>0.00</b>
134	<b>Total</b>		<b>0.00</b>	<b>0.00</b>
135	Details of Investments		0.00	0.00
136	Aggregate amount of Unquoted Investments		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 6 TO THE FS-NCA-INVESTMENTS IN SUBSIDIARIES & JOINT VENTURES**

**( Amount in ₹ )**

	As at	No. of shares	Face value	31.03.2022	31.03.2021
141				0.00	0.00
142				0.00	0.00
143				0.00	0.00
144				0.00	0.00
145				0.00	0.00
153	Valuation of Investments as per Note 1.			0.00	0.00
154				0.00	0.00
202				0.00	0.00
233				0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 7 TO THE FS-NCA-INVESTMENTS**

( Amount in ₹ )

As at	No. of shares	Face value	31.03.2022	31.03.2021
001	Non-current financial assets (investments)		0.00	0.00
006	<b>Long Term - Trade</b>		<b>0.00</b>	<b>0.00</b>
007	<b>Equity Instruments (fully paid up-unless otherwise stated)</b>		<b>0.00</b>	<b>0.00</b>
008	<b>Quoted</b>		<b>0.00</b>	<b>0.00</b>
009	<b>JOINT VENTURE COMPANIES</b>		<b>0.00</b>	<b>0.00</b>
010	PTC India Ltd.		0.00	0.00
070	INTERNATIONAL COAL VENTURES PRIVATE LTD.		0.00	0.00
075	BF-NTPC ENERGY SYSTEMS LTD.		0.00	0.00
098			0.00	0.00
110	COOPERATIVE SOCIETIES		0.00	0.00
111	<b>SUB TOTAL</b>		<b>0.00</b>	<b>0.00</b>
112	AGGREGATE AMOUNT OF IMPAIRMENT IN THE VALUE OF INVESTMENTS		0.00	0.00
115	<b>TOTAL</b>		<b>0.00</b>	<b>0.00</b>
120			0.00	0.00
146	NTPC EMPLOYEES CONSUMERS AND THRIFT CO-OPERATIVE SOCIETY LTD. KORBA		0.00	0.00
147	NTPC EMPLOYEES CONSUMERS AND THRIFT COOPERATIVE SOCIETY LTD. RSTPP		0.00	0.00
148	NTPC EMPLOYEES CONSUMERS COOPERATIVE SOCIETY LTD. FARAKKA		0.00	0.00
149	NTPC EMPLOYEES CONSUMERS COOPERATIVE SOCIETY LTD. VINDHYACHAL		0.00	0.00
150	NTPC EMPLOYEES CONSUMERS COOPERATIVE SOCIETY LTD. ANTA		0.00	0.00
151	NTPC EMPLOYEES CONSUMERS COOPERATIVE SOCIETY LTD. KAWAS		0.00	0.00
152	NTPC Employees Consumers Cooperative Society Ltd. Kaniha		0.00	0.00

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 8 TO THE FS-NCA-TRADE RECEIVABLES

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 Non-current financial assets - Trade receivables	0.00	0.00
002 UNSECURED, CONSIDERED GOOD	0.00	0.00
003 CREDIT IMPAIRED	0.00	0.00
004	0.00	0.00
005	0.00	0.00
006 <b>Total</b>	<b>0.00</b>	<b>0.00</b>



**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 9 TO THE FS-NCA-LOANS**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>LOANS (NON CURRENT)</b>	<b>0.00</b>	<b>0.00</b>
004 RELATED PARTIES	0.00	0.00
005 SECURED	0.00	0.00
006 UN-SECURED	0.00	0.00
007 WITH SIGNIFICANT INCREASE IN CREDIT RISK	0.00	0.00
008 CREDIT IMPAIRED	0.00	0.00
009	0.00	0.00
010 EMPLOYEES(INCLUDING ACCRUED INTEREST)	0.00	0.00
011 SECURED	87,385,641.00	81,563,013.15
012 UNSECURED	55,663,708.67	53,273,361.38
013 WITH SIGNIFICANT INCREASE IN CREDIT RISK	0.00	0.00
014 CREDIT IMPAIRED	0.00	0.00
015 LESS : EMPLOYEE LOANS DISCOUNTING	0.00	0.00
016 SECURED	21,476,411.67	22,067,890.23
017 UNSECURED	7,068,344.03	7,408,004.99
018 LOAN TO STATE GOVERNMENT IN SETTLEMENT OF DUES FROM CUSTOMERS (UNSECURED)	0.00	0.00
019 OTHERS	0.00	0.00
020 SECURED	0.00	0.00
021 UNSECURED	0.00	0.00
022 WITH SIGNIFICANT INCREASE IN CREDIT RISK	0.00	0.00
023 CREDIT IMPAIRED	0.00	0.00
024 LESS: ALLOWANCE FOR CREDIT IMPAIRED LOANS	0.00	0.00
025 <b>SUB TOTAL</b>	<b>114,504,593.97</b>	<b>105,360,479.31</b>
026	0.00	0.00
027 <b>TOTAL</b>	<b>114,504,593.97</b>	<b>105,360,479.31</b>
028	0.00	0.00
029	0.00	0.00
030 <b>Due from Directors and Officers of the Company</b>	<b>0.00</b>	<b>0.00</b>
031 Directors	0.00	0.00
032 Officers	0.00	0.00
033	<b>0.00</b>	<b>0.00</b>
034 <b>Loans to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
035 i)Key management personel	0.00	0.00
036 ii)Subsidiary companies	0.00	0.00
037 iii)Joint Venture companies	0.00	0.00
038 iv)Others	0.00	0.00
039	<b>0.00</b>	<b>0.00</b>
054 Other loans represent loans given to	0.00	0.00
055 a) APIIC	0.00	0.00
060	0.00	0.00
061 RPD	0.00	0.00
062 i)Key management personel	0.00	0.00

## RIHAND SUPER THERMAL POWER STATION

## NOTE NO. 9 TO THE FS-NCA-LOANS

( Amount in ₹ )

	As at	31.03.2022	31.03.2021
063	ii)Subsidiary companies	0.00	0.00
064	iii)Joint Venture companies	0.00	0.00
065	iv)Others	0.00	0.00
066	<b>Total</b>	<b>0.00</b>	<b>0.00</b>

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 10 TO THE FS-NCA-OTHER FINANCIAL ASSETS

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>Other Financial Assets (non current)</b>	<b>0.00</b>	<b>0.00</b>
002	0.00	0.00
003 <b>Share application money pending allotment in (Subsidiary Companies) :</b>	<b>0.00</b>	<b>0.00</b>
004 NTPC Electric Supply Company Ltd.	0.00	0.00
005 NTPC Vidyut Vyapar Nigam Ltd.	0.00	0.00
006 Nabinagar Power Generating Company Ltd.	0.00	0.00
007 Kanti Bijlee Utpadan Nigam Ltd.	0.00	0.00
008 Bhartiya Rail Bijlee Company Ltd.	0.00	0.00
009 Patratu Vidyut Utpadan Nigam Ltd.	0.00	0.00
010 NTPC Mining Limited	0.00	0.00
011 THDC Ltd.	0.00	0.00
012 NEEPCO Ltd	0.00	0.00
013	0.00	0.00
014 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
015 <b>Share application money pending allotment (Joint Venture)</b>	<b>0.00</b>	<b>0.00</b>
016 Utility Powertech Ltd.	0.00	0.00
017 NTPC GE Power Services Pvt.Ltd.	0.00	0.00
018 NTPC-SAIL Power Company Ltd.	0.00	0.00
019 NTPC-Tamil Nadu Energy Company Ltd.	0.00	0.00
020 Ratnagiri Gas & Power Private Ltd.	0.00	0.00
021 Aravali Power Company Private Ltd.	0.00	0.00
022	0.00	0.00
023 NTPC BHEL Power Projects Private Ltd.	0.00	0.00
024 Meja Urja Nigam Private Limited	0.00	0.00
025 BF-NTPC Energy Systems Ltd.	0.00	0.00
026 Anushakti Vidhyut Nigam Ltd.	0.00	0.00
027 Nabinagar Power Generating Company Ltd.	0.00	0.00
028 Energy Efficiency Services Ltd.	0.00	0.00
029 National High Power Test Labortory Private Ltd.	0.00	0.00
030	0.00	0.00
031 CIL NTPC Urja Private Ltd.	0.00	0.00
032 Trincomalee Power Company Ltd.	0.00	0.00
033 Hindustan Urvarak & Rasayan Limited	0.00	0.00
034 Bangladesh-India Friendship Power Company Private Ltd.	0.00	0.00
035 <b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
036	0.00	0.00
037 Claims Recoverable	0.00	0.00
038 Finance Lease Recoverable	0.00	0.00
039 Mine Closure Deposit	0.00	0.00
041 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

RIHAND SUPER THERMAL POWER STATION



A Maharatna Company

( Amount in ₹ )

As at

31.03.2022

31.03.2021

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 11 TO THE FS-NCA-OTHER NON-CURRENT ASSETS

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>Other Non-current Assets</b>	<b>0.00</b>	<b>0.00</b>
002	<b>0.00</b>	<b>0.00</b>
003 <b>CAPITAL ADVANCES</b>	<b>0.00</b>	<b>0.00</b>
004 SECURED	0.00	0.00
005 Unsecured	0.00	0.00
006 COVERED BY BANK GUARANTEE	194,789,674.00	374,937,145.32
007 OTHERS	53,588,917.11	23,546,752.62
008 CONSIDERED DOUBTFUL	0.00	0.00
009 LESS: ALLOWANCE FOR BAD & DOUBTFUL ADVANCES	0.00	0.00
010 <b>Sub-Total</b>	<b>248,378,591.11</b>	<b>398,483,897.94</b>
011	0.00	0.00
012 Advances other than capital advances	0.00	0.00
013 SECURITY DEPOSITS	87,880.00	1,436,400.00
019 Advances to Related parties	0.00	0.00
022 <b>Advances to Contractors &amp; Suppliers</b>	<b>0.00</b>	<b>0.00</b>
023 SECURED	0.00	0.00
024 UNSECURED	0.00	0.00
025 CONSIDERED DOUBTFUL	0.00	0.00
026 LESS: ALLOWANCE FOR BAD & DOUBTFUL ADVANCES	0.00	0.00
027 <b>Sub Total</b>	<b>87,880.00</b>	<b>1,436,400.00</b>
028 RECEIVABLE FROM MCP ESCROW A/C	0.00	0.00
039 ADVANCE TAX & TAX DEDUCTED AT SOURCE	7,544,241.17	2,447,428.10
040 LESS:- PROVISION FOR CURRENT TAX	0.00	0.00
041	0.00	0.00
042 <b>Sub Total</b>	<b>7,544,241.17</b>	<b>2,447,428.10</b>
043 DEFERRED PAYROLL EXPENSES (SECURED)	16,323,225.74	17,618,156.45
044 DEFERRED PAYROLL EXPENSES (UNSECURED)	4,860,126.54	5,186,725.53
045 <b>Sub Total</b>	<b>21,183,352.28</b>	<b>22,804,881.98</b>
046 DEFERRED FOREIGN CURRENCY FLUCTUATION ASSET	744,410,000.00	1,799,476,000.00
048 <b>Total</b>	<b>1,021,604,064.56</b>	<b>2,224,648,608.02</b>
049	0.00	0.00
050	0.00	0.00
061 Advances include amount due from the following Private Companies in which Directors of the Company are also Directors in such Companies	0.00	0.00
063	0.00	0.00
064 NTPC GE Power Services Pvt.Ltd.	0.00	0.00
065	0.00	0.00
066 Ratnagiri Gas & Power Private Ltd.	0.00	0.00
067 Aravali Power Company Private Ltd.	0.00	0.00
068 NTPC-SCCL Global Ventures Private Ltd.	0.00	0.00
069 NTPC BHEL Power Projects Private Ltd.	0.00	0.00
070 Meja Urja Nigam Private Limited	0.00	0.00

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 11 TO THE FS-NCA-OTHER NON-CURRENT ASSETS

( Amount in ₹ )

As at	31.03.2022	31.03.2021
071 Nabinagar Power Generating Company Ltd.	0.00	0.00
072 National High Power Test Labortory Private Ltd.	0.00	0.00
074 CIL NTPC Urja Private Ltd.	0.00	0.00
076	0.00	0.00
077 <b>Related Party (Adv)</b>	<b>0.00</b>	<b>0.00</b>
078 Key Management personel	0.00	0.00
079 Subsidiary companies	0.00	0.00
080 Joint Venture companies	0.00	0.00
081 Contractors	0.00	0.00
082 Others	0.00	0.00
084	0.00	0.00
085 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 12 TO THE FS-CA-INVENTORIES

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>INVENTORIES</b>	<b>0.00</b>	<b>0.00</b>
002	<b>0.00</b>	<b>0.00</b>
003 Coal	2,703,905,576.35	1,293,481,712.46
004 Fuel oil	331,140,312.31	221,275,469.56
005 Naphtha	0.00	0.00
006 Stores and spares	2,663,630,801.56	2,434,045,104.96
007 Chemicals & consumables	65,606,636.51	84,873,916.88
008 Loose tools	1,308,727.02	1,320,987.78
009 Steel Scrap	6,531,859.28	10,032,350.58
010 Others	670,976,891.13	578,527,487.01
011 <b>Sub Total</b>	<b>6,443,100,804.16</b>	<b>4,623,557,029.23</b>
012 Less: Provision for shortages	1,655,918.65	1,116,991.43
013 Less: Provision for obsolete/ unservicable/dimuntion in value of surplus inventory	33,701,668.96	22,832,831.53
014	0.00	0.00
015 <b>Total</b>	<b>6,407,743,216.55</b>	<b>4,599,607,206.27</b>
016 <b>Inventories include material in transit</b>	<b>0.00</b>	<b>0.00</b>
017 Coal	0.00	0.00
018 Fuel oil	0.00	0.00
019 Naphtha	0.00	0.00
020 Stores and spares	7,409,492.60	14,287,641.72
021 Chemicals & consumables	8,269,466.13	0.00
022 Loose tools	0.00	0.00
023 Others	12,040,077.62	0.00
024	<b>0.00</b>	<b>0.00</b>
025 Inventory items other than steel scrap have been valued considering Note 1.	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 13 TO THE FS-CA-INVESTMENTS**

( Amount in ₹ )

	As at	No. of shares	Face value	31.03.2022	31.03.2021
001	<b>CURRENT INVESTMENTS</b>			<b>0.00</b>	<b>0.00</b>
002	<b>(Valuation as per Note 1)</b>			<b>0.00</b>	<b>0.00</b>
003				0.00	0.00
033	Investment in Mutual Funds (Details as under)			0.00	0.00
034	SBI-Magnum Insta Cash Fund-DDR			0.00	0.00
035	SBI Premier Liquid Fund Super-IP-DDR			0.00	0.00
036	SBI-SHF Ultra Short Term Fund-IP-DDR			0.00	0.00
037	UTI Money Market- IP-Direct-Growth			0.00	0.00
038	IDBI-Liquid plan- Direct-Growth			0.00	0.00
039	Canara Robeco Liquid Fund Super-IP-DDR			0.00	0.00
040	Canara Robeco Treasury Advantage Fund Super-IP-DDR			0.00	0.00
041	IDBI Liquid Fund-DDR			0.00	0.00
042	SBI Premier Liquid fund-Direct DDR (Ash Fund)			0.00	0.00
043	UTI Liquid CashPlan - IP - DDR (Ash Funds)			0.00	0.00
044	IDBI Liquid Fund - DDR - (Ash Funds)			0.00	0.00
045	Baroda Liquid Fund - Direct - Growth			0.00	0.00
046	<b>Sub Total</b>			<b>0.00</b>	<b>0.00</b>
047				<b>0.00</b>	<b>0.00</b>
052	<b>Unquoted Investments</b>			<b>0.00</b>	<b>0.00</b>
054				0.00	0.00
066	<b>TOTAL</b>			<b>0.00</b>	<b>0.00</b>
067				0.00	0.00



**RIHAND SUPER THERMAL POWER STATION**  
**NOTE NO. 14 TO THE FS-CA-TRADE RECEIVABLES**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>TRADE RECEIVABLES (current)*</b>	<b>0.00</b>	<b>0.00</b>
002	0.00	0.00
003 Secured, Considered Good	0.00	0.00
004 Unsecured , considered good	1,733,397.09	15,464,355.69
005 Credit impaired	0.00	0.00
006 Unbilled Revenue	0.00	0.00
007 <b>Sub-Total</b>	<b>1,733,397.09</b>	<b>15,464,355.69</b>
008 <b>Total</b>	<b>1,733,397.09</b>	<b>15,464,355.69</b>
009 Less: Allowance for credit impaired receivables	0.00	0.00
010 <b>Total</b>	<b>1,733,397.09</b>	<b>15,464,355.69</b>
012 Less: Discom Clearing	0.00	0.00
013 <b>Grand Total</b>	<b>1,733,397.09</b>	<b>15,464,355.69</b>
014 * After adjustment for Unbilled Revenue	0.00	0.00
015 Long-term trade receivables	0.00	0.00
016 TCS Clearing	0.00	0.00
017 Discom Clearing	0.00	0.00
228 <b>Trade Receivable</b>	<b>0.00</b>	<b>0.00</b>
230 Not due	0.00	0.00
231 Due	0.00	0.00
232 (i) Undisputed Trade receivables # considered good	1,733,397.09	15,464,355.69
233 (ii) Undisputed Trade Receivables # which have significant increase in credit risk	0.00	0.00
234 (iii) Undisputed Trade Receivables # credit impaired	0.00	0.00
235 (iv) Disputed Trade Receivables#considered good	0.00	0.00
236 (v) Disputed Trade Receivables # which have significant increase in credit risk	0.00	0.00
237 (vi) Disputed Trade Receivables # credit impaired	0.00	0.00
238 Unbilled	0.00	0.00
239 <b>Total</b>	<b>1,733,397.09</b>	<b>15,464,355.69</b>
240	0.00	0.00
241 <b>(i) Undisputed Trade receivables # considered good</b>	<b>0.00</b>	<b>0.00</b>
242 Less than 6 months	1,733,397.09	15,464,355.69
243 6 months -1 year	0.00	0.00
244 1-2 years	0.00	0.00
245 2-3 years	0.00	0.00
246 More than 3 years	0.00	0.00
247 <b>Sub Total (I)</b>	<b>1,733,397.09</b>	<b>15,464,355.69</b>
248 <b>(ii) Undisputed Trade Receivables # which have significant increase in credit risk</b>	<b>0.00</b>	<b>0.00</b>
249 Less than 6 months	0.00	0.00
250 6 months -1 year	0.00	0.00
251 1-2 years	0.00	0.00
252 2-3 years	0.00	0.00
253 More than 3 years	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**  
**NOTE NO. 14 TO THE FS-CA-TRADE RECEIVABLES**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
254 <b>Sub Total (II)</b>	<b>0.00</b>	<b>0.00</b>
255 <b>(iv) Disputed Trade Receivables#considered good</b>	<b>0.00</b>	<b>0.00</b>
256 Less than 6 months	0.00	0.00
257 6 months -1 year	0.00	0.00
258 1-2 years	0.00	0.00
259 2-3 years	0.00	0.00
260 More than 3 years	0.00	0.00
261 <b>Sub Total (IV)</b>	<b>0.00</b>	<b>0.00</b>
262 <b>(v) Disputed Trade Receivables # which have significant increase in credit risk</b>	<b>0.00</b>	<b>0.00</b>
263 Less than 6 months	0.00	0.00
264 6 months -1 year	0.00	0.00
265 1-2 years	0.00	0.00
266 2-3 years	0.00	0.00
267 More than 3 years	0.00	0.00
268 <b>Sub Total (V)</b>	<b>0.00</b>	<b>0.00</b>
269 <b>(vi) Disputed Trade Receivables # credit impaired</b>	<b>0.00</b>	<b>0.00</b>
270 Less than 6 months	0.00	0.00
271 6 months -1 year	0.00	0.00
272 1-2 years	0.00	0.00
273 2-3 years	0.00	0.00
274 More than 3 years	0.00	0.00
275 <b>Sub Total (VI)</b>	<b>0.00</b>	<b>0.00</b>
276 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 15 TO THE FS-CA-CASH AND CASH EQUIVALENTS

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>CASH &amp; BANK BALANCES</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Cash &amp; Cash Equivalents</b>	<b>0.00</b>	<b>0.00</b>
003 Balances with Banks	0.00	240,123.40
004 Cheques & Drafts on hand	0.00	150,000.00
005 Cash on hand	0.00	0.00
006 Others (stamps in hand)	0.00	0.00
007 Bank deposits with original maturity upto three months	0.00	0.00
008 Balances with RBI	0.00	0.00
009	0.00	0.00
010 <b>Total</b>	<b>0.00</b>	<b>390,123.40</b>

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 16 TO THE FS-CA-BANK BALANCES OTHER THAN CASH AND CASH EQUIVALENTS ( Amount in ₹ )**

As at	31.03.2022	31.03.2021
001 <b>Other Bank Balances</b>	<b>0.00</b>	<b>0.00</b>
002 Deposits with original maturity of more than three months but not more than twelve months	0.00	0.00
003 Earmarked balances with banks*	0.00	0.00
004 <b>SubTotal</b>	<b>0.00</b>	<b>0.00</b>
005 Interest accrued on deposits	0.00	0.00
006	0.00	0.00
007 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
008	0.00	0.00
009 <b>Earmarked balances with banks consist of :</b>	<b>0.00</b>	<b>0.00</b>
010 Unpaid dividend account balance	0.00	0.00
011 Towards public deposit repayment reserve	0.00	0.00
012 Towards redemption of bonds due for repayment within one year	0.00	0.00
013 Security with Government/other authorities	0.00	0.00
014 Unpaid refund/interest account balance - Tax free bonds/ Bonus Debentures	0.00	0.00
015 Earmarked for RGGVY/DDUGJY/SAUBHAGYA Fund	0.00	0.00
016 Earmarked for Flyash Utilisation Reserve Fund	0.00	0.00
017 Deposits with original maturity upto three months as per court orders	0.00	0.00
018 Payment Security Scheme of MNRE NSM (NTPC)	0.00	0.00
019 Payment Security Scheme of MNRE NSM (NVVN)	0.00	0.00
020 Enforcement Directorate of Solar Plant(NVVN)	0.00	0.00
021 Bank guarantee Fund of MNRE (NVVN)	0.00	0.00
022 Others	0.00	0.00
023 Margin Money	0.00	0.00
024	0.00	0.00
025	0.00	0.00
026 <b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
030 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
031	0.00	0.00
032 Bank deposits with original maturity of less than three months- other than earmarked	0.00	0.00
033 Bank deposits with original maturity of more than three months but not more than twelve months- other than earmarked	0.00	0.00
034 Earmarked bank balances (current account)	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 17 TO THE FS-CA-LOANS**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>Current financial assets - Loans</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Loans (current)-including interest accrued</b>	<b>0.00</b>	<b>0.00</b>
004 <b>Related Parties</b>	<b>0.00</b>	<b>0.00</b>
005 Secured	0.00	0.00
006 Un-Secured	0.00	0.00
007 With significant increase in Credit Risk	0.00	0.00
008 Credit impaired	0.00	0.00
009	<b>0.00</b>	<b>0.00</b>
010 <b>Employees</b>	<b>0.00</b>	<b>0.00</b>
011 Secured	19,369,168.43	18,592,501.77
012 Unsecured	56,443,419.22	50,222,125.18
013 With significant increase in Credit Risk	0.00	0.00
014 Credit impaired	0.00	0.00
015 Less : Employee Loans Discounting	0.00	0.00
016 <b>Loan to State Government in settlement of dues from customers (Unsecured)</b>	<b>0.00</b>	<b>0.00</b>
017	0.00	0.00
018 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
019 Secured	0.00	0.00
020 Unsecured	0.00	0.00
021 With significant increase in Credit Risk	0.00	0.00
022 Credit impaired	0.00	0.00
023	<b>0.00</b>	<b>0.00</b>
024 Less: Allowance for credit impaired loans	0.00	0.00
025 <b>Total (Loans)</b>	<b>75,812,587.65</b>	<b>68,814,626.95</b>
026	<b>0.00</b>	<b>0.00</b>
027 <b>Due from Directors and Officers of the Company</b>	<b>0.00</b>	<b>0.00</b>
028 Directors	0.00	0.00
029 Officers	0.00	0.00
030	<b>0.00</b>	<b>0.00</b>
031 <b>Loans to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
032 i)Key management personel	0.00	0.00
033 ii)Subsidiary companies	0.00	0.00
034 KBUNL	0.00	0.00
035 RGPPL	0.00	0.00
036 NVVN	0.00	0.00
037 iii)Joint Venture companies	0.00	0.00
038 iv)others	0.00	0.00
039	0.00	0.00
059 RPD	0.00	0.00
060 i)Key management personel	0.00	0.00
061 ii)Subsidiary companies	0.00	0.00
062 iii)Joint Venture companies	0.00	0.00
063 iv)Others	0.00	0.00
064	0.00	0.00
065 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 18 TO THE FS-CA-OTHER FINANCIAL ASSETS

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>Other Financial Assets (current)</b>	<b>0.00</b>	<b>0.00</b>
002	0.00	0.00
003 <b>ADVANCES</b>	<b>0.00</b>	<b>0.00</b>
004	<b>0.00</b>	<b>0.00</b>
005 <b>Related Parties</b>	<b>0.00</b>	<b>0.00</b>
006 Secured	0.00	0.00
007 Un-Secured	75,281,568.77	75,433,495.80
008 Considered doubtful	0.00	0.00
009	<b>0.00</b>	<b>0.00</b>
010 <b>Employees</b>	<b>0.00</b>	<b>0.00</b>
012 Unsecured	4,837,250.36	2,693,948.65
013 Considered Doubtful	0.00	0.00
014	<b>0.00</b>	<b>0.00</b>
020 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
021 Secured	0.00	0.00
022 Unsecured	0.00	0.00
023 Considered Doubtful	0.00	0.00
024	<b>0.00</b>	<b>0.00</b>
025 Less: Allowance for bad & doubtful advances	0.00	0.00
026	<b>0.00</b>	<b>0.00</b>
033 <b>Total (Advances)</b>	<b>80,118,819.13</b>	<b>78,127,444.45</b>
044	<b>0.00</b>	<b>0.00</b>
045 <b>Claims Recoverable</b>	<b>0.00</b>	<b>0.00</b>
046 Secured	0.00	0.00
047 Unsecured, considered good	2,233,059.02	3,413,667.00
048 Considered Doubtful	0.00	0.00
049 Less:- Allowance for doubtful claims	0.00	0.00
050 Others-Claims Recoverable	0.00	0.00
051	<b>0.00</b>	<b>0.00</b>
052 Contract Asset- Revenue	2,841,100.83	2,841,100.83
053 Hedging cost recoverable from beneficiaries	0.00	0.00
054 Derivative MTM Asset	0.00	0.00
055 Finance Lease Receivable	0.00	0.00
056 Mine Closure Deposit	0.00	0.00
058 <b>Other Accrued Income</b>	<b>0.00</b>	<b>0.00</b>
059 Secured, Considered Good	0.00	0.00
060 Unsecured , considered good	64,097,982.95	84,093,847.15
061 Credit impaired	0.00	0.00
062 <b>Sub-Total</b>	<b>64,097,982.95</b>	<b>84,093,847.15</b>
063 Less: Allowance for credit impaired receivables	0.00	0.00
064 <b>Total</b>	<b>64,097,982.95</b>	<b>84,093,847.15</b>
065	0.00	0.00
066 Others*	0.00	0.00
067 <b>Total</b>	<b>149,290,961.93</b>	<b>168,476,059.43</b>
068 * Other include amount recoverable from contractors and other parties towards hire charges, rent/electricity etc.	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 18 TO THE FS-CA-OTHER FINANCIAL ASSETS**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
069 <b>Advances to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
070 i)Key management personel	0.00	0.00
071 ii)Subsidiary companies	0.00	0.00
072 iii)Joint Venture companies	0.00	0.00
073 iv)Contractors	0.00	0.00
074 v)Others	0.00	0.00
075	<b>0.00</b>	<b>0.00</b>
076 Advances include amount due from the following Private Companies in which Directors of the Company are also Directors in such Companies	0.00	0.00
077	<b>0.00</b>	<b>0.00</b>
078 NTPC GE Power Services Pvt.Ltd.	0.00	0.00
079 Ratnagiri Gas & Power Private Ltd.	0.00	0.00
080 Aravali Power Company Private Ltd.	0.00	0.00
081 NTPC-SCCL Global Ventures Private Ltd.	0.00	0.00
082 NTPC BHEL Power Projects Private Ltd.	0.00	0.00
083 Meja Urja Nigam Private Limited	0.00	0.00
084 Nabinagar Power Generating Company Ltd.	0.00	0.00
085 National High Power Test Labortory Private Ltd.	0.00	0.00
086 International Coal Ventures Private Ltd.	0.00	0.00
087 CIL NTPC Urja Private Ltd.	0.00	0.00
089 Bangladesh-India Friendship Power Co. Pvt.Ltd	0.00	0.00
090 TCS Clearing	0.00	0.00
091 Related Party (Adv)- Employee	0.00	0.00
092 Related Party (Adv)- Subsidiaries	0.00	0.00
093 Related Party (Adv)- Joint Ventures	0.00	0.00
094 Related Party (Adv)- Contractors	0.00	0.00
095 Related Party (Adv)- Others	75,281,568.77	75,433,495.80
096	0.00	0.00
097	0.00	0.00
098	0.00	0.00
099	0.00	0.00
100 <b>Total</b>	<b>75,281,568.77</b>	<b>75,433,495.80</b>

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 19 TO THE FS-CA-OTHER CURRENT ASSETS

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>OTHER CURRENT ASSETS</b>	<b>0.00</b>	<b>0.00</b>
002 Security Deposits (Unsecured)	0.00	0.00
003 Deposit with Customs, port trust & others*	2,249,156.00	900,636.00
004 <b>ADVANCES</b>	<b>0.00</b>	<b>0.00</b>
005	<b>0.00</b>	<b>0.00</b>
006 <b>Related Parties</b>	<b>0.00</b>	<b>0.00</b>
007 Secured	0.00	0.00
008 Un-Secured	1,407,513.00	1,407,513.00
009 Considered doubtful	0.00	0.00
010	<b>0.00</b>	<b>0.00</b>
011 <b>Employees(including imprest)</b>	<b>0.00</b>	<b>0.00</b>
012 Secured	0.00	0.00
013 Unsecured	355,986.00	310,414.00
014 Considered Doubtful	0.00	0.00
015	<b>0.00</b>	<b>0.00</b>
016 <b>Contractors &amp; Suppliers</b>	<b>0.00</b>	<b>0.00</b>
017 Secured	0.00	0.00
018 Unsecured	136,271,338.36	203,102,280.46
019 Considered Doubtful	0.00	0.00
020	0.00	0.00
021 <b>Others**</b>	<b>0.00</b>	<b>0.00</b>
022 Secured	0.00	0.00
023 Unsecured	18,584,624.00	24,626,717.00
024 Considered Doubtful	0.00	0.00
025 Less: Allowance for bad & doubtful advances	0.00	0.00
026 Receivable from MCP Escrow A/c	0.00	0.00
027 Deferred Payroll Expenses (Secured)	2,129,056.99	2,319,227.24
028 Deferred Payroll Expenses (Unsecured)	3,686,929.13	3,778,654.23
029 <b>Sub-total</b>	<b>5,815,986.12</b>	<b>6,097,881.47</b>
030 <b>Interest accrued on :</b>	<b>0.00</b>	<b>0.00</b>
031 Advances to contractors	0.00	0.00
032	<b>0.00</b>	<b>0.00</b>
033 <b>Claims Recoverable</b>	<b>0.00</b>	<b>0.00</b>
034 Secured	0.00	0.00
035 Unsecured, considered good	286,458,564.02	227,947,046.81
036 Considered Doubtful	26,600,000.00	26,600,000.00
037 Less:- Allowance for doubtful claims	26,600,000.00	26,600,000.00
038	<b>0.00</b>	<b>0.00</b>
039 Deferred premium on forward exchange contract/ Option Assets	0.00	0.00
041 Assets Held for Disposal	42,084.39	42,084.39
042 Others	3,824,265.73	5,071,018.00
043	0.00	0.00
044 <b>Total (Other Current Assets)</b>	<b>455,009,517.62</b>	<b>469,505,591.13</b>
045 **Include Prepaid Expenses	17,926,405.00	24,275,748.00
046 *Includes sales tax/Entry tax/VAT deposited under protest with Sales Tax Authorities	812,756.00	812,756.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 19 TO THE FS-CA-OTHER CURRENT ASSETS

( Amount in ₹ )

As at	31.03.2022	31.03.2021
047 *Includes deposited with courts	0.00	0.00
048 *Includes deposited with LIC for annuity payments	0.00	0.00
049 * Includes deposits with WRD / against BG in r/o finance lease	0.00	0.00
050 Other include amount recoverable from contractors and other parties towards hire charges, rent/electricity etc.	0.00	0.00
<b>052 Advances to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
053 i)Key management personnel	0.00	0.00
054 ii)Subsidiary companies	0.00	0.00
055 iii)Joint Venture companies	0.00	0.00
056 Contractors	0.00	0.00
057 Others	0.00	0.00
058	0.00	0.00
059 Advances include amount due from the following Private Companies in which Directors of the Company are also Directors in such Companies	0.00	0.00
060	<b>0.00</b>	<b>0.00</b>
061	0.00	0.00
062 Related Party (Adv)- Employee	0.00	0.00
063 Related Party (Adv)- Subsidiaries	0.00	0.00
064 Related Party (Adv)- Joint Venture	1,407,513.00	1,407,513.00
065	0.00	0.00
066	0.00	0.00
067 <b>Total</b>	<b>1,407,513.00</b>	<b>1,407,513.00</b>
068	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 20 TO THE FS--REGULATORY DEFERRAL ACCOUNT DEBIT BALANCES**

**( Amount in ₹ )**

As at	31.03.2022	31.03.2021
001 On account of Exchange Differences	-138,738,090.16	-23,349,137.66
002 On account of employee benefit exp	254,610,387.33	381,915,581.00
003 Regulatory deferred account - deferred	0.00	0.00
004 Deferred asset for ash transportation	1,035,424,777.02	312,520,012.83
005 Deferred asset for Arbitration Award	0.00	0.00
007 <b>Total</b>	<b>1,151,297,074.19</b>	<b>671,086,456.17</b>

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 21 TO THE FS-EQUITY-EQUITY SHARE CAPITAL

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>SHARE CAPITAL</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Equity Share Capital</b>	<b>0.00</b>	<b>0.00</b>
003 <b>Authorised</b>	<b>0.00</b>	<b>0.00</b>
004 10,000,000,000 equity shares of Rs.10/- each (Previous year 10,000,000,000 eq shares of Rs.10/- each)	0.00	0.00
005 <b>Issued,Subscribed and fully Paid-up</b>	<b>0.00</b>	<b>0.00</b>
006 9,69,66,66,134 equity shares of Rs.10/- (Pv. Year 9,894,557,280 equity shares of Rs.10/- each)	0.00	0.00
007	<b>0.00</b>	<b>0.00</b>
008 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
009 During FY 2018-19, the company has issued 1,649,092,880 equity shares of Rs.10/- each as fully paid bonus shares	0.00	0.00
010 The holders of the equity shares are entitled to receive dividends as declared from time to time, and are entitled to one vote per share at meetings of the company.	0.00	0.00
011 Details of shareholders holding more than 5% shares in the company	0.00	0.00
012 - President of India	0.00	0.00
013 No. of Shares	0.00	0.00
014 % of holding	0.00	0.00
015 - Life Insurance Corporation of India/ICICI Prudential Mutual Fund	0.00	0.00
016 No. of Shares	0.00	0.00
017 % of holding	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**  
**NOTE NO. 22 TO THE FS-EQUITY-OTHER EQUITY**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 RESERVE AND SURPLUS	0.00	0.00
002	<b>0.00</b>	<b>0.00</b>
003 <b>Capital Reserve</b>	<b>0.00</b>	<b>0.00</b>
004 As per last financial statements	0.00	0.00
006 Add : Grants received during the year	0.00	0.00
007 Add: Transfer from Surplus	0.00	0.00
008 Less: Write back during the year/period	0.00	0.00
009 Less: Adjustments during the year/period	0.00	0.00
010 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
011	0.00	0.00
017	0.00	0.00
018 <b>SECURITIES PREMIUM ACCOUNT</b>	<b>0.00</b>	<b>0.00</b>
019 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
020 ADD: ADDITIONS DURING THE YEAR/PERIOD	0.00	0.00
021 LESS: ADJUSTMENTS DURING THE YEAR/PERIOD	0.00	0.00
022 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
023 <b>BONDS REDEMPTION RESERVE</b>	<b>0.00</b>	<b>0.00</b>
024 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
025 ADD: TRANSFER FROM SURPLUS	0.00	0.00
026 LESS: TRANSFER TO SURPLUS ON REDEMPTION	0.00	0.00
027 LESS: ADJUSTMENTS DURING THE YEAR/ PERIOD	0.00	0.00
028 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
029 <b>CAPITAL REDEMPTION RESERVE</b>	<b>0.00</b>	<b>0.00</b>
030 As per last financial statements	0.00	0.00
031 Add: Transfer from Surplus	0.00	0.00
032 Less: Transfer to surplus on redemption	0.00	0.00
033 Less: Adjustments during the year/ period	0.00	0.00
034 <b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
035 <b>Share Application money pending Allotment</b>	<b>0.00</b>	<b>0.00</b>
036 As per last financial statements	0.00	0.00
037 Add: Addition during the year	0.00	0.00
038 Less: Utilised for allotment during the year	0.00	0.00
039 Less: Adjustments during the year/ period	0.00	0.00
040 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
046 <b>FLY-ASH UTILISATION RESERVE FUND</b>	<b>0.00</b>	<b>0.00</b>
047 AS PER LAST FINANCIAL STATEMENTS	0.00	8,220,860.44
048 TRANSFERRED TO CC	0.00	0.00
049 ADD:TRANSFER FROM REVENUE FROM OPERATIONS	0.00	15,712,224.90
050 ADD:TRANSFER FROM OTHER INCOME	0.00	0.00
051 LESS: UTILISED DURING THE YEAR	0.00	0.00
052 TANGIBLE ASSETS	0.00	0.00
053 EMPLOYEE BENEFIT EXPENSES	0.00	0.00
054 GENERATION,ADMN. AND OTHER EXPENSES	0.00	23,933,085.34

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 22 TO THE FS-EQUITY-OTHER EQUITY**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
055 TAX EXPENSES	0.00	0.00
056 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
057 Self Insurance Reserve	0.00	0.00
058 As per last financial statements	0.00	0.00
059 Add: Addition during the year	0.00	0.00
060 Less: Utilised for allotment during the year	0.00	0.00
061 Less: Adjustments during the year/ period	0.00	0.00
062 SUB-TOTAL	0.00	0.00
063 <b>SPECIAL ALLOWANCE RESERVE FUND</b>	<b>0.00</b>	<b>0.00</b>
064 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
065 ADD: ADDITION DURING THE YEAR	0.00	0.00
066 LESS: UTILISED FOR ALLOTMENT DURING THE YEAR	0.00	0.00
067 LESS: ADJUSTMENTS DURING THE YEAR/ PERIOD	0.00	0.00
068 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
069 <b>CORPORATE SOCIAL RESPONSIBILITY (CSR) RESERVE</b>	<b>0.00</b>	<b>0.00</b>
070 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
071 ADD : TRANSFER FROM SURPLUS	0.00	0.00
072 LESS:-WRITE BACK DURING THE YEAR	0.00	0.00
073 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
074 <b>GENERAL RESERVE</b>	<b>0.00</b>	<b>0.00</b>
075 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
076 ADD: TRANSFER FROM SURPLUS	0.00	0.00
077 LESS: TRANSFER TO SURPLUS	0.00	0.00
078 LESS: WRITE BACK DURING THE YEAR /PERIOD	0.00	0.00
079 LESS: ADJUSTMENTS DURING THE YEAR /PERIOD	0.00	0.00
080 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
081	<b>0.00</b>	<b>0.00</b>
082 <b>RETAINED EARNINGS</b>	<b>0.00</b>	<b>0.00</b>
083 AS PER LAST FINANCIAL STATEMENTS	166,604,865,582.08	156,537,113,839.05
084 ADD(LESS):-CHANGES IN ACCOUNTING POLICY / PRIOR PERIOD ERRORS	0.00	0.00
085 ADD(LESS):-PROFIT (LOSS) AFTER TAX FOR THE YEAR FROM STATEMENT OF PROFIT & LOSS	11,540,965,874.06	10,067,751,743.03
087 ADD: WRITE BACK FROM BOND REDEMPTION RESERVE	0.00	0.00
088 ADD: WRITE BACK FROM CAPITAL RESERVE	0.00	0.00
089 ADD: WRITE BACK FROM FOREIGN PROJECT RESERVE	0.00	0.00
090 ADD: WRITE BACK FROM CSR RESERVE	0.00	0.00
091 ADD: WRITE BACK FROM GENERAL RESERVE	0.00	0.00
093 LESS: TRANSFER TO BONDS REDEMPTION RESERVE	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 22 TO THE FS-EQUITY-OTHER EQUITY**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
094 LESS: TRANSFER TO SPECIAL ALLOWANCE RESERVE FUND	0.00	0.00
095 LESS: TRANSFER TO FOREIGN PROJECT RESERVE	0.00	0.00
096 LESS:TRANSFER TO CAPITAL RESERVE	0.00	0.00
097 LESS:TRANSFER TO CSR RESERVE	0.00	0.00
098 LESS:TRANSFER TO GENERAL RESERVE	0.00	0.00
099 LESS:INTERIM DIVIDEND PAID	0.00	0.00
100 LESS:TAX ON INTERIM DIVIDEND PAID	0.00	0.00
101 LESS:FINAL DIVIDEND PAID	0.00	0.00
102 LESS:TAX ON FINAL DIVIDEND PAID	0.00	0.00
103 LESS: ISSUE OF BONUS DEBENTURE	0.00	0.00
104 LESS: TAX ON ISSUE OF BONUS DEBENTURE	0.00	0.00
105 <b>SUB-TOTAL</b>	<b>178,145,831,456.14</b>	<b>166,604,865,582.08</b>
110	0.00	0.00
111 <b>REMEASUREMENT OF DEFINED BENEFIT PLANS</b>	<b>0.00</b>	<b>0.00</b>
112 AS PER LAST FINANCIAL STATEMENTS	-196,870,608.91	-172,809,279.53
113 ADD/(LESS):- ACTUARIAL GAINS/LOSS THROUGH OCI	-9,725,634.75	-24,061,329.38
114 <b>SUB-TOTAL</b>	<b>-206,596,243.66</b>	<b>-196,870,608.91</b>
115	0.00	0.00
116 <b>FVTOCI Reserve</b>	<b>0.00</b>	<b>0.00</b>
117 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
118 ADD/(LESS):-NET GAIN/LOSS OF EQUITY INSTRUMENTS THROUGH OCI	0.00	0.00
119 <b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
120	<b>0.00</b>	<b>0.00</b>
121 <b>Total Other equity</b>	<b>177,939,235,212.48</b>	<b>166,407,994,973.17</b>
122	0.00	0.00
123	0.00	0.00
124	0.00	0.00
125	0.00	0.00
126	0.00	0.00
127	0.00	0.00
128	0.00	0.00

RIHAND SUPER THERMAL POWER STATION



A Maharatna Company

( Amount in ₹ )

As at

31.03.2022

31.03.2021

**RIHAND SUPER THERMAL POWER STATION**  
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
<b>001 LONG TERM BORROWINGS</b>	<b>0.00</b>	<b>0.00</b>
<b>002 Bonds</b>	<b>0.00</b>	<b>0.00</b>
<b>003 Secured</b>	<b>0.00</b>	<b>0.00</b>
004 7.37 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2035 (Fifty Sixth Issue - Public Issue - Series 3A).	0.00	0.00
005 7.62 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2035 (Fifty Sixth Issue - Public Issue - Series 3 B).	0.00	0.00
006 8.61% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4th March 2034 (Fifty First Issue C - Private Placement)	0.00	0.00
007 8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2033 ( Fiftieth Issue - Public Issue - Series 3A)	0.00	0.00
008 8.91% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2033 ( Fiftieth Issue - Public Issue - Series 3B)	0.00	0.00
009 7.37% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 14th December 2031 (Sixty Sixth Issue - Private Placement)	0.00	0.00
010 7.49% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 7th November 2031 (Sixty Fourth Issue - Private Placement)	0.00	0.00
011 7.28 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2030 (Fifty Sixth Issue - Public Issue - Series	0.00	0.00



**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
2A)		
012 7.53 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2030 (Fifty Sixth Issue - Public Issue - Series 2 B).	0.00	0.00
013 7.32% Secured non-cumulative non-convertible redeemable taxable bonds of Rs 10,00,000/- each redeemable at par in full on 17 July 2029 (Sixty Ninth Issue - Private Placement)	0.00	0.00
014 8.63% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4th March 2029 (Fifty First Issue B - Private Placement)	0.00	0.00
015 8.30% Secured non-cumulative non-convertible redeemable taxable bonds of Rs 10,00,000/- each redeemable at par in full on 15 January 2029 (Sixty Seventh Issue - Private Placement)	0.00	0.00
016 8.48% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2028 ( Fiftieth Issue - Public Issue - Series 2A)	0.00	0.00
017 8.73% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2028 ( Fiftieth Issue - Public Issue - Series 2B)	0.00	0.00
018 7.47% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 16th September 2026 (Sixty Third Issue - Private Placement)	0.00	0.00
019 7.58% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at		31.03.2022	31.03.2021
full on 23rd August 2026 (Sixty Second Issue - Private Placement)			
020	8.05% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 5th May 2026 (Sixtieth Issue - Private Placement)	0.00	0.00
021	8.19% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 15th December 2025 (Fifty Seventh Issue - Private Placement)	0.00	0.00
022	7.11 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2025 (Fifty Sixth Issue - Public Issue - Series 1A).	0.00	0.00
023	7.36 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2025 (Fifty Sixth Issue - Public Issue - Series 1 B).	0.00	0.00
024	7.15% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of Rs. 10,00,000/- each redeemable at par in full on 21st August 2025 (Fifty Fifth Issue - Private Placement)	0.00	0.00
025	9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 22nd September 2024 (53rd Issue - private placement).	0.00	0.00
026	9.34% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 24th March 2024 (Fifty Second Issue - private placement)	0.00	0.00
027	8.19% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 10,00,000/- each redeemable at	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION  
NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

		31.03.2022	31.03.2021
	As at		
	par in full on 4th March 2024 (Fifty First Issue A - Private Placement)		
028	8.41% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2023 ( Fiftieth Issue - Public Issue - Series 1A)	0.00	0.00
029	8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2023 ( Fiftieth Issue - Public Issue - Series 1B)	0.00	0.00
030	9.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 4th May 2023 and ending on 4th May 2027 (Forty fourth issue - private placement)VII	0.00	0.00
031	8.48% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 1st May 2023 (Seventeenth issue - private placement)I	0.00	0.00
032	8.80% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4th April 2023 (Forty ninth issue -private placement	0.00	0.00
033	8.49% Secured non-cumulative non-convertible redeemable taxable fully paid-up bonus debentures of Rs. 12.50 each redeemable at par in three annual installments of Rs. 2.50, Rs. 5.00 and Rs. 5.00 at the end of 8th year, 9th year and 10th year on 25th March 2023, 25th March 2024 and 25th March 2025 respectively (Fifty Fourth Issue -Bonus Debentures)X - (refer Note 5 d)	0.00	0.00
034	8.73% Secured non-cumulative	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at		31.03.2022	31.03.2021
non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 07th March 2023 (Forty eighth issue - private placement)			
035	9.00% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 25th January 2023 and ending on 25th January 2027 (Forty second issue- private placement)III	0.00	0.00
036	8.84% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4th October 2022 (Forty seventh issue- private placement)VII	0.00	0.00
037	7.93% Secured non-cumulative non-convertible redeemable taxable bonds of ` 10,00,000/- each redeemable at par in full on 03 May 2022 (68th Issue - Private Placement)	0.00	0.00
038	6.72% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 24th November 2021 (Sixty Fifth Issue - Private Placement)	0.00	0.00
039	8.10% Secured Non-Cumulative Non-Convertible Redeemable Taxable Bonds of Rs. 30,00,000/- each redeemable at par in three equal separately transferable redeemable principal parts (STRPP) at the end of 5th year, 10th year & 15th year on 27th May 2021, 27th May 2026 and 27th May 2031 respectively (Sixty First Issue- Private Placement)	0.00	0.00
040	8.33% Secured non-cumulative non-convertible redeemable taxable bonds of Rs.10,00,000/- each redeemable at par in full on 24th February 2021	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION  
NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at				31.03.2022	31.03.2021
(Fifty Ninth Issue - Private Placement).					
042	8.93%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 19th January 2021 Thirty seventh issue - private placement)III	0.00	0.00
043	8.18%	Secured	non-cumulative non-convertible redeemable taxable bonds of Rs.10,00,000/- each redeemable at par in full on 31st December 2020 (Fifty Eight Issue - Private Placement).	0.00	0.00
044	8.73 %	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 31st March 2020 (Thirty third issue- private placement)III	0.00	0.00
045	8.78 %	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 9th March 2020 (Thirty first issue- private placement)III	0.00	0.00
046	11.25%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in five equal annual installments commencing from 6th Nov 2019 and ending on 6th Nov 2023 (Twenty seventh issue - private placement)III	0.00	0.00
047	7.89%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 5th May 2019 (Thirtieth issue - private placement)III	0.00	0.00
048	8.65%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4th February 2019 (Twenty ninth issue - private placement)III	0.00	0.00
049	7.50%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at				31.03.2022	31.03.2021
on 12th January 2019 (Nineteenth issue - private placement)II					
050	11%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 21st November 2018 (Twenty eighth issue - private placement)III	0.00	0.00
051	9.3473%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 20th July 2018 and ending on 20th July 2032 (Forty sixth issue - private placement)VII	0.00	0.00
052	9.4376%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 16th May 2018 and ending on 16th May 2032 (Forty fifth issue - private placement)VII	0.00	0.00
053	8.00%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 10th April 2018 (Sixteenth issue -private placement)I	0.00	0.00
054	9.2573%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 2nd March 2018 and ending on 2nd March 2032 (Forty third issue - private placement)III	0.00	0.00
055	9.6713%	Secured	non-cumulative non-convertible redeemable taxable bonds	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

			31.03.2022	31.03.2021
	As at			
	of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 23rd December 2017 and ending on 23rd December 2031 (Forty first issue - private placement)III			
056	9.558% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 29th July 2017 and ending on 29th July 2031(Fourtieth issue-private placement)III		0.00	0.00
057	9.3896% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 9th June 2017 and ending on 9th June 2031(Thirty ninth issue-private placement)III		0.00	0.00
058	9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 22nd March 2017 and ending on 22nd March 2031(Thirty eighth issue-private placement)III		0.00	0.00
059	8.8086% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**  
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
year and in annual installments thereafter upto the end of 20th year respectively commencing from 15th December 2016 and ending on 15th December 2030 (Thirty sixth issue - private placement)III		
060 8.785% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15th September 2016 and ending on 15th September 2030 (Thirty fifth issue - private placement)III	0.00	0.00
061 8.71% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 10th June 2016 and ending on 10th June 2030 (Thirty fourth issue - private placement)III	0.00	0.00
062 8.8493% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 25th March 2016 and ending on 25th March 2030 (Thirty second issue - private placement)III	0.00	0.00
063 9.37% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 70,00,000/- each with fourteen separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 4th June 2012 and ending on 4th December 2018 (Twenty fifth issue -	0.00	0.00



**RIHAND SUPER THERMAL POWER STATION  
NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at		31.03.2022	31.03.2021
private placement)III			
065	9.06% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 70,00,000/- each with fourteen separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 4th June 2012 and ending on 4th December 2018 (Twenty sixth issue - private placement)III	0.00	0.00
066	8.6077% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 9th September 2011 and ending on 9th March 2021 (Twenty fourth issue - private placement)IV	0.00	0.00
067	8.3796% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 5th August 2011 and ending on 5th February 2021 (Twenty third issue - private placement)IV	0.00	0.00
068	8.1771% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2nd July 2011 and ending on 2nd January 2021 (Twenty second issue - private placement)IV	0.00	0.00
069	7.7125% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2nd August 2010 and ending on 2nd February 2020 (Twenty first issue - private placement)V	0.00	0.00
070	7.552% Secured non-cumulative non-convertible redeemable taxable bonds	0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION**  
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 23rd September 2009 and ending on 23rd March 2019 (Twentieth issue - private placement)VI		
071 9.55% Secured non-cumulative non-convertible taxable redeemable bonds of ₹ 10,00,000/- each with ten equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of the 6th year and in annual installments thereafter upto the end of 15th year respectively from 30th April 2002 (Thirteenth issue - Part B - private placement)VIII	0.00	0.00
072 9.55% Secured non-cumulative non-convertible taxable redeemable bonds of ₹ 10,00,000/- each redeemable at par in ten equal annual installments commencing from the end of 6th year and upto the end of 15th year respectively from 18th April 2002 (Thirteenth issue -Part A - private placement)VIII	0.00	0.00
075	0.00	0.00
076	0.00	0.00
077 <b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
078 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
079 6.55% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 17 April 2023 (Seventieth Issue - Private Placement)	0.00	0.00
080 6.29% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 11 April 2031 (Seventy First Issue - Private Placement)	0.00	0.00
081 5.45% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 October 2025 (Seventy Second Issue - Private Placement)	0.00	0.00
082 6.43% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
full on 27 January 2031 (Seventy Third Issue - Private Placement)		
083 6.87% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 21 April 2036 (Seventy Fourth Issue - Private Placement)	0.00	0.00
084 6.69% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 13 September 2031 (Seventy Fifth Issue - Private Placement)	0.00	0.00
085 6.74% Unsecured non-cumulative non-convertible redeemable taxable bonds of Rs.10,00,000/- each redeemable at par in full on 14 April 2032 (Seventy Sixth Issue - Private Placement)	0.00	0.00
086	0.00	0.00
087	0.00	0.00
088	0.00	0.00
089 <b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
090 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
091 <b>Foreign Currency Notes-Unsecured</b>	<b>0.00</b>	<b>0.00</b>
092 4.50% Fixed Rate Notes Due for repayment on 19th March 2028	0.00	0.00
093 2.75% Fixed rate notes due for repayment on 1st February 2027	0.00	0.00
094 4.25 % Fixed rate notes due for repayment on 26th February 2026	0.00	0.00
095 4.375% Fixed Rate Note due for repayment on 26th November 2024	0.00	0.00
096 4.75 % Fixed Rate Notes due for repayment on 3rd Oct 2022	0.00	0.00
097 7.25 % Fixed green global INR denominated bonds due on 3 May 2022	0.00	0.00
098 7.375 % Fixed green global INR denominated bonds due on 10 August 2021	0.00	0.00
099 5.625% Fixed Rate Notes due for repayment on 14th July 2021	0.00	0.00
100 3.75 % Fixed rate notes due for repayment on 03 April 2024	0.00	0.00
101	0.00	0.00
102	0.00	0.00
103	0.00	0.00
104 <b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
105 <b>Term Loans</b>	<b>0.00</b>	<b>0.00</b>
106 <b>From Banks</b>	<b>0.00</b>	<b>0.00</b>
107 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
108 Rupee Loans	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**  
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
109 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
110 Foreign Currency Loans	0.00	0.00
111 Rupee Loans	0.00	0.00
112 <b>From Others</b>	<b>0.00</b>	<b>0.00</b>
113 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
114 Rupee Loans	0.00	0.00
115 Foreign Currency loans (guaranteed by GOI)	0.00	0.00
116 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
117 Foreign Currency loans (guaranteed by GOI)	0.00	0.00
118 Other Foreign currency loans	0.00	0.00
120 Rupee Loans	0.00	0.00
121 <b>Deposits</b>	<b>0.00</b>	<b>0.00</b>
122 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
123 Fixed Deposits	0.00	0.00
124 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
125 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
126 Bonds Application Money Pending Allotment	0.00	0.00
127 <b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
128 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
129 Less:- Interst accrued but not due on secured borrowings	0.00	0.00
130 Less:- Interst accrued but not due on unsecured borrowings	0.00	0.00
131 Less:- Current maturities of long term borrowings	0.00	0.00
132 Bonds-Secured	0.00	0.00
133 Fixed Rate Notes	0.00	0.00
135 Foreign currency loans from Banks- unsecured	0.00	0.00
136 Rupee loans from banks- Secured	0.00	0.00
137 Rupee loans from banks- unsecured	0.00	0.00
138 Rupee Term loan from Others - Secured	0.00	0.00
139 Foreign currency loans from others- unsecured (Guaranteed by GOI)	0.00	0.00
140 Other foreign currency loans from others- unsecured	0.00	0.00
141 Rupee loans from others- unsecured	0.00	0.00
142	0.00	0.00
143	0.00	0.00
144	0.00	0.00
145	0.00	0.00
146	0.00	0.00
147	0.00	0.00
148	0.00	0.00
149	0.00	0.00
150	0.00	0.00
151	0.00	0.00
200 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 23A TO THE FS-NCL-LEASE BORROWINGS

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>Non-current financial liabilities - Lease liabilities</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Lease liabilities</b>	<b>0.00</b>	<b>0.00</b>
003 Long term maturities of Finance Lease Liabilities (Secured) IX	0.00	0.00
004 Long term maturities of Finance Lease Liabilities (Unsecured) X	0.00	0.00
005 <b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
006 <b>Less: current maturities of lease liabilities</b>	<b>0.00</b>	<b>0.00</b>
007 Finance Lease obligations - secured	0.00	0.00
008 Finance Lease obligations - unsecured	0.00	0.00
009 <b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
010 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 24 TO THE FS-NCL-TRADE PAYABLES

( Amount in ₹ )

As at		31.03.2022	31.03.2021
001	<b>TRADE PAYABLES(NON CURRENT)</b>	<b>0.00</b>	<b>0.00</b>
002	<b>For Goods and Services</b>	<b>0.00</b>	<b>0.00</b>
003	- Micro & Small Enterprises	7,830,370.14	16,336,269.21
004	- Others	11,108,650.81	6,373,476.89
005		0.00	0.00
006	<b>Total</b>	<b>18,939,020.95</b>	<b>22,709,746.10</b>

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 25 TO THE FS-NCL-OTHER FINANCIAL LIABILITIES

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>OTHER FINANCIAL LIABILITIES (NON-CURRENT)</b>	<b>0.00</b>	<b>0.00</b>
002 Payable for Capital Expenditure	0.00	0.00
003 - Micro & Small Enterprises	3,022,575.28	100,024.63
004 - Others	210,903,859.44	681,641,329.62
005 Others	0.00	0.00
006 Deposits from contractors and others	11,000.00	0.00
007	0.00	0.00
008	0.00	0.00
009 <b>Total</b>	<b>213,937,434.72</b>	<b>681,741,354.25</b>

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 26 TO THE FS-NCL-PROVISIONS

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>LONG TERM PROVISIONS</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Provision for Employee Benefits</b>	<b>0.00</b>	<b>0.00</b>
003 Opening Balance	0.00	0.00
004 Additions/ (adjustments) during the year	0.00	0.00
005 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
006	0.00	0.00
007 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
008 <b>i) Mine Closure Provision</b>	<b>0.00</b>	<b>0.00</b>
009 Opening Balance	0.00	0.00
010 Additions during the year	0.00	0.00
011 Amounts adjusted during the year	0.00	0.00
012 Amounts reversed during the year	0.00	0.00
013 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
014	0.00	0.00
015 <b>ii) Stripping Activity Adjustments</b>	<b>0.00</b>	<b>0.00</b>
016 Opening Balance	0.00	0.00
017 Additions during the year	0.00	0.00
018 Amounts adjusted during the year	0.00	0.00
019 Amounts reversed during the year	0.00	0.00
020 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
021	0.00	0.00
024	0.00	0.00
025 <b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>



**NOTE NO. 27 TO THE FS-NCL-DEFERRED TAX LIABILITIES (NET)**

As at	Open Balance on 01.04.2021	Addition	Closing Balance on 31.03.2022
001 <b>DEFERRED TAX LIABILITIES (NET)</b>			
002 Difference of book depreciation and tax depreciation	0.00	0.00	0.00
003 Less: Deferred tax assets			
004 Provisions & Other disallowances for tax purposes	0.00	0.00	0.00
005 Unabsorbed Depreciation	0.00	0.00	0.00
006 Disallowances u/s 43B of the Income Tax Act, 1961	0.00	0.00	0.00
007 Others	0.00	0.00	0.00
008 Opening Balance	0.00	0.00	0.00
009 Additions during the year	0.00	0.00	0.00
010 Amounts adjusted during the year	0.00	0.00	0.00
011 Amounts reversed during the year	0.00	0.00	0.00
012 Closing Balance	0.00	0.00	0.00
013 MAT credit entitlement	0.00	0.00	0.00
014 <b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
015 <b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
016 Breakup of deferred tax assets	0.00	0.00	0.00
017 Provision	0.00	0.00	0.00
018 Statutory dues	0.00	0.00	0.00
019 Leave encashment	0.00	0.00	0.00
020 Others	0.00	0.00	0.00
021	0.00	0.00	0.00
022	0.00	0.00	0.00

## RIHAND SUPER THERMAL POWER STATION

## NOTE NO. 28 TO THE FS-NCL-OTHER NON-CURRENT LIABILITIES

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 Other Non current Liabilities	0.00	0.00
002 Advances from customers and others	0.00	0.00
003 Deposits from contractors and others	0.00	0.00
004 Grants	0.00	0.00
005 <b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 29 TO THE FS-CL-BORROWINGS

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>Short Term Borrowings</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Loans repayable on demand</b>	<b>0.00</b>	<b>0.00</b>
003 <b>From Banks</b>	<b>0.00</b>	<b>0.00</b>
004 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
005 Cash Credit	0.00	0.00
006 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
007 Cash Credit	0.00	0.00
008 <b>Other loans-unsecured</b>	<b>0.00</b>	<b>0.00</b>
009 Commercial Papers	0.00	0.00
010 Less: Unamortised discount on Commercial Papers	0.00	0.00
011 <b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
012 <b>Current maturity of long term borrowings</b>	<b>0.00</b>	<b>0.00</b>
013 Bonds-Secured	0.00	0.00
014 Foreign Currency Fixed Rate Notes	0.00	0.00
015 <b>From Banks</b>	<b>0.00</b>	<b>0.00</b>
016 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
017 Rupee Term Loan	0.00	0.00
018 Foreign currency loans	0.00	0.00
019 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
020 Foreign currency loans	0.00	0.00
021 Rupee term loans	0.00	0.00
022 <b>From Others</b>	<b>0.00</b>	<b>0.00</b>
023 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
024 Rupee Term Loan	0.00	0.00
025 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
026 Foreign currency loans (Guaranteed by Government of India)	0.00	0.00
027 Other foreign currency loans	0.00	0.00
028 Rupee term loans	0.00	0.00
029 Fixed deposits	0.00	0.00
031 Sub Total	0.00	0.00
032 <b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 29A TO THE FS-CL-LEASE BORROWINGS

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>Current financial liabilities - Lease liabilities</b>	<b>0.00</b>	<b>0.00</b>
002 Current maturity of finance lease obligations (secured)	0.00	0.00
003 Current maturity of finance lease obligations (unsecured)	0.00	0.00
004 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**  
**NOTE NO. 30 TO THE FS-CL-TRADE PAYABLES**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>TRADE PAYABLES</b>	<b>0.00</b>	<b>0.00</b>
002 For Goods and Services	0.00	0.00
003 - Micro & Small Enterprises	220,046,789.16	227,641,821.80
004 - Others	3,104,879,539.52	1,688,677,134.68
005	0.00	0.00
006 <b>Total</b>	<b>3,324,926,328.68</b>	<b>1,916,318,956.48</b>
007	0.00	0.00
172 <b>Trade payable</b>	<b>0.00</b>	<b>0.00</b>
173 <b>MSME</b>	<b>0.00</b>	<b>0.00</b>
174 Unbilled	75,353,748.01	87,950,700.89
175 Not due	111,869,021.20	117,462,296.91
176 <b>Due</b>	<b>32,824,020.00</b>	<b>22,228,824.00</b>
177 Disputed	0.00	0.00
178 Undisputed	32,824,020.00	22,228,824.00
179	0.00	0.00
180 <b>Sub-total (A)</b>	<b>220,046,789.21</b>	<b>227,641,821.80</b>
181	0.00	0.00
182 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
183 Unbilled	512,665,789.10	375,565,004.14
184 Not due	210,843,363.50	88,840,101.54
185 <b>Due</b>	<b>2,381,370,387.00</b>	<b>1,224,272,029.00</b>
186 Disputed	0.00	0.00
187 Undisputed	2,381,370,387.00	1,224,272,029.00
188	0.00	0.00
189 <b>Sub-total (B)</b>	<b>3,104,879,539.60</b>	<b>1,688,677,134.68</b>
190	0.00	0.00
191 <b>Total</b>	<b>3,324,926,328.81</b>	<b>1,916,318,956.48</b>
192	0.00	0.00
193 <b>Ageing</b>	<b>0.00</b>	<b>0.00</b>
194 <b>MSME</b>	<b>0.00</b>	<b>0.00</b>
195 <b>Disputed</b>	<b>0.00</b>	<b>0.00</b>
196 Less than 1 year	0.00	0.00
197 1-2 years	0.00	0.00
198 2-3 years	0.00	0.00
199 More than 3 years	0.00	0.00
200 <b>Sub Total (I)</b>	<b>0.00</b>	<b>0.00</b>
201	0.00	0.00
202 <b>Undisputed</b>	<b>0.00</b>	<b>0.00</b>
203 Less than 1 year	32,824,020.00	22,228,824.00
204 1-2 years	0.00	0.00
205 2-3 years	0.00	0.00
206 More than 3 years	0.00	0.00
207 <b>Sub Total (II)</b>	<b>32,824,020.00</b>	<b>22,228,824.00</b>
208	0.00	0.00
209 <b>Total MSME (III)</b>	<b>32,824,020.00</b>	<b>22,228,824.00</b>
210	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**  
**NOTE NO. 30 TO THE FS-CL-TRADE PAYABLES**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
211 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
212 <b>Disputed</b>	<b>0.00</b>	<b>0.00</b>
213 Less than 1 year	0.00	0.00
214 1-2 years	0.00	0.00
215 2-3 years	0.00	0.00
216 More than 3 years	0.00	0.00
217 <b>Sub Total (IV)</b>	<b>0.00</b>	<b>0.00</b>
218	0.00	0.00
219 <b>Undisputed</b>	<b>0.00</b>	<b>0.00</b>
220 Less than 1 year	1,676,015,685.00	730,603,504.30
221 1-2 years	85,164,135.00	430,819,121.70
222 2-3 years	193,027,381.00	1,186,607.00
223 More than 3 years	427,163,186.00	61,662,796.00
224 <b>Sub Total (V)</b>	<b>2,381,370,387.00</b>	<b>1,224,272,029.00</b>
225	0.00	0.00
226 <b>Total Others (VI)</b>	<b>2,381,370,387.00</b>	<b>1,224,272,029.00</b>

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 31 TO THE FS-CL-OTHER FINANCIAL LIABILITIES

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>OTHER FINANCIAL LIABILITIES (CURRENT)</b>	<b>0.00</b>	<b>0.00</b>
020	0.00	0.00
021 Interest accrued but not due on secured borrowings	0.00	0.00
022 Interest accrued but not due on unsecured borrowings	0.00	0.00
023 Unpaid Dividends*	0.00	0.00
024 Unpaid matured deposits and interest accrued thereon*	0.00	0.00
025 Unpaid matured bonds and interest accrued thereon*	0.00	0.00
026 Unpaid bond refund money-Tax free bonds *	0.00	0.00
027 Book Overdraft	0.00	0.00
028 Payable to Customers	0.00	0.00
029 Liability under forward exchange contract	0.00	0.00
030 Hedging cost payable to beneficiaries	0.00	0.00
031 Derivative MTM Liability	0.00	0.00
032 <b>Payable for Capital Expenditure</b>	<b>0.00</b>	<b>0.00</b>
033 - Micro & Small Enterprises	113,167,223.51	114,779,286.53
034 - Others	3,485,636,092.15	1,769,755,357.39
035 <b>Others Payables</b>	<b>0.00</b>	<b>0.00</b>
036 Deposits from contractors and others	85,251,588.78	53,078,458.78
037 Gratuity Obligations	0.00	0.00
038 Payable to employees	19,782,024.00	10,896,978.39
039 Payable to holding company	0.00	0.00
040 Retention on A/c BG encashment (Solar)	0.00	0.00
041 Payable to Solar Payment Security Account	0.00	0.00
042 Others **	96,581,271.22	140,861,301.14
043 Unspent CSR balance on ongoing Approved CSR projects	0.00	0.00
044 <b>Total</b>	<b>3,800,418,199.66</b>	<b>2,089,371,382.23</b>
045 * Represents the amounts which have not been claimed by the investor/holders of the bonds/ fixed deposits. Out of the above, no amount is due for payment to Investor Education and Protection Fund.	0.00	0.00
046 ** Include Payable to Hospital and other payable.	0.00	0.00

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 32 TO THE FS-CL-OTHER CURRENT LIABILITIES

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>OTHER CURRENT LIABILITIES</b>	<b>0.00</b>	<b>0.00</b>
002 Advances from customers and others	66,809,931.25	35,638,788.25
003 Deferred discount on forward exchange contact	0.00	0.00
004 Tax deducted at source and other statutory dues	83,997,873.09	59,989,614.61
005 Deposits from contractors and others	0.00	0.00
006 Government grants	0.00	0.00
007 Others	0.00	0.00
008 <b>Total</b>	<b>150,807,804.34</b>	<b>95,628,402.86</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 33 TO THE FS-CL-PROVISIONS

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>SHORT TERM PROVISIONS</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Provision for Employee Benefits</b>	<b>0.00</b>	<b>0.00</b>
003 Opening balance	0.00	0.00
004 Additions/ (adjustments) during the year	0.00	0.00
005 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
028 <b>Provisions for Obligations Incidental to Land Acquisition</b>	<b>0.00</b>	<b>0.00</b>
029 Opening balance	0.00	0.00
030 Additions during the year	0.00	0.00
031 Amounts paid during the year	0.00	0.00
032 Amounts reversed during the year	0.00	0.00
033 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
035 <b>Provision for Tariff Adjustment</b>	<b>0.00</b>	<b>0.00</b>
036 Opening balance	0.00	0.00
037 Additions during the year	0.00	0.00
038 Amounts adjusted during the year	0.00	0.00
039 Amounts reversed during the year	0.00	0.00
040 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
042 <b>Provision for shortage in Fixed Assets Pending Investigation &amp; Others</b>	<b>0.00</b>	<b>0.00</b>
043 Opening balance	0.00	633,857.99
044 Additions during the year	0.00	0.00
045 Amounts adjusted during the year	0.00	54,258.29
046 Amounts reversed during the year	0.00	579,599.70
047 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
048 <b>Provision for Arbitration</b>	<b>0.00</b>	<b>0.00</b>
049 Opening balance	8,265,312.00	7,846,960.00
050 Additions during the year	418,352.00	418,352.00
051 Amounts used during the year	0.00	0.00
052 Amounts reversed during the year	0.00	0.00
053 <b>Closing Balance</b>	<b>8,683,664.00</b>	<b>8,265,312.00</b>
054 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
055 Opening balance	0.00	0.00
056 Additions during the year	0.00	0.00
057 Amounts used during the year	0.00	0.00
058 Amounts reversed during the year	0.00	0.00
059 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
102	0.00	0.00
103 <b>Total</b>	<b>8,683,664.00</b>	<b>8,265,312.00</b>

## RIHAND SUPER THERMAL POWER STATION

## NOTE NO. 34 TO THE FS-CL-CURRENT TAX LIABILITIES (NET)

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>Current liabilities - current tax liabilities (net)</b>	<b>0.00</b>	<b>0.00</b>
002 Opening balance	0.00	0.00
003 Additions during the year	0.00	0.00
004 Amounts adjusted during the year	0.00	0.00
005 Less: Set off against taxes paid	0.00	0.00
006 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>

## RIHAND SUPER THERMAL POWER STATION

## NOTE NO. 35 TO THE FS--DEFERRED REVENUE

( Amount in ₹ )

	As at	31.03.2022	31.03.2021
001	<b>Deferred Revenue</b>	<b>0.00</b>	<b>0.00</b>
002	On account of advance against depreciation	0.00	0.00
003	On account of income from foreign currency fluctuation	1,521,099,000.00	1,550,313,000.00
004	Government grants	0.00	0.00
006	<b>TOTAL</b>	<b>1,521,099,000.00</b>	<b>1,550,313,000.00</b>

## RIHAND SUPER THERMAL POWER STATION

## NOTE NO. 36 TO THE FS--REGULATORY DEFERRAL ACCOUNT CREDIT BALANCES

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 Regulatory deferral account credit balances	0.00	0.00
002 Exchange Differences	0.00	0.00
003	0.00	0.00
004 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 37 TO THE FS--REVENUE FROM OPERATIONS**

( Amount in ₹ )

	For the Year ended	31.03.2022	31.03.2021
001	<b>REVENUE FROM OPERATIONS</b>	<b>0.00</b>	<b>0.00</b>
002	<b>Sales</b>	<b>0.00</b>	<b>0.00</b>
003	Energy Sales (including Electricity Duty)	53,443,276,351.00	50,965,331,245.83
004	Less : Advance against depreciation deferred (net)	0.00	0.00
005	Add: Revenue recognized out of advance against depreciation	0.00	0.00
006	Add : Exchange fluctuation receivable from customers	-1,191,045,000.00	0.00
007	Sale of energy through trading	0.00	0.00
008	Commission (NVVN)	0.00	0.00
009	<b>Sub total</b>	<b>52,252,231,351.00</b>	<b>50,965,331,245.83</b>
010	Less: Rebate to customers	244,496,889.89	792,896,443.92
011	<b>Energy Sales (Total)</b>	<b>52,007,734,461.11</b>	<b>50,172,434,801.91</b>
012	Consultancy, project management and supervision fees	0.00	0.00
013	Lease rentals on assets on Operating lease	0.00	0.00
014	Sale of Captive Coal	0.00	0.00
015	Intra Company Elimination	0.00	0.00
017	<b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
018	<b>Total - Sales</b>	<b>52,007,734,461.11</b>	<b>50,172,434,801.91</b>
019	Sale of fly ash/ash products	0.00	15,712,224.90
020	Less: Transferred to fly ash utilisation reserve fund	0.00	-15,712,224.90
021	<b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
022	<b>Other Operating Income</b>	<b>0.00</b>	<b>0.00</b>
023	Interest from customers	107,849,212.00	0.00
024	Energy Internally Consumed *	31,975,932.00	32,244,116.00
025	Interest income on Assets under finance lease	0.00	0.00
026	Recognized from deferred revenue - government grant	0.00	0.00
027	Provision written back- Tariff Adjustment	0.00	0.00
028	Income form Trading of ESCerts	0.00	0.00
029	Income from E-Mobility Business & others	0.00	0.00
030	Others	0.00	0.00
031	<b>Total</b>	<b>52,147,559,605.11</b>	<b>50,204,678,917.91</b>
040	* Valued at variable cost of generation and corresponding amount included in power charges ( Note No. 42)	0.00	0.00
041	Excise duty on sale of flyash,cenospere & ash products	0.00	0.00
042	Energy sales of principal nature (NVVN)	0.00	0.00
043	Energy sales of agency nature (NVVN)	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 38 TO THE FS--OTHER INCOME**

( Amount in ₹ )

	For the Year ended	31.03.2022	31.03.2021
001	<b>OTHER INCOME</b>	<b>0.00</b>	<b>0.00</b>
002	<b>Interest from</b>	<b>0.00</b>	<b>0.00</b>
004	<b>Financial assets at amortised cost</b>	<b>0.00</b>	<b>0.00</b>
005	Government Securities (8.5% Tax Free Bonds issued by the State Governments)	0.00	0.00
006	Other Bonds	0.00	0.00
007		0.00	0.00
008	Interest from Government of India Securities-Non-Trade	0.00	0.00
009	Less: Amortziation of premium	0.00	0.00
010	<b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
011	Interest from others	0.00	0.00
012	Loan to State Government in settlement of dues from customers	0.00	0.00
013	Loan to Subsidiary Companies	0.00	0.00
014	Loan to Employees	15,984,260.52	15,321,469.09
015	Deposit with banks	0.00	0.00
016	Foreign Banks	0.00	0.00
017	Interest from Contractors	915,881.70	1,013,678.30
018	Interest from Income Tax Refunds	0.00	0.00
019	Less : Refundable to Customers	0.00	0.00
020	<b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
021	Deposits with banks-flyash utilisation reserve fund	0.00	0.00
022	Less: transferred to flyash utilisation reserve fund	0.00	0.00
023	<b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
024	Deposits with banks- DDUGJY funds	0.00	0.00
025	Interest from Contractors- DDUGJY funds	0.00	0.00
026	Transfer to DDUGJY-Advance from customers	0.00	0.00
027	Sub-total	0.00	0.00
030	Others	1,179,995.49	0.00
031		0.00	0.00
032	<b>Dividend from</b>	<b>0.00</b>	<b>0.00</b>
033	<b>Longterm investments in</b>	<b>0.00</b>	<b>0.00</b>
034	Subsidiaries	0.00	0.00
035	Joint Ventures	0.00	0.00
036	Equity Instruments	0.00	0.00
037	<b>Current Investments in</b>	<b>0.00</b>	<b>0.00</b>
038	Mutual Funds measured at fairvalue through profit or loss	0.00	0.00
039	Current investments in mutual funds-flyash utilisation reserve fund	0.00	0.00
040	Less: transferred to flyash utilisation reserve fund	0.00	0.00
041	Lease Rent # Ash Brick Plant	0.00	0.00
042	Less: transferred to flyash utilisation reserve fund	0.00	0.00
043	Other non-operating income	0.00	0.00
044	Profit on disposal of PPE	3,591.10	20,849.70
045	Profit on redemption of GOI securities	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 38 TO THE FS--OTHER INCOME**

( Amount in ₹ )

	For the Year ended	31.03.2022	31.03.2021
046	Net gain on sale of investments	0.00	0.00
047	Surcharge received from customers	890,083,371.00	2,336,727,851.00
048	Hire charges for equipment	0.00	151,491.00
049	Gain on option contract / Discount on F.ExchContract	27,567,170.36	0.00
050	Provision written back-others	8,667,761.36	4,648,573.24
051	Fair value gains/(losses) on investments in mutual funds at fair value through profit or loss	0.00	0.00
052	Interest from Solar payment security account	0.00	0.00
053	Less : Transferred to SPSA fund	0.00	0.00
054	Interest on "Retention on A/c BG encashment (Solar)"	0.00	0.00
055	Less : Transferred to "Retention on A/c BG encashment (Solar)"	0.00	0.00
056	Miscellaneous Income	257,016,760.40	399,678,154.90
057	<b>Total</b>	<b>1,201,418,791.93</b>	<b>2,757,562,067.23</b>
058	Less:Transferred to Development of Coal Mines- Note 43A	0.00	0.00
059	Less:Transferred to Expenditure during Construction period (net)- Note 43	96,735.00	73,452.78
060	Less: Others	0.00	0.00
062	<b>Total</b>	<b>1,201,322,056.93</b>	<b>2,757,488,614.45</b>
063		0.00	0.00
064	<b>Details of Miscellaneous Income</b>	<b>0.00</b>	<b>0.00</b>
065	Vehicle Hire Charges.	118,000.00	100,000.00
066	Sale of by products & residuals	0.00	0.00
067	Township recoveries(exl. Hospital Recoveries).	22,530,387.46	26,531,613.68
068	Depreciation written back	0.00	0.00
069	Sale of Scrap.	118,949,651.93	146,790,506.41
070	Receipt under loss of profit policy.	0.00	0.00
071	Receipts under MBD/Fire Policy.	0.00	105,876,803.99
072	Management development programme.	0.00	0.00
073	Management Fee - Misc (NVVN)	0.00	0.00
074	Others	115,418,721.01	120,379,230.82
075		0.00	0.00
076	<b>Total (Miscellaneous Income)</b>	<b>257,016,760.40</b>	<b>399,678,154.90</b>
077		0.00	0.00
078	<b>Details of Provision written back others</b>	<b>0.00</b>	<b>0.00</b>
079	Doubtful debts	0.00	0.00
080	Doubtful Loans, Advances and Claims	0.00	0.00
081	Doubtful Construction Advances	0.00	0.00
082	Shortage in Construction Stores	548,546.87	3,069,811.99
083	Shortage in Stores	6,867,724.99	999,161.55
084	Obsolescence in Stores	1,251,489.50	0.00
085	Unserviceable capital works	0.00	0.00
086	Other Obligation including Arbitration	0.00	0.00
087	Shortage in Fixed Assets	0.00	579,599.70



A Maharatna Company

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 38 TO THE FS--OTHER INCOME**

**( Amount in ₹ )**

	31.03.2022	31.03.2021
088 Diminution in value of Investment	0.00	0.00



**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 38A TO THE FS--FUEL COST**

( Amount in ₹ )

	For the Year ended	31.03.2022	31.03.2021
001 <b>FUEL COST</b>		<b>0.00</b>	<b>0.00</b>
002 Coal		0.00	0.00
003 Captive		0.00	0.00
004 Other than captive		30,357,469,404.43	30,979,828,493.35
005 Gas		0.00	0.00
006 Naptha		0.00	0.00
007 Oil		286,119,163.76	247,723,305.71
008 Biomass Pellets		0.00	0.00
009 <b>Total</b>		<b>30,643,588,568.19</b>	<b>31,227,551,799.06</b>
010		0.00	0.00

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 39 TO THE FS--EMPLOYEE BENEFITS EXPENSE

( Amount in ₹ )

For the Year ended		31.03.2022	31.03.2021
001	<b>EMPLOYEE BENEFITS EXPENSE</b>	<b>0.00</b>	<b>0.00</b>
002	Salaries and wages	1,545,790,249.09	1,515,897,759.31
003	Contribution to provident and other funds	204,663,720.58	192,912,222.56
004	Unwinding of deferred payroll expense	10,256,372.76	10,267,426.36
005	Staff welfare expenses	188,061,328.44	170,031,632.85
006	Less : Expenses transferred to Consultancy group	0.00	0.00
007		0.00	0.00
008	<b>Sub Total</b>	<b>1,948,771,670.87</b>	<b>1,889,109,041.08</b>
009	Less: Employee benefits expense allocated to fuel inventory	112,502,448.72	121,440,512.65
010	Less: Transferred/Allocated to development of coal mines	0.00	0.00
011	Less: Others	0.00	0.00
012	Less: Transferred to fly ash utilisation reserve fund	0.00	0.00
013	Less: Transferred to CSR Expenses	0.00	0.00
014	Reimbursements for employees on secondment	3,377,875.77	2,735,946.17
015	Less: Transferred to expenditure during construction period (net)- Note 43	24,926,059.94	19,394,829.87
016	<b>TOTAL</b>	<b>1,807,965,286.44</b>	<b>1,745,537,752.39</b>
017	<b>Managerial Remuneration paid/ payable to Directors included above (except for Directors fee which is included in Note 42)</b>	<b>0.00</b>	<b>0.00</b>
018	Salaries and wages	0.00	0.00
019	Contribution to provident and other funds	0.00	0.00
020	Staff welfare expenses	0.00	0.00
021	Directors fee	0.00	0.00
022		0.00	0.00
023		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 40 TO THE FS--FINANCE COSTS**

( Amount in ₹ )

	For the Year ended	31.03.2022	31.03.2021
001	<b>FINANCE COSTS</b>	<b>0.00</b>	<b>0.00</b>
002	Finance charges on financial liabilities measured at amortised cost	0.00	0.00
003	Bonds	710,804,516.35	585,552,890.58
004	Government of India Loans	0.00	0.00
005	Foreign currency term loans	19,995,984.52	19,316,822.83
006	Rupee term loans	438,724,318.00	690,539,220.00
007	Public deposits	0.00	0.00
008	Foreign currency bonds/notes	316,443,493.96	642,399,406.03
009	Cash Credit	0.00	0.00
010	Unwinding of discount on account of vendor liabilities	79,228,121.55	13,871,577.85
011	Commercial Papers	0.00	0.00
012	<b>Sub Total</b>	<b>1,565,196,434.38</b>	<b>1,951,679,917.29</b>
013	Interest on non financial items	0.00	0.00
014	<b>Other Borrowing Costs</b>	<b>0.00</b>	<b>0.00</b>
015	Bonds servicing & public deposit exp.	863,783.14	717,948.54
016	Guarantee fee	0.00	0.00
017	Management fee	0.00	0.00
018	Committ charges/exposure premium	1,126,265.00	0.00
019	Bond issue expenses	0.00	0.00
020	Legal exp on foreign currency loans	0.00	0.00
021	Foreign currency bonds/notes exp.	0.00	0.00
022	Up-front fee	0.00	0.00
023	Insurance premium on foreign currency loans	0.00	0.00
024		0.00	0.00
025	Others	0.00	0.00
026	<b>Sub Total (Other Borrowing cost)</b>	<b>1,990,048.14</b>	<b>717,948.54</b>
027		0.00	0.00
028	<b>Exchange differences regarded as an adjustment to borrowing costs</b>	<b>-2,773,694.67</b>	<b>-16,523.48</b>
029	<b>Sub Total</b>	<b>1,564,412,787.85</b>	<b>1,952,381,342.35</b>
030	Less: Transferred to Expenditure during construction period (net) - Note 43	98,307,037.97	22,905,000.49
031	Less: Transferred to development of coal mines- Note 43A	0.00	0.00
032		0.00	0.00
033	<b>Total</b>	<b>1,466,105,749.88</b>	<b>1,929,476,341.86</b>

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 41 TO THE FS--DEPRECIATION AND AMORTIZATION EXPENSES**

( Amount in ₹ )

	For the Year ended	31.03.2022	31.03.2021
001	<b>Depreciation and amortization expenses</b>	<b>0.00</b>	<b>0.00</b>
002	On property, plant and equipment- Note 2	4,722,518,393.06	4,601,404,034.44
003	On intangible assets- Note 4	0.00	4,317.78
004	Sub-total	4,722,518,393.06	4,601,408,352.22
005	Less:	0.00	0.00
006	Allocated to fuel inventory	374,595,518.15	361,624,623.95
007	Transferred to Expenditure during Construction Period (net)- Note 43	0.00	0.00
008		0.00	0.00
009	Transferred/Allocated to development of coal mines	0.00	0.00
010	Adjustment with deferred revenue from deferred foreign currency fluctuation	165,193,000.00	168,797,000.00
011		0.00	0.00
012	<b>Total</b>	<b>4,182,729,874.91</b>	<b>4,070,986,728.27</b>

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 42 TO THE FS--OTHER EXPENSE**

( Amount in ₹ )

	For the Year ended	31.03.2022	31.03.2021
001 <b>OTHER EXPENSES</b>		<b>0.00</b>	<b>0.00</b>
002 Power charges		31,976,053.83	32,244,116.00
003 Less: Recovered from contractors & employees		18,059,198.89	10,218,976.19
004 <b>Sub-Total(Power Charges)</b>		<b>13,916,854.94</b>	<b>22,025,139.81</b>
005 Water charges		139,871,225.00	139,871,225.00
006 Stores consumed		52,633,011.12	30,362,577.69
007 Rent		0.00	0.00
008 Less:Recoveries		0.00	0.00
009 <b>Sub-Total (Rent)</b>		<b>0.00</b>	<b>0.00</b>
010 Cost of captive coal produced		0.00	0.00
011 <b>Repairs &amp; maintenance</b>		<b>0.00</b>	<b>0.00</b>
012 Buildings		129,376,643.93	157,598,147.58
013 Plant & machinery		0.00	0.00
014 Power stations		1,746,499,355.61	2,012,457,618.12
015 Construction equipment		0.00	0.00
016 Others		106,882,579.98	71,233,169.46
017 <b>Sub-total (Repairs &amp; maintenance)</b>		<b>1,982,758,579.52</b>	<b>2,241,288,935.16</b>
019 Load Dispatch Center Charges		25,361,760.00	16,378,065.00
021 Insurance		141,466,994.50	135,670,380.27
022 Interest to beneficiaries		0.00	0.00
023 Rates and taxes		14,847,960.99	14,719,674.88
024 Water cess & environment protection cess		0.00	0.00
025 Training & recruitment expenses		688,607.70	2,517,189.00
026 Less: Receipts		0.00	0.00
027 <b>Sub-total (Training and recruitment expenses)</b>		<b>688,607.70</b>	<b>2,517,189.00</b>
028 Communication expenses		21,264,678.98	20,286,959.05
029 Inland Travel		66,788,667.74	60,029,239.63
030 Foreign Travel		0.00	0.00
031 Tender expenses		0.00	0.00
032 Less: Receipt from sale of tenders		0.00	0.00
033 <b>Sub-total (Tender expenses)</b>		<b>0.00</b>	<b>0.00</b>
034 Payment to auditors		0.00	0.00
035 Audit fee		0.00	0.00
036 Tax audit fee		0.00	0.00
037 Other services		0.00	0.00
038 Reimbursement of expenses		0.00	0.00
039 <b>Sub-total (Payment to Auditors)</b>		<b>0.00</b>	<b>0.00</b>
040 Advertisement and publicity		1,007,008.21	657,415.36
041 Electricity duty		0.00	0.00
042 Security expenses		375,343,967.09	460,687,189.93
043 Entertainment expenses		25,139,954.44	26,655,551.12
044 Expenses for guest house		18,821,757.77	17,271,947.40
045 Less:Recoveries		2,432,785.40	0.00
046 <b>Sub-Total (Guest house expenses)</b>		<b>16,388,972.37</b>	<b>17,271,947.40</b>
047 Education expenses		58,099,926.00	79,480,752.00
049 Donations		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 42 TO THE FS--OTHER EXPENSE**

( Amount in ₹ )

	For the Year ended	31.03.2022	31.03.2021
050	Ash utilisation & marketing expenses	796,403,425.57	432,245,428.81
051	Directors sitting fee	0.00	0.00
053	Professional charges and consultancy fees	2,058,930.20	3,302,664.23
054	Legal expenses	15,869,702.68	15,480,086.00
055	EDP hire and other charges	778,677.16	1,336,546.59
056	Printing and stationery	1,845,738.55	1,376,617.64
057	Oil & gas exploration expenses	0.00	0.00
059	Hiring of vehicles	25,296,051.88	20,600,619.14
061	Reimbursement of L.C.charges on sales realisation	0.00	0.00
062		0.00	0.00
063	Cost of Hedging	0.00	166,468.00
064	Derivatives MTM loss/gain (Net)	0.00	0.00
065	Net loss/(gain) in foreign currency transactions & translations	-89,322,683.55	-11,861,227.40
066	Transport Vehicle running expenses	1,160,422.83	936,937.36
067	Horticulture Expenses	63,583,840.61	59,411,651.45
068	Hire charges- helicopter/aircraft.	0.00	0.00
069	Hire charges of construction equipment	0.00	0.00
070	Demurrage Charges	0.00	0.00
072		0.00	0.00
073	Miscellaneous expenses	55,867,107.84	21,346,532.03
074	Loss on disposal/write-off of PPE	68,736,584.56	231,316,192.66
075	<b>Sub-Total</b>	<b>3,877,855,966.93</b>	<b>4,043,560,757.81</b>
076	Less: Other expenses allocated to fuel inventory	588,057,845.97	567,027,646.89
077	Less: Transferred/Allocated to development of coal mines	0.00	0.00
078	Less: Transferred to fly ash utilisation reserve fund	73,498,661.01	119,725,415.98
079	Less: Hedging cost Net recoverable/payable from/to beneficiaries	0.00	0.00
080	Less: Others	0.00	0.00
081	Less: Transferred to CSR Expenses	58,647,288.00	71,755,551.00
082	Less: Transferred to Expenditure during Construction period(net)-Note 43	-2,659,409.99	5,629,081.66
083	<b>Net (Generation, Administration and Other expenses)</b>	<b>3,160,311,581.94</b>	<b>3,279,423,062.28</b>
084	Corporate Social Responsibility Expenses	98,681,095.39	117,469,384.87
085	Less: Grants-in-aid	0.00	0.00
086	<b>Sub-total (Corporate Social Responsibility Expenses)</b>	<b>98,681,095.39</b>	<b>117,469,384.87</b>
087	<b>Provisions</b>	<b>0.00</b>	<b>0.00</b>
088	Doubtful Debts	0.00	0.00
089	Doubtful loans, advances and claims	0.00	0.00
090	Doubtful Construction Advances	0.00	0.00
091	Shortage in stores	1,655,918.65	156,818.20
092	Obsolete/Diminution in the value of surplus stores	12,120,326.93	0.00
093	Shortage in construction stores	1,469,730.55	6,233,763.36
094	Diminution in value of long term investments	0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 42 TO THE FS--OTHER EXPENSE**

( Amount in ₹ )

	For the Year ended	31.03.2022	31.03.2021
095	Shortage in Fixed assets	0.00	0.00
096	Unfinished minimum work progress from oil & gas exploration	0.00	0.00
097	Unserviceable capital works	0.00	0.00
098	Tariff Adjustment	105,799,000.00	97,702,000.00
099	Others :	0.00	0.00
100	(i) Provision for arbitration cases	418,352.00	418,352.00
101	(ii) Other provisions	0.00	0.00
102	<b>Total (Provisions)</b>	<b>121,463,328.13</b>	<b>104,510,933.56</b>
103		0.00	0.00
104	<b>Total</b>	<b>3,380,456,005.46</b>	<b>3,501,403,380.71</b>
105		0.00	0.00
106	<b>Breakup of miscellaneous expenses.</b>	<b>0.00</b>	<b>0.00</b>
109	Hire charges of office equipment	1,714,504.43	1,215,364.67
111	Operating expenses of construction equipment	0.00	0.00
112	Operating expenses of D.G. sets	0.00	0.00
113	Furnishing expenses	111,933.41	0.00
114	Subscription to trade and other associations.	0.00	0.00
116	Visa and entry permit charges	0.00	0.00
117	Tree plantation exp.-NTPC Land	0.00	0.00
118	Research & development expenses .	0.00	0.00
119	Less : Grants received for Research & development expenses.	0.00	0.00
120	Sub-total (Research & development expenses)	0.00	0.00
121	Bank charges	57,713.83	141,681.42
122	Business Development Expenditure	0.00	0.00
123	Surcharge (NVVN)	0.00	0.00
124	Power Trading Expenses	23,017,240.00	6,458,871.00
125	Brokerage & commission	8,510,225.90	1,951,671.00
129	Books and periodicals	61,430.00	88,572.00
130	Claims/advances written off	0.00	0.00
131	Stores written off	0.00	0.00
132	Survey &Investigation expenses written off	2,987,667.50	0.00
133	Others	19,406,392.77	11,490,371.94
134	<b>Total</b>	<b>55,867,107.84</b>	<b>21,346,532.03</b>
135		0.00	0.00
136		0.00	0.00
137		0.00	0.00

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 43 TO THE FS--EXPENDITURE DURING CONSTRUCTION PERIOD (NET)

( Amount in ₹ )

For the Year ended		31.03.2022	31.03.2021
001	<b>EXPENDITURE DURING CONSTRUCTION PERIOD (NET)</b>	<b>0.00</b>	<b>0.00</b>
002	A. Employee benefits expense	0.00	0.00
003	Salaries and wages	21,286,958.63	16,690,366.44
004	Contribution to provident and other funds	2,431,771.71	1,990,589.37
005	Unwinding of deferred payroll expenses	0.00	-9,214.56
006	Staff welfare expenses	1,207,329.60	723,088.62
007	<b>Total (A)</b>	<b>24,926,059.94</b>	<b>19,394,829.87</b>
008	<b>B. Finance Costs</b>	<b>0.00</b>	<b>0.00</b>
009	Finance charges on financial liabilities measured at amortised cost	0.00	0.00
010	Bonds	5,668,439.23	991,703.48
011	Foreign currency term loans	3,847,461.50	202,998.16
012	Rupee term loans	12,081,882.00	12,796,466.00
013	Foreign currency bonds/notes	0.00	0.00
014	Unwinding of discount on account of vendor liabilities	74,018,223.04	8,870,269.79
015	Others	0.00	0.00
016		0.00	0.00
017	Other Borrowings Costs	0.00	0.00
018	Guarantee Commission	0.00	0.00
019	Management Fees/Arrangers Fees	0.00	0.00
020	Commitment charges/Exposure Premium	1,126,265.00	0.00
021	Legal Expenses on foreign currency loans	0.00	0.00
022	Foreign currency bonds/notes expenses	0.00	0.00
023	Foreign Credit Insurance Premium	0.00	0.00
024	Upfront Fee	0.00	0.00
025	Exchange Differences	0.00	0.00
026	Others	1,564,768.20	476,690.72
027	Exchange differences regarded as adjustment to interest cost	-1.00	-433,127.66
028	<b>Total (B)</b>	<b>98,307,037.97</b>	<b>22,905,000.49</b>
029		0.00	0.00
030	C. Depreciation and amortisation	0.00	0.00
031	<b>D. Generation , administration and other expenses</b>	<b>0.00</b>	<b>0.00</b>
032	Power charges	872,302.00	2,653,635.00
033	Less: Recovered from contractors & employees	6,316,951.40	18,237.39
034	<b>Sub-total(Net power charges)</b>	<b>-5,444,649.40</b>	<b>2,635,397.61</b>
035	Water charges	0.00	0.00
036	Rent	0.00	0.00
037	Repairs & maintenance	0.00	0.00
038	Buildings	0.00	0.00
039	Construction equipment	0.00	0.00
040	Others	0.00	161,732.04
041		0.00	0.00
042	Insurance	0.00	0.00



**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 43 TO THE FS--EXPENDITURE DURING CONSTRUCTION PERIOD (NET)**

( Amount in ₹ )

	For the Year ended	31.03.2022	31.03.2021
043	Rates and taxes	93.60	0.00
044	Communication expenses	194,837.00	202,309.00
045	Travelling expenses	863,550.68	1,061,207.26
046	Tender expenses	0.00	0.00
047	Less: Income from sale of tenders	0.00	0.00
048	<b>Sub-total (Net tender expenses)</b>	<b>0.00</b>	<b>0.00</b>
049	Advertisement and publicity	0.00	0.00
050	Security expenses	0.00	0.00
051	Entertainment expenses	82,552.00	96,997.19
052	Guest house expenses	0.00	0.00
053	Less: Receipt from guest house	0.00	0.00
054	<b>Sub-total (Net Guest House Expenses)</b>	<b>0.00</b>	<b>0.00</b>
055	Education expenses	0.00	0.00
056	Brokerage & Commission	0.00	0.00
057	Books and periodicals	0.00	0.00
058	Community development expenses	0.00	0.00
059	Professional charges and consultancy fee	0.00	0.00
060	Legal expenses	0.00	0.00
061	EDP Hire and other charges	0.00	0.00
062	Printing and stationery	0.00	0.00
063	Miscellaneous expenses	1,644,206.13	1,471,438.56
064	<b>Total (D)</b>	<b>-2,659,409.99</b>	<b>5,629,081.66</b>
065	<b>Total (A+B+C+D)</b>	<b>120,573,687.92</b>	<b>47,928,912.02</b>
066	<b>E. Less: Other Income</b>	<b>0.00</b>	<b>0.00</b>
067	Interest from	0.00	0.00
068	Indian banks	0.00	0.00
069	Foreign banks	0.00	0.00
070	Others	0.00	0.00
071	Contractors	0.00	0.00
072	Hire charges	0.00	0.00
073	Sale of scrap	0.00	0.00
074	Exchange Differences	0.00	0.00
075	Miscellaneous income	96,735.00	73,452.78
076	<b>TOTAL (E)</b>	<b>96,735.00</b>	<b>73,452.78</b>
077	F. Net actuarial gain/loss OCI	85,940.56	201,530.19
078		0.00	0.00
079	<b>GRAND TOTAL (A+B+C+D-E+F)</b>	<b>120,562,893.48</b>	<b>48,056,989.43</b>
080		0.00	0.00
081	<b>* Balance carried to Capital Work-in-progress - (Note 3)</b>	<b>120,562,893.48</b>	<b>48,056,989.43</b>

**RIHAND SUPER THERMAL POWER STATION**  
**NOTE NO. 43A TO THE FS--EDC- COAL MINING**

( Amount in ₹ )

	For the Year ended	31.03.2022	31.03.2021
001	<b>EDC- Coal Mining</b>	<b>0.00</b>	<b>0.00</b>
002	A. Employee benefits expense	0.00	0.00
003	Salaries and wages	0.00	0.00
004	Contribution to provident and other funds	0.00	0.00
005	Unwinding of deferred payroll expenses	0.00	0.00
006	Staff welfare expenses	0.00	0.00
007	<b>Total (A)</b>	<b>0.00</b>	<b>0.00</b>
008	<b>B. Finance Costs</b>	<b>0.00</b>	<b>0.00</b>
009	Finance charges on financial liabilities measured at amortised cost	0.00	0.00
010	Bonds	0.00	0.00
011	Foreign currency term loans	0.00	0.00
012	Rupee term loans	0.00	0.00
013	Foreign currency bonds/notes	0.00	0.00
014	Unwinding of discount on account of vendor liabilities	0.00	0.00
015	Others	0.00	0.00
016		0.00	0.00
017	Other Borrowings Costs	0.00	0.00
018	Guarantee Commission	0.00	0.00
019	Management Fees/Arrangers Fees	0.00	0.00
020	Commitment charges/Exposure Premium	0.00	0.00
021	Legal Expenses on foreign currency loans	0.00	0.00
022	Foreign currency bonds/notes expenses	0.00	0.00
023	Foreign Credit Insurance Premium	0.00	0.00
024	Upfront Fee	0.00	0.00
025	Exchange Differences	0.00	0.00
026	Others	0.00	0.00
027	Exchange differences regarded as adjustment to interest cost	0.00	0.00
028	<b>Total (B)</b>	<b>0.00</b>	<b>0.00</b>
029		0.00	0.00
030	C. Depreciation and amortisation	0.00	0.00
031	<b>D. Generation , administration and other expenses</b>	<b>0.00</b>	<b>0.00</b>
032	Power charges	0.00	0.00
033	Less: Recovered from contractors & employees	0.00	0.00
034	<b>Sub-total(Net power charges)</b>	<b>0.00</b>	<b>0.00</b>
035	Water charges	0.00	0.00
036	Rent	0.00	0.00
037	Repairs & maintenance	0.00	0.00
038	Buildings	0.00	0.00
039	Construction equipment	0.00	0.00
040	Others	0.00	0.00
041	Cost of Captive Coal	0.00	0.00
042	Insurance	0.00	0.00
043	Rates and taxes	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**  
**NOTE NO. 43A TO THE FS--EDC- COAL MINING**

( Amount in ₹ )

For the Year ended	31.03.2022	31.03.2021
044 Communication expenses	0.00	0.00
045 Travelling expenses	0.00	0.00
046 Tender expenses	0.00	0.00
047 Less: Income from sale of tenders	0.00	0.00
048 <b>Sub-total (Net tender expenses)</b>	<b>0.00</b>	<b>0.00</b>
049 Advertisement and publicity	0.00	0.00
050 Security expenses	0.00	0.00
051 Entertainment expenses	0.00	0.00
052 Guest house expenses	0.00	0.00
053 Less: Receipt from guest house	0.00	0.00
054 <b>Sub-total (Net Guest House Expenses)</b>	<b>0.00</b>	<b>0.00</b>
055 Education expenses	0.00	0.00
056 Brokerage & Commission	0.00	0.00
057 Books and periodicals	0.00	0.00
058 Community development expenses	0.00	0.00
059 Professional charges and consultancy fee	0.00	0.00
060 Legal expenses	0.00	0.00
061 EDP Hire and other charges	0.00	0.00
062 Printing and stationery	0.00	0.00
063 Miscellaneous expenses	0.00	0.00
064 <b>Total (D)</b>	<b>0.00</b>	<b>0.00</b>
065 <b>Total (A+B+C+D)</b>	<b>0.00</b>	<b>0.00</b>
066 <b>E. Less: Other Income</b>	<b>0.00</b>	<b>0.00</b>
067 Interest from	0.00	0.00
068 Indian banks	0.00	0.00
069 Foreign banks	0.00	0.00
070 Others	0.00	0.00
071 Contractors	0.00	0.00
072 Hire charges	0.00	0.00
073 Sale of scrap	0.00	0.00
074 Exchange Differences	0.00	0.00
075 Miscellaneous income	0.00	0.00
076 <b>TOTAL (E)</b>	<b>0.00</b>	<b>0.00</b>
077 F. Net actuarial gain/loss OCI	0.00	0.00
078	0.00	0.00
079 <b>GRAND TOTAL (A+B+C+D-E+F)</b>	<b>0.00</b>	<b>0.00</b>
080	0.00	0.00
081 <b>* Balance carried to Capital Work-in-progress - (Note 3)</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 44-A TO THE FINANCIAL STATEMENTS**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 Balance sheet	0.00	0.00
002 Freehold land for which conveyancing of the title is awaiting completion of legal formalities	0.00	0.00
003 (a) area (in acres)	1,277.87	1,277.87
004 (b) value (in rs)	50,838,469.84	50,838,469.84
005 Right-of-use land for which execution of lease deed is awaiting completion of legal formalities	0.00	0.00
006 (a) area (in acres)	1,966.04	1,966.04
007 (b) value (in rs)	312,091,923.56	312,091,923.56
008 Right-of-use land acquired on perpetual lease and accordingly not amortised	0.00	0.00
009 (a) area (in acres)	0.00	0.00
010 (b) value (in rs.)	0.00	0.00
011 Land in physical possession of the company which has not been shown in the books pending settlement of price (in acres)	0.00	0.00
012 Deposit with government authorities towards land in possession of the company included in cost of land which is subject to adjus	0.00	0.00
<b>013 Land not in possession of the company</b>	<b>0.00</b>	<b>0.00</b>
014 (a) area (in acres)	0.00	0.00
015 -Freehold	786.37	786.37
016 -Right of Use	0.00	72.47
017 (b) value (in rs)	0.00	0.00
018 -Freehold	14,409,326.78	14,409,326.78
019 -Right of Use	0.00	31,000,000.00
020 Right-of-use buildings pending completion of legal fomalities - value (in rs.)	0.00	0.00
021 Estimated amount of contracts remaining to be executed on capital account and not provided for	0.00	0.00
022 Property, plant & equipment	17,845,234,843.44	13,007,728,593.40
023 Intangible assets	0.00	0.00
024 Details of precommissioning expenditure	0.00	0.00
025 (a) precommissioning expenses	0.00	0.00
026 (b) precommissioning income	0.00	0.00
027 (c) net precommissioning expenditure	0.00	0.00
028	0.00	0.00
029	0.00	0.00
030	0.00	0.00
031 Exchange rate variation taken to revenue during the year (with -ve sign, if favourable)	-92,096,377.22	-15,064,742.92
045 Exchange rate variation capitalised during the year (with -ve sign, if favourable)	154,890,055.40	-258,283,111.07
064 Short Term Leases	0.00	0.00
065 A) Rent	0.00	0.00
066 Company lease accomodation - executives	0.00	0.00
067 Company lease accomodation - directors	0.00	0.00
068 Others	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 44-A TO THE FINANCIAL STATEMENTS**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
069 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
101 Borrowing cost capitalised during the year	24,288,814.93	22,905,000.49
102 Revenue grants recognized during the year	0.00	0.00
103 Revenue expenditure on research and development	0.00	0.00
104 Capital expenditure on research and development.	0.00	0.00
105 Expenditure on sustainability development - capital	0.00	0.00
106 Expenditure on csr- capital	0.00	0.00
107 Opening balance - CSR Liability	39,305,330.19	12,146,990.00
108 Paid/Adjusted during the Year out of Opening above	-36,690,803.19	-11,111,558.00
109 Amount yet to be paid against Cr Year CSR Exp	3,179,626.00	38,269,898.19
110 Closing Balance CSR- Liability ( 110)	5,794,153.00	39,305,330.19
111	0.00	0.00
112	0.00	0.00
113	0.00	0.00
114	0.00	0.00
115 Disclosure under msmed act 2006.	0.00	0.00
116 (i) (a) the principal amount remaining unpaid as at year end	344,066,958.09	358,855,306.17
117 (i) (b) interest due there on remaining unpaid as at Year end	0.00	0.00
118 (ii) the amount of interest paid by the buyer in terms of section 16, along with the amounts of the payment made to the supplier	0.00	0.00
119 (iii) the amount of interest due and payable for the period of delay in making payment(which has been paid but beyond the appoin	0.00	0.00
120 (iv) the amount of interest accrued and remaining unpaid at the end of the year; and	0.00	0.00
121 (v) the amount of further interest remaining due and payable even in the succeeding years, until such date when the interest due	0.00	0.00
122 Amount of inventories recognized as an expense (including fuel)	31,594,433,719.35	32,450,425,492.54
123 Amount of inventories capitalised as overhauling assets out of 122 above	138,605,728.72	211,306,876.17
124 Amount capitalised as edc out of 122 above	0.00	0.00
133 Value of Imported Material Consumed during the Year	0.00	0.00
134	0.00	0.00
135 Contingent liabilities	0.00	0.00
136 A. Claims against the company not acknowledged as debts in respect of :	0.00	0.00
137 (i)Capital works	0.00	0.00
138 (ii)Land compensation cases	35,769,736.80	36,846,334.60
139 (iii)Others by state authorities towards:-	0.00	0.00
140 (a) Water royalty / water charges / nala tax	0.00	0.00
141 (b) Diversion of land / building permission fees	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 44-A TO THE FINANCIAL STATEMENTS**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
142 (c) Other demands by state authorities	257,912,490.57	213,444,000.00
143 (iv) Others by fuel companies	0.00	0.00
144 (a) Disputes related to grade slippage-third party sampling	521,176,520.00	674,113,356.00
145 (b) Surface transportation charges on coal	911,712,917.66	911,712,917.66
146 (c) Take or pay claim - Gas stations	0.00	0.00
147 (d) Other claims by fuel companies not acknowledged as debt	291,000,980.00	288,553,832.00
149 B.Disputed tax demands	0.00	0.00
150 (i) Income tax	0.00	0.00
151 (ii) Excise duty	3,691,823.00	3,691,823.00
152 (iii) Sales tax	145,060,360.00	144,606,592.00
153 (iv) Service tax	4,080,007.53	3,934,244.13
154 (v) Entry tax	0.00	0.00
155 C. Others	240,865,291.85	244,114,529.58
156 <b>Total</b>	<b>2,411,270,127.41</b>	<b>2,521,017,628.97</b>
157 D. Possible reimbursement on account of contingent liabilities	0.00	0.00
158 (i) Capital works	0.00	0.00
159 (ii) Land compensation cases	0.00	0.00
160 (iii) Others (by state authorities)	0.00	0.00
161	0.00	0.00
162 (iv) Others by fuel companies	1,723,890,417.66	1,874,380,105.66
163 (v) Disputed income tax demand	0.00	0.00
164 (vi) Disputed tax demands -others	148,752,183.00	147,399,897.00
165 (vii) Others	118,267,099.00	124,237,101.00
167 <b>Total</b>	<b>1,990,909,699.66</b>	<b>2,146,017,103.66</b>
168 E.AMOUNT PAID UNDER PROTEST/ADJUSTED BY AUTHORITIES - TAX CASES	812,756.00	812,756.00
169 F.CONTINGENT ASSETS	0.00	0.00
170 Intangible under development : less than 1 year	0.00	0.00
171 Intangible under development #: 1-2 year	0.00	0.00
227 Intangible under development #: 2-3 year	0.00	0.00
277 Intangible under development #: More than 3 years	0.00	0.00
278 <b>Capital-Work-in Progress (CWIP)</b>	<b>0.00</b>	<b>0.00</b>
279 Projects in progress	6,758,466,834.90	3,031,095,010.70
280 Projects temporarily suspended	0.00	0.00
281	0.00	0.00
282	0.00	0.00
283 <b>Projects in progress</b>	<b>0.00</b>	<b>0.00</b>
284 Less than 1 year	4,445,877,958.44	2,464,027,384.05
285 1-2 years	1,791,003,583.98	275,380,547.60
286 2-3 years	268,220,634.24	47,112,066.26
287 More than 3 years	253,364,658.24	244,575,012.79
288 <b>Sub Total (I)</b>	<b>6,758,466,834.90</b>	<b>3,031,095,010.70</b>
289	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**  
**NOTE NO. 44-A TO THE FINANCIAL STATEMENTS**

( Amount in ₹ )

As at	31.03.2022	31.03.2021
290 <b>Projects temporarily suspended</b>	<b>0.00</b>	<b>0.00</b>
291 Less than 1 year	0.00	0.00
292 1-2 years	0.00	0.00
293 2-3 years	0.00	0.00
294 More than 3 years	0.00	0.00
295 <b>Sub Total (II)</b>	<b>0.00</b>	<b>0.00</b>
296	0.00	0.00
380 Previous year figures have been regrouped/rearranged wherever necessary.	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 44-B TO THE FS--RPD DISCLOSURE- TRANSACTIONS DURING THE PERIOD**

( Amount in ₹ )

For the Year ended	31.03.2022	31.03.2021
<b>001 1) Transactions during the year- subsidiaries</b>	<b>0.00</b>	<b>0.00</b>
002 Purchase of equipment, supply & erection services	0.00	0.00
003 Purchase of spares	0.00	0.00
004 Maintenance services	0.00	0.00
005 Contracts for works/services for services provided by the company	0.00	0.00
006 Deputation of employees	0.00	0.00
007 Sales of goods	0.00	0.00
008 Sales of property and other assets	0.00	0.00
<b>009 Sub-total</b>	<b>0.00</b>	<b>0.00</b>
010	0.00	0.00
011 Dividend received	0.00	0.00
012 Equity contributions made	0.00	0.00
013 Share application money pending allotment	0.00	0.00
014 Loans granted	0.00	0.00
015 Interest on Loan	0.00	0.00
016 Guarantees received	0.00	0.00
017 Guarantees provided	0.00	0.00
<b>018 Sub-total</b>	<b>0.00</b>	<b>0.00</b>
019	0.00	0.00
<b>020 Transactions during the year- jvs</b>	<b>0.00</b>	<b>0.00</b>
021 Purchase of equipment, supply & erection services	5,024,657.17	-1,682,896.23
022 Purchase of spares	0.00	0.00
023 Maintenance services	859,040,089.80	997,681,580.70
024 Contracts for works/services for services provided by the company	0.00	1,329,798.62
025 Deputation of employees	0.00	0.00
026 Sales of goods	0.00	0.00
027 Sales of property and other assets	0.00	0.00
<b>028 Sub-total</b>	<b>864,064,746.97</b>	<b>997,328,483.09</b>
029	0.00	0.00
030 Dividend received	0.00	0.00
031 Equity contributions made	0.00	0.00
032 Share application money pending allotment	0.00	0.00
033 Loans granted	0.00	0.00
034 Guarantees received	0.00	0.00
035 Guarantees provided	0.00	0.00
<b>036 Sub-total</b>	<b>0.00</b>	<b>0.00</b>
<b>037 Total</b>	<b>864,064,746.97</b>	<b>997,328,483.09</b>
<b>038 Transactions with post employment benefit plans</b>	<b>0.00</b>	<b>0.00</b>
039 Contributions made during the year	0.00	0.00
<b>040 Compensation to key management personnel</b>	<b>0.00</b>	<b>0.00</b>
041 Short term employee benefits	0.00	0.00
042 Post employment benefits	0.00	0.00
043 Other long term benefits	0.00	0.00
044 Termination benefits	0.00	0.00



**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 44-B TO THE FS--RPD DISCLOSURE- TRANSACTIONS DURING THE PERIOD**

( Amount in ₹ )

	For the Year ended	31.03.2022	31.03.2021
045	Sitting Fee	0.00	0.00
046	Share based payments	0.00	0.00
047	<b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
048	<b>Transactions with the related parties under the control of the same government:</b>	<b>0.00</b>	<b>0.00</b>
049	Coal india ltd.. And its subsidiaries- purchase of coal	29,254,471,598.00	29,065,603,324.00
050	Singareni coalfields ltd- purchase of coal	0.00	0.00
051	<b>Bhel ltd.</b>	<b>0.00</b>	<b>0.00</b>
052	Purchase of equipment, supply & erection services	83,658,474.64	242,365,356.74
053	Purchase of spares	132,241,476.97	108,328,927.92
054	Maintenance services	255,496,685.48	221,583,436.88
055	<b>Sub-total</b>	<b>471,396,637.09</b>	<b>572,277,721.54</b>
056	Gail (i) ltd. Supply of natural gas	0.00	0.00
057	locl supply of oil products	757,980,356.02	576,989,518.01
058	Bpcl-supply of natural gas and oil	54,520,164.69	36,610,626.00
059	Sail-supply of steel and iron products	218,133,550.53	191,925,531.94
060	Other entities	0.00	0.00
061	Purchase of equipments & erection services	2,578,991.04	558,043.00
062	Purchase of spares	29,830,616.57	43,435,715.81
063	Maintenance services	116,741,621.33	134,637,356.67
064		0.00	0.00
065	<b>Total</b>	<b>30,905,653,535.27</b>	<b>30,622,037,836.97</b>
066	<b>Transaction with other</b>	<b>0.00</b>	<b>0.00</b>
067	<b>Transaction with ntpc education and research society and ntpc foundation</b>	<b>0.00</b>	<b>0.00</b>
068	- transactions during the year	0.00	0.00
069	ADDITIONAL TRANSACTIONS WITH RELATED PARTIES FOR PSU	0.00	0.00
070	Additional Transactions with GAIL	0.00	0.00
071	Additional Transactions with subsidiaries	0.00	0.00
072	Additional Transactions with joint ventures	0.00	0.00
073		0.00	0.00
074		0.00	0.00

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 44-C TO THE FS--RPD DISCLOSURE- OUTSTANDING BALANCES

( Amount in ₹ )

As at	31.03.2022	31.03.2021
001 <b>Outstanding balance</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Amount recoverable towards loans</b>	<b>0.00</b>	<b>0.00</b>
003 - From Subsidiaries	0.00	0.00
004 - From JVC	0.00	0.00
005 - From KMP	0.00	0.00
006 - From Others	0.00	0.00
007 Sub-total	0.00	0.00
008 <b>Amount recoverable other than loan</b>	<b>0.00</b>	<b>0.00</b>
009 - from subsidiaries	0.00	0.00
010 - from joint ventures	0.00	35,658.00
011 - from key managerial personnel	0.00	0.00
012 - from post employment benefit plans	0.00	0.00
013 - from others	0.00	0.00
014 Sub-total	0.00	35,658.00
015 <b>Amount payable</b>	<b>0.00</b>	<b>0.00</b>
016 - from subsidiaries	0.00	0.00
017 - from joint ventures	102,917,865.18	115,175,286.78
018 - from key managerial personnel	0.00	0.00
019 - from post employment benefit plans	0.00	0.00
020 - from others	0.00	0.00
021 Sub-total	102,917,865.18	115,175,286.78
022	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION  
BALANCE SHEET**

( Amount in ₹ )

As at	Note	31.03.2023	31.03.2022
001	<b>ASSETS</b>	0.00	0.00
002		0.00	0.00
003	<b>NON-CURRENT ASSETS</b>	0.00	0.00
004	PROPERTY, PLANT & EQUIPMENT	49,021,309,183.59	50,524,638,213.05
005	CAPITAL WORK-IN-PROGRESS	8,960,205,455.82	6,758,466,834.90
006	INVESTMENT PROPERTY	0.00	0.00
007	INTANGIBLE ASSETS	73,793.85	15,282.40
008	INTANGIBLE ASSETS UNDER DEVELOPMENT	0.00	0.00
009	<b>FINANCIAL ASSETS</b>	0.00	0.00
010	I) EQUITY INVESTMENTS IN SUBSIDIARIES AND JOINT VENTURES	0.00	0.00
011	II) OTHER INVESTMENTS	0.00	0.00
012	III) TRADE RECEIVABLES	0.00	0.00
013	IV) LOANS	111,577,788.06	114,504,593.97
014	V) OTHER FINANCIAL ASSETS	0.00	0.00
016	OTHER NON-CURRENT ASSETS	696,673,872.57	1,023,040,464.58
017	<b>TOTAL NON-CURRENT ASSETS</b>	<b>59,379,845,893.79</b>	<b>58,420,665,369.38</b>
018		0.00	0.00
019	<b>CURRENT ASSETS</b>	0.00	0.00
020	INVENTORIES	7,344,113,893.80	6,407,743,216.55
021	<b>FINANCIAL ASSETS</b>	0.00	0.00
022	I) OTHER INVESTMENTS	0.00	0.00
023	II) TRADE RECEIVABLES	1,737,334.04	1,733,397.09
024	III) CASH AND CASH EQUIVALENTS	0.00	0.00
025	IV) BANK BALANCES OTHER THAN CASH AND CASH EQUIVALENTS	0.00	0.00
026	V) LOANS	69,609,653.52	75,812,587.85
027	VI) OTHER FINANCIAL ASSETS	126,649,561.86	149,290,961.93
028	CURRENT TAX ASSETS (NET)	0.00	0.00
029		0.00	0.00
030	OTHER CURRENT ASSETS	682,394,268.11	453,531,000.23
031		0.00	0.00
032	<b>TOTAL CURRENT ASSETS</b>	<b>8,224,504,791.53</b>	<b>7,888,111,196.45</b>
033	ASSETS CLASSIFIED AS HELD FOR SALE	6,037,344.90	42,064.39
036	REGULATORY DEFERRAL ACCOUNT DEBIT BALANCES	-43,260,292.59	381,102,021.19
037	<b>TOTAL ASSETS</b>	<b>67,567,127,737.83</b>	<b>66,489,920,679.91</b>
038	<b>EQUITY AND LIABILITIES</b>	0.00	0.00
039	<b>EQUITY</b>	0.00	0.00
040	EQUITY SHARE CAPITAL	0.00	0.00
041	OTHER EQUITY	178,727,729,333.46	178,727,729,333.46
044	<b>TOTAL EQUITY</b>	<b>178,727,729,333.46</b>	<b>178,727,729,333.46</b>
045		0.00	0.00
046	<b>LIABILITIES</b>	0.00	0.00
047	<b>NON-CURRENT LIABILITIES</b>	0.00	0.00
048	<b>FINANCIAL LIABILITIES</b>	0.00	0.00
049	I) BORROWINGS	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION  
BALANCE SHEET**

( Amount in ₹ )

As at	Note	31.03.2023	31.03.2022
050 II) LEASE LIABILITIES	23A	200,090,601.98	0.00
051 III) TRADE PAYABLES		0.00	0.00
052 - TOTAL OUTSTANDING DUES OF MICRO AND SMALL ENTERPRISES	24	3,290,711.73	7,630,370.14
053 - TOTAL OUTSTANDING DUES OF CREDITORS OTHER THAN MICRO AND SMALL ENTERPRISES	24	7,141,146.39	11,100,050.81
054 IV) OTHER FINANCIAL LIABILITIES	25	45,450,369.21	213,937,434.72
055 PROVISIONS	26	0.00	0.00
056 DEFERRED TAX LIABILITIES (NET)	27	0.00	0.00
057 OTHER NON-CURRENT LIABILITIES	28	0.00	0.00
058		0.00	0.00
059 TOTAL NON-CURRENT LIABILITIES		255,960,829.31	232,876,455.67
060		0.00	0.00
061 CURRENT LIABILITIES		0.00	0.00
062 FINANCIAL LIABILITIES		0.00	0.00
063 I) BORROWINGS	29	0.00	0.00
064 II) LEASE LIABILITIES	29A	15,669,307.00	0.00
065 III) TRADE PAYABLES		0.00	0.00
066 - TOTAL OUTSTANDING DUES OF MICRO AND SMALL ENTERPRISES	30	177,806,736.80	220,046,789.16
067 - TOTAL OUTSTANDING DUES OF CREDITORS OTHER THAN MICRO AND SMALL ENTERPRISES	30	2,778,477,796.80	3,104,879,536.52
068 III) OTHER FINANCIAL LIABILITIES	31	4,329,158,828.22	3,800,418,199.66
069 OTHER CURRENT LIABILITIES	32	124,300,877.64	150,867,804.94
070 PROVISIONS	33	9,102,016.00	8,683,884.00
071 CURRENT TAX LIABILITIES (NET)	34	0.00	0.00
072		0.00	0.00
073 TOTAL CURRENT LIABILITIES		7,434,413,564.46	7,284,835,996.68
074		0.00	0.00
077 DEFERRED REVENUE	35	1,576,387,000.00	1,521,099,000.00
078 REGULATORY DEFERRAL ACCOUNT CREDIT BALANCES	36	0.00	0.00
079 INTER UNIT ACCOUNTS		-130,781,938,495.19	-121,276,820,114.92
080		0.00	0.00
081 TOTAL EQUITY AND LIABILITIES		67,567,127,737.63	66,489,920,670.91
082 Significant Accounting Policies as per note 1	1	0.00	0.00
083		0.00	0.00
084 The Accompanying notes 1 to 44 form an integral part of these financial statements.		0.00	0.00
085		0.00	0.00

( Auditor Initial & Stamp )

( Head of Finance )

  
( Head of Unit )

पी. मैदीरत्ता/P. Mediratta  
महाप्रबंधक (प्रवा. एवं अनु)/GM (O&M)  
एनटीपीसी-रिहन्दनगर/NTPC-Rihandnagar  
सोनभद्र (उ.प्र.)/Sonebhadra (U.P.) 231223

**RIHAND SUPER THERMAL POWER STATION  
STATEMENT OF PROFIT AND LOSS**

( Amount in ₹ )

	For the Year ended	Note	31.03.2023	31.03.2022
001	Revenue		0.00	0.00
002	Revenue from operations	37	58,472,623,746.09	53,148,219,779.11
003	Other income	38	494,325,517.38	1,201,322,056.93
005	<b>Total Income</b>		<b>58,956,949,263.47</b>	<b>54,349,541,836.04</b>
007	Expenses		0.00	0.00
008	Fuel including cost of captive coal	38A	34,514,855,222.10	30,643,588,586.19
009	Employee benefits expense	39	1,777,403,106.11	1,507,965,286.44
010	Electricity purchased for trading		0.00	0.00
011	Finance costs	40	1,283,819,909.71	1,466,105,749.88
012	Depreciation and amortization expenses	41	4,307,908,550.58	4,182,729,874.91
013			0.00	0.00
014	Other expenses	42	4,773,404,303.59	3,422,427,005.46
015	CC expenses charge to revenue		900,990,130.26	807,280,921.12
016	Less: Unit expenses transferred to CC		0.00	0.00
017	<b>Total expenses</b>		<b>47,558,469,292.35</b>	<b>42,338,097,406.90</b>
020	<b>Profit before exceptional items &amp; tax</b>		<b>11,398,479,971.12</b>	<b>12,019,444,430.94</b>
021	Exceptional items		0.00	0.00
024	<b>Profit before tax</b>		<b>11,398,479,971.12</b>	<b>12,019,444,430.94</b>
027	Tax expense:		0.00	0.00
028	Current tax		0.00	0.00
031	Deferred tax		0.00	0.00
034			0.00	0.00
035	<b>Total Tax expense</b>		<b>0.00</b>	<b>0.00</b>
036	<b>Profit for the period before regulatory deferral account balances</b>		<b>11,398,479,971.12</b>	<b>12,019,444,430.94</b>
037	Movement in regulatory deferral account balances		0.00	0.00
038	Regulatory deferred account - deferred		0.00	0.00
039	Others		-1,024,362,313.78	316,015,565.02
040	Tax impact on Regulatory deferral account balances		0.00	0.00
041	<b>Movement in Regulatory deferral account balances (Net of Tax)</b>		<b>-1,024,362,313.78</b>	<b>316,015,565.02</b>
042	<b>Profit for the period/ year</b>		<b>10,374,117,657.34</b>	<b>12,325,459,995.96</b>
055	Other comprehensive income		0.00	0.00
056	(A) Items that will not be reclassified to profit or loss		0.00	0.00
057	- Net gains/(losses) on fair value of equity instruments through other comprehensive income		0.00	0.00
058	Income tax on above that will not be reclassified to profit or loss		0.00	0.00
059	- Net actuarial gains/(losses) on defined benefit plans		-19,544,151.77	-9,725,834.75
060	Income tax on above that will not be reclassified to profit or loss		0.00	0.00
064			0.00	0.00
065	<b>Other comprehensive income for the year, net of income tax</b>		<b>-19,544,151.77</b>	<b>-9,725,834.75</b>
070			0.00	0.00
071			0.00	0.00
072	<b>Total Comprehensive Income for the year</b>		<b>10,354,573,505.57</b>	<b>12,319,734,369.31</b>

**RIHAND SUPER THERMAL POWER STATION  
STATEMENT OF PROFIT AND LOSS**

( Amount in ₹ )

	For the Year ended	Note	31.03.2023	31.03.2022
086			0.00	0.00
087	Earnings per equity share:		0.00	0.00
088	Basic & Diluted		0.00	0.00
089	Significant Accounting Policies		0.00	0.00
090			0.00	0.00
091	The accompanying notes 1 to 44 form an integral part of these financial statements.		0.00	0.00

( Auditor Initial & Stamp )

( Head of Finance )

  
( Head of Unit )

**पी. मैदीरत्ता/P. Mediratta**  
महाप्रबंधक (प्रचा. एवं अनु.)/GM (O&M)  
एनटीपीसी-रिहन्दनगर/NTPC-Rihandnagar  
सोनभद्र (उ०प्र०)/Sonebhadra (U.P.) 231223

**For CEO and CFO Certification**

(a) We acknowledge our responsibility for preparation of financial statements in accordance with the requirements of the Companies Act 2013 and recognised accounting policies and practices. We further acknowledge our responsibility for preparation of financial statement according to the requirement of Section 134(5) of the Companies Act, 2013 relating to Director's Responsibilities Statement.

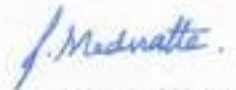
(b) We have reviewed these financial statements to the best of our knowledge and belief that these statements do not contain any materially untrue statement or omit any material fact or contain statements that might be misleading and these statements together present a true and fair view of the our Unit's affairs and are in compliance with existing accounting standards, applicable laws and regulations.

(c) To the best of our knowledge and belief, there are no transactions entered into by the Unit during the year which are fraudulent, illegal or violative of the company's code of conduct.

(d) We are responsible for establishing and maintaining internal controls for financial reporting and we have evaluated the effectiveness of the internal control system of the Unit pertaining to financial reporting and have disclosed to the auditors, the deficiencies in the design or operation of such internal controls, if any, of which we are aware and the steps we have taken or propose to take to rectify these deficiencies.

(e) We have indicated to the company's auditors significant changes in internal control over financial reporting during the year; significant changes, if any, in accounting policies during the year and the same have been disclosed in the notes to the financial statements; and instances of significant fraud of which we have become aware and the involvement therein, if any, of the management or an employee having a significant role in the company's internal control system over financial reporting.

( Head of Finance )



( Head of Unit )

**पी. मैदीरत्ता/P. Mediratta**  
महाप्रबंधक (प्रचा. एवं जनु.)/GM (O&M)  
एनटीपीसी-रिहन्दनगर/NTPC-Rihandnagar  
सोनबढ़ (उ०प्र०)/Sonebhadra (U.P.) 231223

Note forming part of Balance Sheet  
**Note 2 : Property, Plant And Equipment**  
**Business Area :1005**

(Amount in Rupees)

Asset Class	Opening Gross Block As At 01.04.2022	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2023	Opening Depreciation As At 01.04.2022	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2023	Net Block As At 31.03.2023	Net Block As At 31.03.2022
<b>1 TANGIBLE ASSETS</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>2 Land : (including development expenses)</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>3 Freehold</b>	355016843.25	0.00	0.00	355016843.25	0.00	0.00	0.00	0.00	355016843.25	355016843.25
<b>4 Right of Use</b>	312564894.63	381975426.98	(16402587.63)	678137733.98	85480790.23	19559265.37	(5616449.11)	99423606.49	578714127.49	227084104.40
<b>5 Submergence</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>6 Right of use - Coal Bearing Area Land</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>7 Roads,bridges, culverts &amp; helipads</b>	636337614.70	0.00	0.00	636337614.70	156600245.22	23556879.21	0.00	180157124.43	456180490.27	479737369.48
<b>8 Building :</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 Freehold</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>10 Main plant</b>	1852956664.03	16844083.76	0.00	1869800747.79	438548550.32	63015588.18	0.00	501564138.50	1368236609.29	1414408113.71
<b>11 Others</b>	2561634486.83	13176738.39	0.00	2574811225.22	578271478.87	95496029.90	0.00	673767508.77	1901043716.45	1983363007.96
<b>12 Right of Use</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>13 Temporary erection</b>	231168.13	0.00	0.00	231168.13	231168.13	0.00	0.00	231168.13	0.00	0.00
<b>14 Water Supply, drainage &amp; sewerage system</b>	546222044.04	0.00	0.00	546222044.04	147146582.36	24193063.05	0.00	171339645.41	374882398.63	399075461.68
<b>15 Hydraulic works, barrages, dams, tunnels and power channel</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>16 MGR track and signalling system</b>	1353778874.56	530569.59	0.00	1354309444.15	426074134.97	61386311.34	0.00	487460446.31	866848997.84	927704739.59
<b>17 Railway siding</b>	1528212.48	0.00	0.00	1528212.48	712429.73	64482.46	0.00	776912.19	751300.29	815782.75
<b>18 Earth dam reservoir</b>	1456921.40	0.00	0.00	1456921.40	0.00	0.00	0.00	0.00	1456921.40	1456921.40
<b>19 Plant and machinery(including associated civil works)</b>	74164614573.51	3340241532.80	(544289440.95)	76960566665.36	29934556584.50	4541497258.31	(731981424.62)	33744072418.19	43216494247.17	44230057989.01
<b>Owned Asset</b>										

  
 Chief General Manager (Commercial)  
 PFC LIMITED



**Note forming part of Balance Sheet**  
**Note 2 : Property, Plant And Equipment**  
**Business Area :1005**

Asset Class	Opening Gross Block As At 01.04.2022	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2023	Opening Depreciation As At 01.04.2022	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2023	Net Block As At 31.03.2023	Net Block As At 31.03.2022
20 Plant and machinery(including associated civil works) -Right of use Asset	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21 Furniture and fixtures	174964718.54	1676350.00	0.00	176641068.54	78594958.49	9625497.17	0.00	88220455.66	88420612.88	96369760.05
22 Assets under 5 Km Scheme	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23 Vehicles including speedboats / helicopter- Owned	7198115.35	1836000.00	0.00	9034115.35	3207690.71	671403.19	0.00	3879093.90	5155021.45	3990424.64
24 Vehicles including speedboats / helicopter - Leased	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25 Office equipment	100317191.90	496281.64	0.00	100813473.54	59694520.37	6658250.27	0.00	66352770.64	34460702.90	40622671.53
26 EDP, WP machines and satcom equipment	81544199.83	55528767.92	(11294623.43)	125778344.32	66533167.59	14980080.67	(11232170.33)	70281077.93	55497266.39	15011032.24
27 Construction equipments	65110895.86	0.00	0.00	65110895.86	29074058.93	2027521.71	0.00	31101580.64	34009315.22	36036836.93
28 Electrical Installations	331078040.99	0.00	0.00	331078040.99	140007740.40	21198417.68	0.00	161206158.08	169871882.91	191070300.59
29 Communication equipments	31956347.30	855500.00	0.00	32811847.30	24604550.37	483314.00	0.00	25087864.37	7723982.93	7351796.93
30 Hospital equipments	34939396.98	1223800.08	0.00	36163197.06	17430901.95	3295165.86	0.00	20726067.81	15437129.25	17508495.03
31 Laboratory and workshop equipments	149409000.82	1573758.95	0.00	150982759.77	51452438.94	8422703.15	0.00	59875142.09	91107617.68	97956561.88
32 Capital expenditure on assets not owned by the Company	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33 Assets of Government	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

  
 Chief Financial Officer (Accounting)  
 Add. General Manager (Accounting)  
 एन सी ई सी लिमिटेड/NTPC LIMITED

**Note forming part of Balance Sheet**  
**Note 2 : Property, Plant And Equipment**  
**Business Area :1005**

Asset Class	Opening Gross Block As At 01.04.2022	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2023	Opening Depreciation As At 01.04.2022	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2023	Net Block As At 31.03.2023	Net Block As At 31.03.2022
34 Less:Grants from Government	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35 Less: Recoverable from GOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36 Assets for ash utilisation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37 (Less):-Adjusted from fly ash utilisation reserve fund	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38 Site Restoration Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39 Mining Properties	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Grand Total (Tangible)</b>	82762860205.13	3815958810.11	(571986652.01)	86006832363.23	32238221992.08	4896131231.52	(748830044.06)	36385523179.54	49621309183.69	50524638213.05
<b>Grand Total Prev Year (Tangible)</b>	82040081026.12	1446704961.36	(723925782.35)	82762860205.13	28420630260.45	4722518393.06	(904926661.43)	32238221992.08	50524638213.05	53619450765.67

  
 Anil Kumar (Authorized Signatory)  
 Anil Kumar (Authorized Signatory)  
 Anil Kumar (Authorized Signatory)

**Note forming part of Balance Sheet**  
**Note 2 : Property, Plant And Equipment**  
**Business Area :1005**

**Details of Adjustments of Gross Block and Depreciation/Amortization**

Particulars	Gross Block		Depreciation/Amortization	
	Tangible As At: 31.03.2023	Tangible As At: 31.03.2022	Tangible As At: 31.03.2023	Tangible As At: 31.03.2022
Disposal of assets	(11218922.70)	(352672.50)	(11218922.70)	(352672.50)
Retirement of assets	(832440819.19)	(995236466.75)	(738408039.74)	(926400049.04)
Cost adjustments	254681373.92	154890055.40	0.00	0.00
Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Depreciation on construction equipment capitalised as EDC	0.00	0.00	0.00	0.00
Prior Period Depreciation due to Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Special Depreciation (As per New Policy)	0.00	0.00	0.00	0.00
Transfer in /out because of Inter Unit transfers	26964560.27	116773301.50	796918.38	21826060.11
Others	(9972844.31)	0.00	0.00	0.00
<b>TOTAL</b>	<b>(571986652.01)</b>	<b>(723925782.35)</b>	<b>(748830044.06)</b>	<b>(904926661.43)</b>

Note:- Additions during the year includes capital expenditure towards CSR (in Rs.) : 0.00

  
 Anil Kumar (Anil Kumar)  
 Anil Kumar (Anil Kumar)  
 Anil Kumar (Anil Kumar)

## Note forming part of Balance Sheet

## Note 3: Capital-Work-in-Progress

## Business Area: RIHAND SUPER THERMAL POWER STATION

SI No	Asset Class	As At 01.04.2022	Addition	Deduction/ Adjustment	Capitalized	As At 31.03.2023
	1	2	3	4	5	6
1	CAPITAL WORK-IN-PROGRESS					
2	Development of land					
3	Roads, bridges, culverts & helipads					
4	Piling and foundation					
5	Buildings :					
6	Main plant					
7	Others	83909704.41	57882229.10	(13733403.39)		128058530.12
8	Temporary erection					
9	Water supply, drainage and sewerage system					
10	Hydraulic works, barrages, dams, tunnels and power channel					
11	MGR track and signalling system		530569.59	(530569.59)		
12	Railway siding					
13	Earth dam reservoir					
14	Plant and equipment	6305289092.45	4838729538.38	(1260069968.84)	1167430596.92	8716518065.07
15	Furniture and fixtures					
16	Vehicles					
17	Office equipment					
18	EDP/WP machines & satcom equipment					
19	Construction equipments					
20	Electrical installations					
21	Communication equipment					
22	Hospital equipments					
23	Laboratory and workshop equipments					
24	Assets under 5Km Scheme of the GOI					
25	Capital expenditure on assets not owned by the company					
26	Expenditure towards development of coal mines					
27	Survey,Investigation,Consultancy & Supervision Cha		391613.00			391613.00
28	Difference in exchange on foreign currency loans					

## Note forming part of Balance Sheet

## Note 3: Capital-Work-in-Progress

## Business Area: RIHAND SUPER THERMAL POWER STATION

SI No	Asset Class	As At 01.04.2022	Addition	Deduction/ Adjustment	Capitalized	As At 31.03.2023
	1	2	3	4	5	6
29	Expenditure towards diversion of forest land					
30	Pre-commissioning expenses (net)					
31	ExpPendAlloca-oth ex attribut Project					
32	Expenditure During Construction Period (net)*		101556618.75	3866764.12		105423382.87
33	LESS : Allocated to related works		105423382.87			105423382.87
34	LESS : Provision for Unservicable works					
35	<b>Construction stores (At Cost)</b>					
36	Steel	2548783.67		43276.08		2592059.75
37	Cement	1894956.30		(171047.43)		1723908.87
38	Others	366294028.62	5343628.00	(260627980.45)		111009676.17
39	<b>Sub-total</b>	<b>370737768.59</b>	<b>5343628.00</b>	<b>(260755751.80)</b>		<b>115325644.79</b>
40	LESS : Provision for shortages	1469730.55		(1381333.39)		88397.16
41	<b>Sub-total</b>	<b>369268038.04</b>	<b>5343628.00</b>	<b>(259374418.41)</b>		<b>115237247.63</b>
42	<b>Total CWIP</b>	<b>6758466834.90</b>	<b>4899010813.95</b>	<b>(1529841596.11)</b>	<b>1167430596.92</b>	<b>8960205455.82</b>
43						
44						
45	<b>PREVIOUS YEAR TOTAL</b>	<b>3031095010.70</b>	<b>4746007936.56</b>	<b>(60821215.76)</b>	<b>875877285.62</b>	<b>6758466834.90</b>

Note:- Additions during the year includes capital expenditure towards CSR (in Rs.) :

0.00

Note forming part of Balance Sheet  
**Note-4 Non Current Assets- Intangible Assets**  
**Business Area :1005**

Asset Class	Opening Gross Block As At 01.04.2022	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2023	Opening Depreciation As At 01.04.2022	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2023	Net Block As At 31.03.2023	Net Block As At 31.03.2022
<b>INTANGIBLE ASSETS</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>1 Right to Use- Land</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>2 -Others</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>3 -Software</b>	4773867.26	92925.00	0.00	4866792.26	4758604.86	28393.75	0.00	4786998.61	79793.65	15262.40
<b>Grand Total (Intangible)</b>	4773867.26	92925.00	0.00	4866792.26	4758604.86	28393.75	0.00	4786998.61	79793.65	15262.40
<b>Grand Total Prev Year (Intangible)</b>	4773867.26	0.00	0.00	4773867.26	4758604.86	0.00	0.00	4758604.86	15262.40	15262.40

  
 Chief Financial Officer (Accounting)  
 Add. General Manager (Commercial)  
 एन टी सी लिमिटेड/NTSC LIMITED

Note forming part of Balance Sheet  
**Note-4 Non Current Assets- Intangible Assets**  
**Business Area :1005**

<b>Details of Adjustments of Gross Block and Depreciation/Amortization</b>				
<b>Particulars</b>	<b>Gross Block</b>		<b>Depreciation/Amortization</b>	
	<b>InTangible As At: 31.03.2023</b>	<b>InTangible As At: 31.03.2022</b>	<b>InTangible As At: 31.03.2023</b>	<b>InTangible As At: 31.03.2022</b>
Disposal of assets	0.00	0.00	0.00	0.00
Retirement of assets	0.00	0.00	0.00	0.00
Cost adjustments	0.00	0.00	0.00	0.00
Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Depreciation on construction equipment capitalised as EDC	0.00	0.00	0.00	0.00
Prior Period Depreciation due to Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Special Depreciation (As per New Policy)	0.00	0.00	0.00	0.00
Transfer in /out because of Inter Unit transfers	0.00	0.00	0.00	0.00
Others	0.00	0.00	0.00	0.00
<b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Note:- Additions during the year includes capital expenditure towards CSR (in Rs.) : 0.00

  
 Anil Kumar (व्यक्तिगत)  
 Anil, General Manager (Commercial)  
 एन टी सी लिमिटेड/NTSC LIMITED

## Note forming part of Balance Sheet

## Note 5: Intangible Assets under Development

## Business Area: RIHAND SUPER THERMAL POWER STATION

SI No	Asset Class	As At 01.04.2022	Addition	Deduction/ Adjustment	Capitalized	As At 31.03.2023
	1	2	3	4	5	6
1	INTANGIBLE ASSETS UNDER DEVELOPMENT					
2	Software					
3	Right to use Others					
4	Exploration and Evaluation Expenditure - Coal Mini					
5	Exploratory wells-in-progress					
6	<b>Less: Provision for exploratory wells-in-progress</b>					
7	<b>Total</b>					
8	<b>PREVIOUS YEAR TOTAL-I</b>					

Note:- Additions during the year includes capital expenditure towards CSR (in Rs.) :

0.00



**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 6 TO THE FS-NCA-EQUITY INVESTMENTS IN SUBSIDIARIES AND JOINT VENTURES ( Amount in ₹ )**

As at	No. of shares	Face value	31.03.2023	31.03.2022
001	<b>NON CURRENT INVESTMENTS- INVESTMENTS IN SUBSIDIARIES AND JOINT VENTURES</b>		<b>0.00</b>	<b>0.00</b>
012	<b>EQUITY INSTRUMENTS - UNQUOTED-(FULLY PAID UP UNLESS OTHERWISE STATED, AT COST)</b>		<b>0.00</b>	<b>0.00</b>
013	<b>SUBSIDIARY COMPANIES</b>		<b>0.00</b>	<b>0.00</b>
014	PATRATU VIDYUT UTPADAN NIGAM LTD.		0.00	0.00
015	NTPC ELECTRIC SUPPLY COMPANY LTD.		0.00	0.00
016	NTPC VIDYUT VYAPAR NIGAM LTD.		0.00	0.00
017	NABINAGAR POWER GENERATING COMPANY LTD.		0.00	0.00
018	KANTI BIJLEE UTPADAN NIGAM LTD.		0.00	0.00
019	BHARTIYA RAIL BIJLEE COMPANY LTD.		0.00	0.00
020	NTPC MINING LTD (NML)		0.00	0.00
021	THDC INDIA LTD.		0.00	0.00
022	NEEPCO LTD.		0.00	0.00
023	NTPC EDMC Waste Solutions Pvt Ltd		0.00	0.00
024	NTPC Renewables Energy Ltd		0.00	0.00
025	Ratnagiri Gas & Power Pvt. Limited (RGPPL)		0.00	0.00
026	NTPC Green Energy Limited		0.00	0.00
027	Green Valley Renewable Energy Limited		0.00	0.00
028			0.00	0.00
029			0.00	0.00
030	<b>SUB TOTAL</b>		<b>0.00</b>	<b>0.00</b>
055	<b>JOINT VENTURE COMPANIES</b>		<b>0.00</b>	<b>0.00</b>
056	Utility Powertech Ltd.		0.00	0.00
057	NTPC GE Power Services Pvt.Ltd.		0.00	0.00
058	NTPC-SAIL Power Company Ltd.		0.00	0.00
059	NTPC-Tamil Nadu Energy Company Ltd.		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 6 TO THE FS-NCA-EQUITY INVESTMENTS IN SUBSIDIARIES AND JOINT VENTURES ( Amount in ₹ )**

As at	No. of shares	Face value	31.03.2023	31.03.2022
060	Ratnagiri Gas & Power Pvt. Limited (RGPPL)		0.00	0.00
061	ARAVALI POWER COMPANY PRIVATE LTD.		0.00	0.00
062	Jhabua Power Ltd.		0.00	0.00
063	NTPC BHEL POWER PROJECTS PRIVATE LTD.		0.00	0.00
064	MEJA URJA NIGAM PRIVATE LIMITED		0.00	0.00
065	BF-NTPC ENERGY SYSTEMS LTD.		0.00	0.00
066			0.00	0.00
067	NABINAGAR POWER GENERATING COMPANY LTD.		0.00	0.00
068	TRANSFORMER AND ELECTRICAL KERALA LTD.		0.00	0.00
069	NATIONAL HIGH POWER TEST LABORTORY PRIVATE LTD.		0.00	0.00
070			0.00	0.00
071	CIL NTPC URJA PRIVATE LTD.		0.00	0.00
072	ANUSHAKTI VIDHYUT NIGAM LTD.		0.00	0.00
073	ENERGY EFFICIENCY SERVICES LTD.		0.00	0.00
074			0.00	0.00
075	TRINCOMALEE POWER COMPANY LTD.		0.00	0.00
076	BANGLADESH-INDIA FRIENDSHIP POWER COMPANY (PVT.) LTD.		0.00	0.00
077	HINDUSTAN URVARAK & RASAYAN LIMITED		0.00	0.00
078	KONKAN LNG LTD		0.00	0.00
081	<b>SUB TOTAL</b>		<b>0.00</b>	<b>0.00</b>
109	AGGREGATE AMOUNT OF IMPAIRMENT IN THE VALUE OF INVESTMENTS		0.00	0.00
110	TOTAL (NET OF IMPAIRMENT) OF JV		0.00	0.00
111	<b>Gross Total of Investments</b>		<b>0.00</b>	<b>0.00</b>
134	<b>Total</b>		<b>0.00</b>	<b>0.00</b>
135	Details of Investments		0.00	0.00
136	Aggregate amount of Unquoted Investments		0.00	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 6 TO THE FS-NCA-EQUITY INVESTMENTS IN SUBSIDIARIES AND JOINT VENTURES ( Amount in ₹ )

As at	No. of shares	Face value	31.03.2023	31.03.2022
141			0.00	0.00
142			0.00	0.00
143			0.00	0.00
144			0.00	0.00
145			0.00	0.00
153	Valuation of Investments as per Note 1.		0.00	0.00
154			0.00	0.00
202			0.00	0.00
233			0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 7 TO THE FS-NCA-OTHER INVESTMENTS**

( Amount in ₹ )

	As at	No. of shares	Face value	31.03.2023	31.03.2022
001	Non-current financial assets (investments)			0.00	0.00
006	<b>Long Term - Trade</b>			<b>0.00</b>	<b>0.00</b>
007	<b>Equity Instruments (fully paid up-unless otherwise stated)</b>			<b>0.00</b>	<b>0.00</b>
008	<b>Quoted</b>			<b>0.00</b>	<b>0.00</b>
009	<b>JOINT VENTURE COMPANIES</b>			<b>0.00</b>	<b>0.00</b>
010	PTC India Ltd.			0.00	0.00
070	INTERNATIONAL COAL VENTURES PRIVATE LTD.			0.00	0.00
075	BF-NTPC ENERGY SYSTEMS LTD.			0.00	0.00
098	Jhabua Power Limited-8.5% Non convertible debentures - private placement			0.00	0.00
110	COOPERATIVE SOCIETIES			0.00	0.00
111				0.00	0.00
112	<b>SUB TOTAL</b>			<b>0.00</b>	<b>0.00</b>
113	AGGREGATE AMOUNT OF IMPAIRMENT IN THE VALUE OF INVESTMENTS			0.00	0.00
115	<b>TOTAL</b>			<b>0.00</b>	<b>0.00</b>
120				0.00	0.00
146	NTPC EMPLOYEES CONSUMERS AND THRIFT CO-OPERATIVE SOCIETY LTD. KORBA			0.00	0.00
147	NTPC EMPLOYEES CONSUMERS AND THRIFT COOPERATIVE SOCIETY LTD. RSTPP			0.00	0.00
148	NTPC EMPLOYEES CONSUMERS COOPERATIVE SOCIETY LTD. FARAKKA			0.00	0.00
149	NTPC EMPLOYEES CONSUMERS COOPERATIVE SOCIETY LTD. VINDHYACHAL			0.00	0.00
150	NTPC EMPLOYEES CONSUMERS COOPERATIVE SOCIETY LTD. ANTA			0.00	0.00
151	NTPC EMPLOYEES CONSUMERS COOPERATIVE SOCIETY LTD. KAWAS			0.00	0.00
152	NTPC Employees Consumers Cooperative Society Ltd. Kaniha			0.00	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 8 TO THE FS-NCA-TRADE RECEIVABLES

( Amount in ₹ )

As at	31.03.2023	31.03.2022
001 Non-current financial assets - Trade receivables	0.00	0.00
002 UNSECURED, CONSIDERED GOOD	0.00	0.00
003 CREDIT IMPAIRED	0.00	0.00
004	0.00	0.00
006 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 9 TO THE FS-NCA-LOANS**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
001 <b>LOANS (NON CURRENT)</b>	<b>0.00</b>	<b>0.00</b>
004 RELATED PARTIES	0.00	0.00
005 SECURED	0.00	0.00
006 UN-SECURED	0.00	0.00
007 WITH SIGNIFICANT INCREASE IN CREDIT RISK	0.00	0.00
008 CREDIT IMPAIRED	0.00	0.00
009	0.00	0.00
010 EMPLOYEES(INCLUDING ACCRUED INTEREST)	0.00	0.00
011 SECURED	94,115,817.95	87,385,641.00
012 UNSECURED	45,955,656.57	55,663,708.67
013 WITH SIGNIFICANT INCREASE IN CREDIT RISK	0.00	0.00
014 CREDIT IMPAIRED	0.00	0.00
015 LESS : EMPLOYEE LOANS DISCOUNTING	0.00	0.00
016 SECURED	22,171,388.03	21,476,411.67
017 UNSECURED	6,322,298.43	7,068,344.03
018 LOAN TO STATE GOVERNMENT IN SETTLEMENT OF DUES FROM CUSTOMERS (UNSECURED)	0.00	0.00
019 OTHERS	0.00	0.00
020 SECURED	0.00	0.00
021 UNSECURED	0.00	0.00
022 WITH SIGNIFICANT INCREASE IN CREDIT RISK	0.00	0.00
023 CREDIT IMPAIRED	0.00	0.00
024 LESS: ALLOWANCE FOR CREDIT IMPAIRED LOANS	0.00	0.00
026 <b>SUB TOTAL</b>	<b>111,577,788.06</b>	<b>114,504,593.97</b>
027	0.00	0.00
028 <b>TOTAL</b>	<b>111,577,788.06</b>	<b>114,504,593.97</b>
029	0.00	0.00
030	0.00	0.00
031 <b>Due from Directors and Officers of the Company</b>	<b>0.00</b>	<b>0.00</b>
032 Directors	0.00	0.00
033 Officers	0.00	0.00
034	<b>0.00</b>	<b>0.00</b>
035 <b>Loans to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
036 i)Key management personel	0.00	0.00
037 ii)Subsidiary companies	0.00	0.00
038 iii)Joint Venture companies	0.00	0.00
039 iv)Others	0.00	0.00
040	<b>0.00</b>	<b>0.00</b>
055 Other loans represent loans given to	0.00	0.00
056 a) APIIC	0.00	0.00
061	0.00	0.00
062 RPD	0.00	0.00
063 i)Key management personel	0.00	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 9 TO THE FS-NCA-LOANS

( Amount in ₹ )

As at	31.03.2023	31.03.2022
064 ii)Subsidiary companies	0.00	0.00
065 iii)Joint Venture companies	0.00	0.00
066 iv)Others	0.00	0.00
067 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 10 TO THE FS-NCA-OTHER FINANCIAL ASSETS**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
001 <b>Other Financial Assets (non current)</b>	<b>0.00</b>	<b>0.00</b>
002	0.00	0.00
003 <b>Share application money pending allotment in (Subsidiary Companies) :</b>	<b>0.00</b>	<b>0.00</b>
004 NTPC Electric Supply Company Ltd.	0.00	0.00
005 NTPC Vidyut Vyapar Nigam Ltd.	0.00	0.00
006 Nabinagar Power Generating Company Ltd.	0.00	0.00
007 Kanti Bijlee Utpadan Nigam Ltd.	0.00	0.00
008 Bhartiya Rail Bijlee Company Ltd.	0.00	0.00
009 Patratu Vidyut Utpadan Nigam Ltd.	0.00	0.00
010 NTPC Mining Limited	0.00	0.00
011 THDC Ltd.	0.00	0.00
012 NEEPCO Ltd	0.00	0.00
013	0.00	0.00
014 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
015 <b>Share application money pending allotment (Joint Venture)</b>	<b>0.00</b>	<b>0.00</b>
016 Utility Powertech Ltd.	0.00	0.00
017 NTPC GE Power Services Pvt.Ltd.	0.00	0.00
018 NTPC-SAIL Power Company Ltd.	0.00	0.00
019 NTPC-Tamil Nadu Energy Company Ltd.	0.00	0.00
020 Ratnagiri Gas & Power Private Ltd.	0.00	0.00
021 Aravali Power Company Private Ltd.	0.00	0.00
022	0.00	0.00
023 NTPC BHEL Power Projects Private Ltd.	0.00	0.00
024 Meja Urja Nigam Private Limited	0.00	0.00
025 BF-NTPC Energy Systems Ltd.	0.00	0.00
026 Anushakti Vidhyut Nigam Ltd.	0.00	0.00
027 Nabinagar Power Generating Company Ltd.	0.00	0.00
028 Energy Efficiency Services Ltd.	0.00	0.00
029 National High Power Test Labortory Private Ltd.	0.00	0.00
030	0.00	0.00
031 CIL NTPC Urja Private Ltd.	0.00	0.00
032 Trincomalee Power Company Ltd.	0.00	0.00
033 Hindustan Urvarak & Rasayan Limited	0.00	0.00
034 Bangladesh-India Friendship Power Company Private Ltd.	0.00	0.00
035 <b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
036	0.00	0.00
037 Claims Recoverable	0.00	0.00
038 Finance Lease Recoverable	0.00	0.00
039 Mine Closure Deposit	0.00	0.00
040 Financial Deposit	0.00	0.00
041	0.00	0.00
042 <b>Total</b>	<b>0.00</b>	<b>0.00</b>





RIHAND SUPER THERMAL POWER STATION

( Amount in ₹ )

As at	31.03.2023	31.03.2022
010	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 11 TO THE FS-NCA-OTHER NON-CURRENT ASSETS**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
001 <b>Other Non-current Assets</b>	<b>0.00</b>	<b>0.00</b>
002	<b>0.00</b>	<b>0.00</b>
003 <b>CAPITAL ADVANCES</b>	<b>0.00</b>	<b>0.00</b>
004 SECURED	0.00	0.00
005 Unsecured	0.00	0.00
006 COVERED BY BANK GUARANTEE	600,930,914.00	194,789,674.00
007 OTHERS	54,522,506.49	53,588,917.11
008 CONSIDERED DOUBTFUL	0.00	0.00
009 LESS: ALLOWANCE FOR BAD & DOUBTFUL ADVANCES	0.00	0.00
010 <b>Sub-Total</b>	<b>655,453,420.49</b>	<b>248,378,591.11</b>
011	0.00	0.00
012 Advances other than capital advances	0.00	0.00
013 SECURITY DEPOSITS	1,524,280.00	1,524,280.00
019 Advances to Related parties	0.00	0.00
022 <b>Advances to Contractors &amp; Suppliers</b>	<b>0.00</b>	<b>0.00</b>
023 SECURED	0.00	0.00
024 UNSECURED	0.00	0.00
025 CONSIDERED DOUBTFUL	0.00	0.00
026 LESS: ALLOWANCE FOR BAD & DOUBTFUL ADVANCES	0.00	0.00
027 <b>Sub Total</b>	<b>1,524,280.00</b>	<b>1,524,280.00</b>
028 RECEIVABLE FROM MCP ESCROW A/C	0.00	0.00
029 Pre Paid expenses	0.00	0.00
039 ADVANCE TAX & TAX DEDUCTED AT SOURCE	9,747,424.13	7,544,241.17
040 LESS:- PROVISION FOR CURRENT TAX	0.00	0.00
041	0.00	0.00
042 <b>Sub Total</b>	<b>9,747,424.13</b>	<b>7,544,241.17</b>
043 DEFERRED PAYROLL EXPENSES (SECURED)	15,584,840.68	16,323,225.74
044 DEFERRED PAYROLL EXPENSES (UNSECURED)	4,362,707.27	4,860,126.54
045 <b>Sub Total</b>	<b>19,947,547.95</b>	<b>21,183,352.28</b>
046 DEFERRED FOREIGN CURRENCY FLUCTUATION ASSET	1,000.00	744,410,000.00
049	0.00	0.00
050 <b>Total</b>	<b>686,673,672.57</b>	<b>1,023,040,464.56</b>
051	0.00	0.00
052	0.00	0.00
062 Advances include amount due from the following Private Companies in which Directors of the Company are also Directors in such Companies	0.00	0.00
064	0.00	0.00
065 NTPC GE Power Services Pvt.Ltd.	0.00	0.00
066	0.00	0.00
067 Ratnagiri Gas & Power Private Ltd.	0.00	0.00
068 Aravali Power Company Private Ltd.	0.00	0.00
069 NTPC-SCCL Global Ventures Private Ltd.	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION****NOTE NO. 11 TO THE FS-NCA-OTHER NON-CURRENT ASSETS****( Amount in ₹ )**

As at	31.03.2023	31.03.2022
070 NTPC BHEL Power Projects Private Ltd.	0.00	0.00
071 Meja Urja Nigam Private Limited	0.00	0.00
072 Nabinagar Power Generating Company Ltd.	0.00	0.00
073 National High Power Test Labortory Private Ltd.	0.00	0.00
075 CIL NTPC Urja Private Ltd.	0.00	0.00
077	0.00	0.00
078 <b>Related Party (Adv)</b>	<b>0.00</b>	<b>0.00</b>
079 Key Management personel	0.00	0.00
080 Subsidiary companies	0.00	0.00
081 Joint Venture companies	0.00	0.00
082 Contractors	0.00	0.00
083 Others	0.00	0.00
085	0.00	0.00
086 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 12 TO THE FS-CA-INVENTORIES**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
001 <b>INVENTORIES</b>	<b>0.00</b>	<b>0.00</b>
002	<b>0.00</b>	<b>0.00</b>
003 Coal	2,580,101,057.99	2,703,905,576.35
004 Fuel oil	547,439,933.51	331,140,312.31
005 Naphtha	0.00	0.00
006 Stores and spares	3,448,710,137.80	2,663,630,801.56
007 Chemicals & consumables	76,411,103.07	65,606,636.51
008 Loose tools	2,161,544.92	1,308,727.02
009 Steel Scrap	6,955,006.69	6,531,859.28
010 Others	726,364,476.25	670,976,891.13
011	0.00	0.00
012 <b>Sub Total</b>	<b>7,388,143,260.23</b>	<b>6,443,100,804.16</b>
013 Less: Provision for shortages	222,450.81	1,655,918.65
014 Less: Provision for obsolete/ unservicable/dimuniton in value of surplus inventory	43,806,915.82	33,701,668.96
016	0.00	0.00
017 <b>Total</b>	<b>7,344,113,893.60</b>	<b>6,407,743,216.55</b>
018 <b>Inventories include material in transit</b>	<b>0.00</b>	<b>0.00</b>
019 Coal	0.00	0.00
020 Fuel oil	0.00	0.00
021 Naphtha	0.00	0.00
022 Stores and spares	180,646.08	7,409,492.60
023 Chemicals & consumables	1,207,500.10	8,269,466.13
024 Loose tools	0.00	0.00
025 Others	0.00	12,040,077.62
026	<b>0.00</b>	<b>0.00</b>
028 Inventory items other than steel scrap have been valued considering Note 1.	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 13 TO THE FS-CA-OTHER INVESTMENTS**
**( Amount in ₹ )**

	As at	No. of shares	Face value	31.03.2023	31.03.2022
001	<b>CURRENT INVESTMENTS</b>			<b>0.00</b>	<b>0.00</b>
002	<b>(Valuation as per Note 1)</b>			<b>0.00</b>	<b>0.00</b>
003	Jhabua Power Limited-8.5% Non convertible debentures - private placement			0.00	0.00
033	Investment in Mutual Funds (Details as under)			0.00	0.00
034	SBI-Magnum Insta Cash Fund-DDR			0.00	0.00
035	SBI Premier Liquid Fund Super-IP-DDR			0.00	0.00
036	SBI-SHF Ultra Short Term Fund-IP-DDR			0.00	0.00
037	UTI Money Market- IP-Direct-Growth			0.00	0.00
038	IDBI-Liquid plan- Direct-Growth			0.00	0.00
039	Canara Robeco Liquid Fund Super-IP-DDR			0.00	0.00
040	Canara Robeco Treasury Advantage Fund Super-IP-DDR			0.00	0.00
041	IDBI Liquid Fund-DDR			0.00	0.00
042	SBI Premier Liquid fund-Direct DDR (Ash Fund)			0.00	0.00
043	UTI Liquid CashPlan - IP - DDR (Ash Funds)			0.00	0.00
044	IDBI Liquid Fund - DDR - (Ash Funds)			0.00	0.00
045	Baroda Liquid Fund - Direct - Growth			0.00	0.00
046				0.00	0.00
047	<b>Sub Total</b>			<b>0.00</b>	<b>0.00</b>
048				<b>0.00</b>	<b>0.00</b>
052	<b>Unquoted Investments</b>			<b>0.00</b>	<b>0.00</b>
054				0.00	0.00
066	<b>TOTAL</b>			<b>0.00</b>	<b>0.00</b>
067				0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 14 TO THE FS-CA-TRADE RECEIVABLES**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
001 <b>TRADE RECEIVABLES (current)*</b>	<b>0.00</b>	<b>0.00</b>
002	0.00	0.00
003 Secured, Considered Good	0.00	0.00
004 Unsecured , considered good	1,737,334.04	1,733,397.09
005 Credit impaired	0.00	0.00
006 Unbilled Revenue	0.00	0.00
007 <b>Sub-Total</b>	<b>1,737,334.04</b>	<b>1,733,397.09</b>
008 <b>Total</b>	<b>1,737,334.04</b>	<b>1,733,397.09</b>
009 Less: Allowance for credit impaired receivables	0.00	0.00
010 <b>Total</b>	<b>1,737,334.04</b>	<b>1,733,397.09</b>
012 Less: Discom Clearing	0.00	0.00
014	0.00	0.00
015 <b>Grand Total</b>	<b>1,737,334.04</b>	<b>1,733,397.09</b>
016 Other Unsecured	0.00	0.00
017 Long-term trade receivables	0.00	0.00
018 TCS Clearing	0.00	0.00
019 Discom Clearing	0.00	0.00
228 <b>Trade Receivable</b>	<b>0.00</b>	<b>0.00</b>
230 Not due	0.00	0.00
231 Due	0.00	0.00
232 (i) Undisputed Trade receivables # considered good	1,737,334.04	1,733,397.09
233 (ii) Undisputed Trade Receivables # which have significant increase in credit risk	0.00	0.00
234 (iii) Undisputed Trade Receivables # credit impaired	0.00	0.00
235 (iv) Disputed Trade Receivables#considered good	0.00	0.00
236 (v) Disputed Trade Receivables # which have significant increase in credit risk	0.00	0.00
237 (vi) Disputed Trade Receivables # credit impaired	0.00	0.00
238 Unbilled	0.00	0.00
239 <b>Total</b>	<b>1,737,334.04</b>	<b>1,733,397.09</b>
240	0.00	0.00
241 <b>(i) Undisputed Trade receivables # considered good</b>	<b>0.00</b>	<b>0.00</b>
242 Less than 6 months	1,737,334.04	1,733,397.09
243 6 months -1 year	0.00	0.00
244 1-2 years	0.00	0.00
245 2-3 years	0.00	0.00
246 More than 3 years	0.00	0.00
247 <b>Sub Total (I)</b>	<b>1,737,334.04</b>	<b>1,733,397.09</b>
248 <b>(ii) Undisputed Trade Receivables # which have significant increase in credit risk</b>	<b>0.00</b>	<b>0.00</b>
249 Less than 6 months	0.00	0.00
250 6 months -1 year	0.00	0.00
251 1-2 years	0.00	0.00
252 2-3 years	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 14 TO THE FS-CA-TRADE RECEIVABLES**
**( Amount in ₹ )**

As at		31.03.2023	31.03.2022
253	More than 3 years	0.00	0.00
254	<b>Sub Total (II)</b>	<b>0.00</b>	<b>0.00</b>
255	<b>(iii) Undisputed Trade Receivables -credit impaired</b>	<b>0.00</b>	<b>0.00</b>
256	Less than 6 months	0.00	0.00
257	6 months -1 year	0.00	0.00
258	1-2 years	0.00	0.00
259	2-3 years	0.00	0.00
260	More than 3 years	0.00	0.00
261	<b>Sub Total (III)</b>	<b>0.00</b>	<b>0.00</b>
262		0.00	0.00
263	<b>(iv) Disputed Trade Receivables#considered good</b>	<b>0.00</b>	<b>0.00</b>
264	Less than 6 months	0.00	0.00
265	6 months -1 year	0.00	0.00
266	1-2 years	0.00	0.00
267	2-3 years	0.00	0.00
268	More than 3 years	0.00	0.00
269	<b>Sub Total (IV)</b>	<b>0.00</b>	<b>0.00</b>
270	<b>(v) Disputed Trade Receivables # which have significant increase in credit risk</b>	<b>0.00</b>	<b>0.00</b>
271	Less than 6 months	0.00	0.00
272	6 months -1 year	0.00	0.00
273	1-2 years	0.00	0.00
274	2-3 years	0.00	0.00
275	More than 3 years	0.00	0.00
276	<b>Sub Total (V)</b>	<b>0.00</b>	<b>0.00</b>
277	<b>(vi) Disputed Trade Receivables # credit impaired</b>	<b>0.00</b>	<b>0.00</b>
278	Less than 6 months	0.00	0.00
279	6 months -1 year	0.00	0.00
280	1-2 years	0.00	0.00
281	2-3 years	0.00	0.00
282	More than 3 years	0.00	0.00
283	<b>Sub Total (VI)</b>	<b>0.00</b>	<b>0.00</b>
284	<b>Total</b>	<b>-3,474,668.08</b>	<b>-3,466,794.18</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 15 TO THE FS-CA-CASH AND CASH EQUIVALENTS

( Amount in ₹ )

As at	31.03.2023	31.03.2022
001 <b>CASH &amp; BANK BALANCES</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Cash &amp; Cash Equivalents</b>	<b>0.00</b>	<b>0.00</b>
003 Balances with Banks	0.00	0.00
004 Cheques & Drafts on hand	0.00	0.00
005 Cash on hand	0.00	0.00
006 Others (stamps in hand)	0.00	0.00
007 Bank deposits with original maturity upto three months	0.00	0.00
008 Balances with RBI	0.00	0.00
009	0.00	0.00
011 <b>Total</b>	<b>0.00</b>	<b>0.00</b>



**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 16 TO THE FS-CA-BANK BALANCES OTHER THAN CASH AND CASH EQUIVALENTS ( Amount in ₹ )**

As at	31.03.2023	31.03.2022
001 <b>Other Bank Balances</b>	<b>0.00</b>	<b>0.00</b>
002 Deposits with original maturity of more than three months but not more than twelve months	0.00	0.00
003 Earmarked balances with banks*	0.00	0.00
004 <b>SubTotal</b>	<b>0.00</b>	<b>0.00</b>
005 Interest accrued on deposits	0.00	0.00
006	0.00	0.00
008 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
009	0.00	0.00
010 <b>Earmarked balances with banks consist of :</b>	<b>0.00</b>	<b>0.00</b>
011 Unpaid dividend account balance	0.00	0.00
012 Towards public deposit repayment reserve	0.00	0.00
013 Towards redemption of bonds due for repayment within one year	0.00	0.00
014 Security with Government/other authorities	0.00	0.00
015 Unpaid refund/interest account balance - Tax free bonds/ Bonus Debentures	0.00	0.00
016 Earmarked for RGGVY/DDUGJY/SAUBHAGYA Fund	0.00	0.00
017 Earmarked for Flyash Utilisation Reserve Fund	0.00	0.00
018 Deposits with original maturity upto three months as per court orders	0.00	0.00
019 Payment Security Scheme of MNRE NSM (NTPC)	0.00	0.00
020 Payment Security Scheme of MNRE NSM (NVVN)	0.00	0.00
021 Enforcement Directorate of Solar Plant(NVVN)	0.00	0.00
022 Bank guarantee Fund of MNRE (NVVN)	0.00	0.00
023 Others	0.00	0.00
024 Margin Money	0.00	0.00
025	0.00	0.00
026	0.00	0.00
027 <b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
031 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
032	0.00	0.00
033 Bank deposits with original maturity of less than three months- other than earmarked	0.00	0.00
034 Bank deposits with original maturity of more than three months but not more than twelve months- other than earmarked	0.00	0.00
035 Earmarked bank balances (current account)	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 17 TO THE FS-CA-LOANS**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
001 <b>Current financial assets - Loans</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Loans (current)-including interest accrued</b>	<b>0.00</b>	<b>0.00</b>
004 <b>Related Parties</b>	<b>0.00</b>	<b>0.00</b>
005 Secured	0.00	0.00
006 Un-Secured	0.00	0.00
007 With significant increase in Credit Risk	0.00	0.00
008 Credit impaired	0.00	0.00
009	<b>0.00</b>	<b>0.00</b>
010 <b>Employees</b>	<b>0.00</b>	<b>0.00</b>
011 Secured	20,385,267.61	19,369,168.43
012 Unsecured	49,224,386.31	56,443,419.22
013 With significant increase in Credit Risk	0.00	0.00
014 Credit impaired	0.00	0.00
015 Less : Employee Loans Discounting	0.00	0.00
016 <b>Loan to State Government in settlement of dues from customers (Unsecured)</b>	<b>0.00</b>	<b>0.00</b>
017	0.00	0.00
018 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
019 Secured	0.00	0.00
020 Unsecured	0.00	0.00
021 With significant increase in Credit Risk	0.00	0.00
022 Credit impaired	0.00	0.00
023	<b>0.00</b>	<b>0.00</b>
024 Less: Allowance for credit impaired loans	0.00	0.00
026	0.00	0.00
027 <b>Total (Loans)</b>	<b>69,609,653.92</b>	<b>75,812,587.65</b>
028	<b>0.00</b>	<b>0.00</b>
029 <b>Due from Directors and Officers of the Company</b>	<b>0.00</b>	<b>0.00</b>
030 Directors	0.00	0.00
031 Officers	0.00	0.00
032	<b>0.00</b>	<b>0.00</b>
033 <b>Loans to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
034 i)Key management personel	0.00	0.00
035 ii)Subsidiary companies	0.00	0.00
036 KBUNL	0.00	0.00
037 RGPPL	0.00	0.00
038 NVVN	0.00	0.00
039 iii)Joint Venture companies	0.00	0.00
040 iv)others	0.00	0.00
041	0.00	0.00
060 RPD	0.00	0.00
061 i)Key management personel	0.00	0.00
062 ii)Subsidiary companies	0.00	0.00
063 iii)Joint Venture companies	0.00	0.00
064 iv)Others	0.00	0.00
065	0.00	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 17 TO THE FS-CA-LOANS

( Amount in ₹ )

	As at	31.03.2023	31.03.2022
066	<b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 18 TO THE FS-CA-OTHER FINANCIAL ASSETS**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
001 <b>Other Financial Assets (current)</b>	<b>0.00</b>	<b>0.00</b>
002	0.00	0.00
003 <b>ADVANCES</b>	<b>0.00</b>	<b>0.00</b>
004	<b>0.00</b>	<b>0.00</b>
005 <b>Related Parties</b>	<b>0.00</b>	<b>0.00</b>
006 Secured	0.00	0.00
007 Un-Secured	84,291,452.19	75,281,568.77
008 Considered doubtful	0.00	0.00
009	<b>0.00</b>	<b>0.00</b>
010 <b>Employees</b>	<b>0.00</b>	<b>0.00</b>
012 Unsecured	4,592,765.26	4,837,250.36
013 Considered Doubtful	0.00	0.00
014	<b>0.00</b>	<b>0.00</b>
020 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
021 Secured	0.00	0.00
022 Unsecured	0.00	0.00
023 Considered Doubtful	0.00	0.00
024	<b>0.00</b>	<b>0.00</b>
025 Less: Allowance for bad & doubtful advances	0.00	0.00
026	<b>0.00</b>	<b>0.00</b>
033 <b>Total (Advances)</b>	<b>88,884,217.45</b>	<b>80,118,819.13</b>
044	<b>0.00</b>	<b>0.00</b>
045 <b>Claims Recoverable</b>	<b>0.00</b>	<b>0.00</b>
046 Secured	0.00	0.00
047 Unsecured, considered good	10,262,639.69	2,233,059.02
048 Considered Doubtful	0.00	0.00
049 Less:- Allowance for doubtful claims	0.00	0.00
050 Others-Claims Recoverable	0.00	0.00
051	<b>0.00</b>	<b>0.00</b>
052 Contract Asset- Revenue	2,663,746.83	2,841,100.83
053 Hedging cost recoverable from beneficiaries	0.00	0.00
054 Derivative MTM Asset	0.00	0.00
055 Finance Lease Receivable	0.00	0.00
056 Mine Closure Deposit	0.00	0.00
057 Financial Deposit	0.00	0.00
059 <b>Other Accrued Income</b>	<b>0.00</b>	<b>0.00</b>
060 Secured,Considered Good	0.00	0.00
061 Unsecured , considered good	24,838,947.89	64,097,982.95
062 Credit impaired	0.00	0.00
063	0.00	0.00
064 <b>Sub-Total</b>	<b>24,838,947.89</b>	<b>64,097,982.95</b>
065 Less: Allowance for credit impaired receivables	0.00	0.00
066 <b>Total</b>	<b>24,838,947.89</b>	<b>64,097,982.95</b>
067	0.00	0.00
068 Others*	0.00	0.00
070	0.00	0.00

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 18 TO THE FS-CA-OTHER FINANCIAL ASSETS

( Amount in ₹ )

As at	31.03.2023	31.03.2022
071 <b>Total</b>	<b>126,649,551.86</b>	<b>149,290,961.93</b>
072 * Other include amount recoverable from contractors and other parties towards hire charges, rent/electricity etc.	0.00	0.00
073 <b>Advances to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
074 i)Key management personel	0.00	0.00
075	0.00	0.00
076 iii)Joint Venture companies	0.00	0.00
077	0.00	0.00
078 v)Others	0.00	0.00
079	<b>0.00</b>	<b>0.00</b>
080 Advances include amount due from the following Private Companies in which Directors of the Company are also Directors in such Companies	0.00	0.00
081 Related Party (Adv)- Employee	0.00	0.00
082 Related Party (Adv)- Subsidiaries	83,366,423.19	75,281,568.77
083 Related Party (Adv)- Joint Ventures	925,029.00	0.00
084	0.00	0.00
085 Related Party (Adv)- Others	0.00	0.00
086	0.00	0.00
099	0.00	0.00
100	0.00	0.00
101 <b>Total</b>	<b>84,291,452.19</b>	<b>75,281,568.77</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 19 TO THE FS-CA-OTHER CURRENT ASSETS**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
<b>001 OTHER CURRENT ASSETS</b>	<b>0.00</b>	<b>0.00</b>
002 Security Deposits (Unsecured)	0.00	0.00
003 Deposit with Customs, port trust & others*	812,756.00	812,756.00
<b>004 ADVANCES</b>	<b>0.00</b>	<b>0.00</b>
005	<b>0.00</b>	<b>0.00</b>
<b>006 Related Parties</b>	<b>0.00</b>	<b>0.00</b>
007 Secured	0.00	0.00
008 Un-Secured	1,407,513.00	1,407,513.00
009 Considered doubtful	0.00	0.00
010	<b>0.00</b>	<b>0.00</b>
<b>011 Employees(including imprest)</b>	<b>0.00</b>	<b>0.00</b>
012 Secured	0.00	0.00
013 Unsecured	1,322,275.00	355,986.00
014 Considered Doubtful	0.00	0.00
015	<b>0.00</b>	<b>0.00</b>
<b>016 Contractors &amp; Suppliers</b>	<b>0.00</b>	<b>0.00</b>
017 Secured	0.00	0.00
018 Unsecured	205,359,772.28	136,271,338.36
019 Considered Doubtful	0.00	0.00
020	0.00	0.00
<b>021 Others**</b>	<b>0.00</b>	<b>0.00</b>
022 Secured	0.00	0.00
023 Unsecured	18,994,496.00	18,584,624.00
024 Considered Doubtful	0.00	0.00
025 Less: Allowance for bad & doubtful advances	0.00	0.00
026 Receivable from MCP Escrow A/c	0.00	0.00
027 Deferred Payroll Expenses (Secured)	1,972,468.83	2,129,056.99
028 Deferred Payroll Expenses (Unsecured)	3,069,573.18	3,686,929.13
<b>029 Sub-total</b>	<b>5,042,042.01</b>	<b>5,815,986.12</b>
<b>030 Interest accrued on :</b>	<b>0.00</b>	<b>0.00</b>
031 Advances to contractors	0.00	0.00
032	<b>0.00</b>	<b>0.00</b>
<b>033 Claims Recoverable</b>	<b>0.00</b>	<b>0.00</b>
034 Secured	0.00	0.00
035 Unsecured, considered good	445,294,831.82	286,458,564.02
036 Considered Doubtful	26,600,000.00	26,600,000.00
037 Less:- Allowance for doubtful claims	26,600,000.00	26,600,000.00
038	<b>0.00</b>	<b>0.00</b>
039 Deferred premium on forward exchange contract/ Option Assets	0.00	0.00
041	0.00	0.00
042 Others	4,160,672.00	3,824,265.73
043	0.00	0.00
<b>045 Total (Other Current Assets)</b>	<b>682,394,358.11</b>	<b>453,531,033.23</b>
046 **Include Prepaid Expenses	18,220,222.00	17,926,405.00
047 *Includes sales tax/Entry tax/VAT deposited under protest with Sales Tax Authorities	812,756.00	812,756.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 19 TO THE FS-CA-OTHER CURRENT ASSETS**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
048 *Includes deposited with courts	0.00	0.00
049 *Includes deposited with LIC for annuity payments	0.00	0.00
050 * Includes deposits with WRD / against BG in r/o finance lease	0.00	0.00
051 Other include amount recoverable from contractors and other parties towards hire charges, rent/electricity etc.	0.00	0.00
053 <b>Advances to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
054 i)Key management personel	0.00	0.00
055 ii)Subsidiary companies	0.00	0.00
056 iii)Joint Venture companies	0.00	0.00
057 Contractors	0.00	0.00
058 Others	0.00	0.00
059	0.00	0.00
060 Advances include amount due from the following Private Companies in which Directors of the Company are also Directors in such Companies	0.00	0.00
061	<b>0.00</b>	<b>0.00</b>
062	0.00	0.00
063 Related Party (Adv)- Employee	0.00	0.00
064 Related Party (Adv)- Subsidiaries	0.00	0.00
065 Related Party (Adv)- Joint Venture	1,407,513.00	1,407,513.00
066	0.00	0.00
067	0.00	0.00
068 <b>Total</b>	<b>1,407,513.00</b>	<b>1,407,513.00</b>
069	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION****NOTE NO. 20 TO THE FS--REGULATORY DEFERRAL ACCOUNT DEBIT BALANCES****( Amount in ₹ )**

As at	31.03.2023	31.03.2022
001 On account of Exchange Differences	-127,675,626.92	-138,738,090.16
002 On account of employee benefit exp	84,415,334.33	84,415,334.33
003 Regulatory deferred account - deferred	0.00	0.00
004 Deferred asset for ash transportation	0.00	1,035,424,777.02
005 Deferred asset for Arbitration Award	0.00	0.00
008	0.00	0.00
009 <b>Total</b>	<b>-43,260,292.59</b>	<b>981,102,021.19</b>



**RIHAND SUPER THERMAL POWER STATION****NOTE NO. 21 TO THE FS-EQUITY-EQUITY SHARE CAPITAL****( Amount in ₹ )**

As at	31.03.2023	31.03.2022
001 <b>SHARE CAPITAL</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Equity Share Capital</b>	<b>0.00</b>	<b>0.00</b>
003 <b>Authorised</b>	<b>0.00</b>	<b>0.00</b>
004 16,60,00,00,000 equity shares of Rs.10/- each (Previous year 10,000,000,000 equity shares of Rs.10/- each)	0.00	0.00
005 <b>Issued,Subscribed and fully Paid-up</b>	<b>0.00</b>	<b>0.00</b>
006 9,69,66,66,134 equity shares of Rs.10/- (Pv. Year 9,894,557,280 equity shares of Rs.10/- each)	0.00	0.00
007	<b>0.00</b>	<b>0.00</b>
008 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
009 During FY 2018-19, the company has issued 1,649,092,880 equity shares of Rs.10/- each as fully paid bonus shares	0.00	0.00
010 The holders of the equity shares are entitled to receive dividends as declared from time to time, and are entitled to one vote per share at meetings of the company.	0.00	0.00
011 Details of shareholders holding more than 5% shares in the company	0.00	0.00
012 - President of India	0.00	0.00
013 No. of Shares	0.00	0.00
014 % of holding	0.00	0.00
015 - Life Insurance Corporation of India/ICICI Prudential Mutual Fund	0.00	0.00
016 No. of Shares	0.00	0.00
017 % of holding	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 22 TO THE FS-EQUITY-OTHER EQUITY**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
001 RESERVE AND SURPLUS	0.00	0.00
002	<b>0.00</b>	<b>0.00</b>
003 <b>Capital Reserve</b>	<b>0.00</b>	<b>0.00</b>
004 As per last financial statements	0.00	0.00
006 Add : Grants received during the year	0.00	0.00
007 Add: Transfer from Surplus	0.00	0.00
008 Less: Write back during the year/period	0.00	0.00
009 Less: Adjustments during the year/period	0.00	0.00
010 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
011	0.00	0.00
017	0.00	0.00
018 <b>SECURITIES PREMIUM ACCOUNT</b>	<b>0.00</b>	<b>0.00</b>
019 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
020 ADD: ADDITIONS DURING THE YEAR/PERIOD	0.00	0.00
021 LESS: ADJUSTMENTS DURING THE YEAR/PERIOD	0.00	0.00
022 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
023 <b>BONDS REDEMPTION RESERVE</b>	<b>0.00</b>	<b>0.00</b>
024 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
025 ADD: TRANSFER FROM SURPLUS	0.00	0.00
026 LESS: TRANSFER TO SURPLUS ON REDEMPTION	0.00	0.00
027 LESS: ADJUSTMENTS DURING THE YEAR/ PERIOD	0.00	0.00
028 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
029 <b>CAPITAL REDEMPTION RESERVE</b>	<b>0.00</b>	<b>0.00</b>
030 As per last financial statements	0.00	0.00
031 Add: Transfer from Surplus	0.00	0.00
032 Less: Transfer to surplus on redemption	0.00	0.00
033 Less: Adjustments during the year/ period	0.00	0.00
034 <b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
035 <b>Share Application money pending Allotment</b>	<b>0.00</b>	<b>0.00</b>
036 As per last financial statements	0.00	0.00
037 Add: Addition during the year	0.00	0.00
038 Less: Utilised for allotment during the year	0.00	0.00
039 Less: Adjustments during the year/ period	0.00	0.00
040 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
046 <b>FLY-ASH UTILISATION RESERVE FUND</b>	<b>0.00</b>	<b>0.00</b>
047 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
048 TRANSFERRED TO CC	0.00	0.00
049 ADD:TRANSFER FROM REVENUE FROM OPERATIONS	549,433.49	0.00
050 ADD:TRANSFER FROM OTHER INCOME	0.00	0.00
051 LESS: UTILISED DURING THE YEAR	0.00	0.00
052 TANGIBLE ASSETS	0.00	0.00
053 EMPLOYEE BENEFIT EXPENSES	0.00	0.00
054 GENERATION,ADMN. AND OTHER EXPENSES	549,433.49	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 22 TO THE FS-EQUITY-OTHER EQUITY**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
055 TAX EXPENSES	0.00	0.00
056 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
057 Self Insurance Reserve	0.00	0.00
058 As per last financial statements	0.00	0.00
059 Add: Addition during the year	0.00	0.00
060 Less: Utilised for allotment during the year	0.00	0.00
061 Less: Adjustments during the year/ period	0.00	0.00
062 SUB-TOTAL	0.00	0.00
063 <b>SPECIAL ALLOWANCE RESERVE FUND</b>	<b>0.00</b>	<b>0.00</b>
064 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
065 ADD: ADDITION DURING THE YEAR	0.00	0.00
066 LESS: UTILISED FOR ALLOTMENT DURING THE YEAR	0.00	0.00
067 LESS: ADJUSTMENTS DURING THE YEAR/ PERIOD	0.00	0.00
068 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
069 <b>CORPORATE SOCIAL RESPONSIBILITY (CSR) RESERVE</b>	<b>0.00</b>	<b>0.00</b>
070 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
071 ADD : TRANSFER FROM SURPLUS	0.00	0.00
072 LESS:-WRITE BACK DURING THE YEAR	0.00	0.00
073 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
074 <b>GENERAL RESERVE</b>	<b>0.00</b>	<b>0.00</b>
075 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
076 ADD: TRANSFER FROM SURPLUS	0.00	0.00
077 LESS: TRANSFER TO SURPLUS	0.00	0.00
078 LESS: WRITE BACK DURING THE YEAR /PERIOD	0.00	0.00
079 LESS: ADJUSTMENTS DURING THE YEAR /PERIOD	0.00	0.00
080 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
081	<b>0.00</b>	<b>0.00</b>
082 <b>RETAINED EARNINGS</b>	<b>0.00</b>	<b>0.00</b>
083 AS PER LAST FINANCIAL STATEMENTS	178,934,325,577.14	166,604,865,582.08
084 ADD(LESS):-CHANGES IN ACCOUNTING POLICY / PRIOR PERIOD ERRORS	0.00	0.00
085 ADD(LESS):-PROFIT (LOSS) AFTER TAX FOR THE YEAR FROM STATEMENT OF PROFIT & LOSS	10,374,117,657.34	12,329,459,995.06
087 ADD: WRITE BACK FROM BOND REDEMPTION RESERVE	0.00	0.00
088 ADD: WRITE BACK FROM CAPITAL RESERVE	0.00	0.00
089 ADD: WRITE BACK FROM FOREIGN PROJECT RESERVE	0.00	0.00
090 ADD: WRITE BACK FROM CSR RESERVE	0.00	0.00
091 ADD: WRITE BACK FROM GENERAL RESERVE	0.00	0.00
093 LESS: TRANSFER TO BONDS REDEMPTION RESERVE	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 22 TO THE FS-EQUITY-OTHER EQUITY**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
094 LESS: TRANSFER TO SPECIAL ALLOWANCE RESERVE FUND	0.00	0.00
095 LESS: TRANSFER TO FOREIGN PROJECT RESERVE	0.00	0.00
096 LESS: TRANSFER TO CAPITAL RESERVE	0.00	0.00
097 LESS: TRANSFER TO CSR RESERVE	0.00	0.00
098 LESS: TRANSFER TO GENERAL RESERVE	0.00	0.00
099 LESS: INTERIM DIVIDEND PAID	0.00	0.00
100 LESS: TAX ON INTERIM DIVIDEND PAID	0.00	0.00
101 LESS: FINAL DIVIDEND PAID	0.00	0.00
102 LESS: TAX ON FINAL DIVIDEND PAID	0.00	0.00
103 LESS: ISSUE OF BONUS DEBENTURE	0.00	0.00
104 LESS: TAX ON ISSUE OF BONUS DEBENTURE	0.00	0.00
105 <b>SUB-TOTAL</b>	<b>189,308,443,234.48</b>	<b>178,934,325,577.14</b>
110	0.00	0.00
111 <b>REMEASUREMENT OF DEFINED BENEFIT PLANS</b>	<b>0.00</b>	<b>0.00</b>
112 AS PER LAST FINANCIAL STATEMENTS	-206,596,243.66	-196,870,608.91
113 ADD/(LESS):- ACTUARIAL GAINS/LOSS THROUGH OCI	-19,544,151.77	-9,725,634.75
114 <b>SUB-TOTAL</b>	<b>-226,140,395.43</b>	<b>-206,596,243.66</b>
115	0.00	0.00
116 <b>FVTOCI Reserve</b>	<b>0.00</b>	<b>0.00</b>
117 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
118 ADD/(LESS):- NET GAIN/LOSS OF EQUITY INSTRUMENTS THROUGH OCI	0.00	0.00
119 <b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
120	<b>0.00</b>	<b>0.00</b>
121 <b>Total Other equity</b>	<b>189,082,302,839.05</b>	<b>178,727,729,333.48</b>
122	0.00	0.00
123	0.00	0.00
124	0.00	0.00
125	0.00	0.00
126	0.00	0.00
127	0.00	0.00
128	0.00	0.00



RIHAND SUPER THERMAL POWER STATION

( Amount in ₹ )

As at

31.03.2023

31.03.2022

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
<b>001 LONG TERM BORROWINGS</b>	<b>0.00</b>	<b>0.00</b>
<b>002 Bonds</b>	<b>0.00</b>	<b>0.00</b>
<b>003 Secured</b>	<b>0.00</b>	<b>0.00</b>
004 7.37 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2035 (Fifty Sixth Issue - Public Issue - Series 3A).	0.00	0.00
005 7.62 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2035 (Fifty Sixth Issue - Public Issue - Series 3 B).	0.00	0.00
006 8.61% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4th March 2034 (Fifty First Issue C - Private Placement)	0.00	0.00
007 8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2033 ( Fiftieth Issue - Public Issue - Series 3A)	0.00	0.00
008 8.91% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2033 ( Fiftieth Issue - Public Issue - Series 3B)	0.00	0.00
009 7.37% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 14th December 2031 (Sixty Sixth Issue - Private Placement)	0.00	0.00
010 7.49% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 7th November 2031 (Sixty Fourth Issue - Private Placement)	0.00	0.00
011 7.28 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2030 (Fifty Sixth Issue - Public Issue - Series	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
2A)		
012 7.53 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2030 (Fifty Sixth Issue - Public Issue - Series 2 B).	0.00	0.00
013 7.32% Secured non-cumulative non-convertible redeemable taxable bonds of Rs 10,00,000/- each redeemable at par in full on 17 July 2029 (Sixty Ninth Issue - Private Placement)	0.00	0.00
014 8.63% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4th March 2029 (Fifty First Issue B - Private Placement)	0.00	0.00
015 8.30% Secured non-cumulative non-convertible redeemable taxable bonds of Rs 10,00,000/- each redeemable at par in full on 15 January 2029 (Sixty Seventh Issue - Private Placement)	0.00	0.00
016 8.48% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2028 ( Fiftieth Issue - Public Issue - Series 2A)	0.00	0.00
017 8.73% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2028 ( Fiftieth Issue - Public Issue - Series 2B)	0.00	0.00
018 7.47% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 16th September 2026 (Sixty Third Issue - Private Placement)	0.00	0.00
019 7.58% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at		31.03.2023	31.03.2022
full on 23rd August 2026 (Sixty Second Issue - Private Placement)			
020	8.05% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 5th May 2026 (Sixtieth Issue - Private Placement)	0.00	0.00
021	8.19% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 15th December 2025 (Fifty Seventh Issue - Private Placement)	0.00	0.00
022	7.11 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2025 (Fifty Sixth Issue - Public Issue - Series 1A).	0.00	0.00
023	7.36 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2025 (Fifty Sixth Issue - Public Issue - Series 1 B).	0.00	0.00
024	7.15% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of Rs. 10,00,000/- each redeemable at par in full on 21st August 2025 (Fifty Fifth Issue - Private Placement)	0.00	0.00
025	9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 22nd September 2024 (53rd Issue - private placement).	0.00	0.00
026	9.34% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 24th March 2024 (Fifty Second Issue - private placement)	0.00	0.00
027	8.19% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 10,00,000/- each redeemable at	0.00	0.00



**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

		31.03.2023	31.03.2022
	As at		
	par in full on 4th March 2024 (Fifty First Issue A - Private Placement)		
028	8.41% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2023 ( Fiftieth Issue - Public Issue - Series 1A)	0.00	0.00
029	8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2023 ( Fiftieth Issue - Public Issue - Series 1B)	0.00	0.00
030	9.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 4th May 2023 and ending on 4th May 2027 (Forty fourth issue - private placement)VII	0.00	0.00
031	8.48% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 1st May 2023 (Seventeenth issue - private placement)I	0.00	0.00
032	8.80% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4th April 2023 (Forty ninth issue -private placement	0.00	0.00
033	8.49% Secured non-cumulative non-convertible redeemable taxable fully paid-up bonus debentures of Rs. 12.50 each redeemable at par in three annual installments of Rs. 2.50, Rs. 5.00 and Rs. 5.00 at the end of 8th year, 9th year and 10th year on 25th March 2023, 25th March 2024 and 25th March 2025 respectively (Fifty Fourth Issue -Bonus Debentures)X - (refer Note 5 d)	0.00	0.00
034	8.73% Secured non-cumulative	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at		31.03.2023	31.03.2022
	non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 07th March 2023 ( Forty eighth issue - private placement)		
035	9.00% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 25th January 2023 and ending on 25th January 2027 (Forty second issue- private placement)III	0.00	0.00
036	8.84% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4th October 2022 (Forty seventh issue- private placement)VII	0.00	0.00
037	7.93% Secured non-cumulative non-convertible redeemable taxable bonds of ` 10,00,000/- each redeemable at par in full on 03 May 2022 (68th Issue - Private Placement)	0.00	0.00
038	6.72% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 24th November 2021 (Sixty Fifth Issue - Private Placement)	0.00	0.00
039	8.10% Secured Non-Cumulative Non-Convertible Redeemable Taxable Bonds of Rs. 30,00,000/- each redeemable at par in three equal separately transferable redeemable principal parts (STRPP) at the end of 5th year, 10th year & 15th year on 27th May 2021, 27th May 2026 and 27th May 2031 respectively (Sixty First Issue- Private Placement)	0.00	0.00
040	8.33% Secured non-cumulative non-convertible redeemable taxable bonds of Rs.10,00,000/- each redeemable at par in full on 24th February 2021	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at				31.03.2023	31.03.2022
(Fifty Ninth Issue - Private Placement).					
042	8.93%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 19th January 2021 Thirty seventh issue - private placement)III	0.00	0.00
043	8.18%	Secured	non-cumulative non-convertible redeemable taxable bonds of Rs.10,00,000/- each redeemable at par in full on 31st December 2020 (Fifty Eight Issue - Private Placement).	0.00	0.00
044	8.73 %	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 31st March 2020 (Thirty third issue- private placement)III	0.00	0.00
045	8.78 %	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 9th March 2020 (Thirty first issue- private placement)III	0.00	0.00
046	11.25%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in five equal annual installments commencing from 6th Nov 2019 and ending on 6th Nov 2023 (Twenty seventh issue - private placement)III	0.00	0.00
047	7.89%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 5th May 2019 (Thirtieth issue - private placement)III	0.00	0.00
048	8.65%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4th February 2019 (Twenty ninth issue - private placement)III	0.00	0.00
049	7.50%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at			31.03.2023	31.03.2022
on 12th January 2019 (Nineteenth issue - private placement)II				
050	11%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 21st November 2018 (Twenty eighth issue - private placement)III	0.00	0.00
051	9.3473%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 20th July 2018 and ending on 20th July 2032 (Forty sixth issue - private placement)VII	0.00	0.00
052	9.4376%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 16th May 2018 and ending on 16th May 2032 (Forty fifth issue - private placement)VII	0.00	0.00
053	8.00%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 10th April 2018 (Sixteenth issue -private placement)I	0.00	0.00
054	9.2573%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 2nd March 2018 and ending on 2nd March 2032 (Forty third issue - private placement)III	0.00	0.00
055	9.6713%	Secured non-cumulative non-convertible redeemable taxable bonds	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at	31.03.2023	31.03.2022
of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 23rd December 2017 and ending on 23rd December 2031 (Forty first issue - private placement)III		
056 9.558% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 29th July 2017 and ending on 29th July 2031(Fourtieth issue-private placement)III	0.00	0.00
057 9.3896% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 9th June 2017 and ending on 9th June 2031(Thirty ninth issue-private placement)III	0.00	0.00
058 9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 22nd March 2017 and ending on 22nd March 2031(Thirty eighth issue-private placement)III	0.00	0.00
059 8.8086% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
year and in annual installments thereafter upto the end of 20th year respectively commencing from 15th December 2016 and ending on 15th December 2030 (Thirty sixth issue - private placement)III		
060 8.785% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15th September 2016 and ending on 15th September 2030 (Thirty fifth issue - private placement)III	0.00	0.00
061 8.71% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 10th June 2016 and ending on 10th June 2030 (Thirty fourth issue - private placement)III	0.00	0.00
062 8.8493% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 25th March 2016 and ending on 25th March 2030 (Thirty second issue - private placement)III	0.00	0.00
063 9.37% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 70,00,000/- each with fourteen separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 4th June 2012 and ending on 4th December 2018 (Twenty fifth issue -	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at			31.03.2023	31.03.2022
private placement)III				
065	9.06%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 70,00,000/- each with fourteen separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 4th June 2012 and ending on 4th December 2018 (Twenty sixth issue - private placement)III	0.00	0.00
066	8.6077%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 9th September 2011 and ending on 9th March 2021 (Twenty fourth issue - private placement)IV	0.00	0.00
067	8.3796%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 5th August 2011 and ending on 5th February 2021 (Twenty third issue - private placement)IV	0.00	0.00
068	8.1771%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2nd July 2011 and ending on 2nd January 2021 (Twenty second issue - private placement)IV	0.00	0.00
069	7.7125%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2nd August 2010 and ending on 2nd February 2020 (Twenty first issue - private placement)V	0.00	0.00
070	7.552%	Secured non-cumulative non-convertible redeemable taxable bonds	0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at	31.03.2023	31.03.2022
of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 23rd September 2009 and ending on 23rd March 2019 (Twentieth issue - private placement)VI		
071 9.55% Secured non-cumulative non-convertible taxable redeemable bonds of ₹ 10,00,000/- each with ten equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of the 6th year and in annual installments thereafter upto the end of 15th year respectively from 30th April 2002 (Thirteenth issue - Part B - private placement)VIII	0.00	0.00
072 9.55% Secured non-cumulative non-convertible taxable redeemable bonds of ₹ 10,00,000/- each redeemable at par in ten equal annual installments commencing from the end of 6th year and upto the end of 15th year respectively from 18th April 2002 (Thirteenth issue -Part A - private placement)VIII	0.00	0.00
075	0.00	0.00
076	0.00	0.00
077 <b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
078 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
079 6.55% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 17 April 2023 (Seventieth Issue - Private Placement)	0.00	0.00
080 6.29% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 11 April 2031 (Seventy First Issue - Private Placement)	0.00	0.00
081 5.45% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 October 2025 (Seventy Second Issue - Private Placement)	0.00	0.00
082 6.43% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in	0.00	0.00



**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
full on 27 January 2031 (Seventy Third Issue - Private Placement)		
083 6.87% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 21 April 2036 (Seventy Fourth Issue - Private Placement)	0.00	0.00
084 6.69% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 13 September 2031 (Seventy Fifth Issue - Private Placement)	0.00	0.00
085 6.74% Unsecured non-cumulative non-convertible redeemable taxable bonds of Rs.10,00,000/- each redeemable at par in full on 14 April 2032 (Seventy Sixth Issue - Private Placement)	0.00	0.00
086 5.78% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 29 April 2024 (Seventy Seventh Issue - Private Placement)	0.00	0.00
087 7.44% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 25 August 2032 (Seventy Eighth Issue - Private Placement)	0.00	0.00
088 7.44% Unsecured non-cumulative non-convertible redeemable taxable bonds of ` 10,00,000/- each redeemable at par in full on 15 April 2033 (Seventy Ninth Issue - Private Placement)	0.00	0.00
089	0.00	0.00
090 <b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
091 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
092 <b>Foreign Currency Notes-Unsecured</b>	<b>0.00</b>	<b>0.00</b>
093 4.50% Fixed Rate Notes Due for repayment on 19th March 2028	0.00	0.00
094 2.75% Fixed rate notes due for repayment on 1st February 2027	0.00	0.00
095 4.25 % Fixed rate notes due for repayment on 26th February 2026	0.00	0.00
096 4.375% Fixed Rate Note due for repayment on 26th November 2024	0.00	0.00
097 4.75 % Fixed Rate Notes due for repayment on 3rd Oct 2022	0.00	0.00
098 7.25 % Fixed green global INR denominated bonds due on 3 May 2022	0.00	0.00
099 7.375 % Fixed green global INR denominated bonds due on 10 August 2021	0.00	0.00
100 5.625% Fixed Rate Notes due for repayment on	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 23 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
14th July 2021		
101 3.75 % Fixed rate notes due for repayment on 03 April 2024	0.00	0.00
102	0.00	0.00
103	0.00	0.00
104	0.00	0.00
105 <b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
106 <b>Term Loans</b>	<b>0.00</b>	<b>0.00</b>
107 <b>From Banks</b>	<b>0.00</b>	<b>0.00</b>
108 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
109 Rupee Loans	0.00	0.00
110 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
111 Foreign Currency Loans	0.00	0.00
112 Rupee Loans	0.00	0.00
113 <b>From Others</b>	<b>0.00</b>	<b>0.00</b>
114 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
115 Rupee Loans	0.00	0.00
116 Foreign Currency loans (guaranteed by GOI)	0.00	0.00
117 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
118 Foreign Currency loans (guaranteed by GOI)	0.00	0.00
119 Other Foreign currency loans	0.00	0.00
121 Rupee Loans	0.00	0.00
122 <b>Deposits</b>	<b>0.00</b>	<b>0.00</b>
123 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
124 Fixed Deposits	0.00	0.00
125 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
126 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
127 Bonds Application Money Pending Allotment	0.00	0.00
128 <b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
129 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
130 Less:- Interst accrued but not due on secured borrowings	0.00	0.00
131 Less:- Interst accrued but not due on unsecured borrowings	0.00	0.00
132 Less:- Current maturities of long term borrowings	0.00	0.00
133 Bonds-Secured	0.00	0.00
134 Fixed Rate Notes	0.00	0.00
136 Foreign currency loans from Banks- unsecured	0.00	0.00
137 Rupee loans from banks- Secured	0.00	0.00
138 Rupee loans from banks- unsecured	0.00	0.00
139 Rupee Term loan from Others - Secured	0.00	0.00
140 Foreign currency loans from others- unsecured (Guaranteed by GOI)	0.00	0.00
141 Other foreign currency loans from others- unsecured	0.00	0.00
142 Rupee loans from others- unsecured	0.00	0.00
143	0.00	0.00



RIHAND SUPER THERMAL POWER STATION  
NOTE NO. 23 TO THE FS-NCL-BORROWINGS

( Amount in ₹ )

As at	31.03.2023	31.03.2022
144	0.00	0.00
145	0.00	0.00
146	0.00	0.00
147	0.00	0.00
148	0.00	0.00
149	0.00	0.00
150	0.00	0.00
151	0.00	0.00
201 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 23A TO THE FS-NCL-LEASE BORROWINGS

( Amount in ₹ )

	31.03.2023	31.03.2022
As at		
001 <b>Non-current financial liabilities - Lease liabilities</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Lease liabilities</b>	<b>0.00</b>	<b>0.00</b>
003 Long term maturities of Finance Lease Liabilities (Secured) IX	0.00	0.00
004 Long term maturities of Finance Lease Liabilities (Unsecured) X	215,659,908.98	0.00
005 <b>Sub-Total</b>	<b>215,659,908.98</b>	<b>0.00</b>
006 <b>Less: current maturities of lease liabilities</b>	<b>0.00</b>	<b>0.00</b>
007 Finance Lease obligations - secured	0.00	0.00
008 Finance Lease obligations - unsecured	15,569,307.00	0.00
009 <b>Sub-Total</b>	<b>15,569,307.00</b>	<b>0.00</b>
011 <b>Total</b>	<b>200,090,601.98</b>	<b>0.00</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 24 TO THE FS-NCL-TRADE PAYABLES

( Amount in ₹ )

As at		31.03.2023	31.03.2022
001	<b>TRADE PAYABLES(NON CURRENT)</b>	<b>0.00</b>	<b>0.00</b>
002	<b>For Goods and Services</b>	<b>0.00</b>	<b>0.00</b>
003	- Micro & Small Enterprises	3,269,711.73	7,830,370.14
004	- Others	7,141,146.39	11,108,650.81
005		0.00	0.00
007	<b>Total</b>	<b>10,410,858.12</b>	<b>18,939,020.95</b>

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 25 TO THE FS-NCL-OTHER FINANCIAL LIABILITIES

( Amount in ₹ )

As at	31.03.2023	31.03.2022
001 <b>OTHER FINANCIAL LIABILITIES (NON-CURRENT)</b>	<b>0.00</b>	<b>0.00</b>
002 Payable for Capital Expenditure	0.00	0.00
003 - Micro & Small Enterprises	1,225,518.70	3,022,575.28
004 - Others	44,233,850.51	210,903,859.44
005 Others	0.00	0.00
006 Deposits from contractors and others	0.00	11,000.00
007	0.00	0.00
008	0.00	0.00
010 <b>Total</b>	<b>45,459,369.21</b>	<b>213,937,434.72</b>

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 26 TO THE FS-NCL-PROVISIONS**

( Amount in ₹ )

As at	31.03.2023	31.03.2022
001 <b>LONG TERM PROVISIONS</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Provision for Employee Benefits</b>	<b>0.00</b>	<b>0.00</b>
003 Opening Balance	0.00	0.00
004 Additions/ (adjustments) during the year	0.00	0.00
005 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
006	0.00	0.00
007 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
008 <b>i) Mine Closure Provision</b>	<b>0.00</b>	<b>0.00</b>
009 Opening Balance	0.00	0.00
010 Additions during the year	0.00	0.00
011 Amounts adjusted during the year	0.00	0.00
012 Amounts reversed during the year	0.00	0.00
013 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
014	0.00	0.00
015 <b>ii) Stripping Activity Adjustments</b>	<b>0.00</b>	<b>0.00</b>
016 Opening Balance	0.00	0.00
017 Additions during the year	0.00	0.00
018 Amounts adjusted during the year	0.00	0.00
019 Amounts reversed during the year	0.00	0.00
020 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
021	0.00	0.00
024	0.00	0.00
026 <b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>

**NOTE NO. 27 TO THE FS-NCL-DEFERRED TAX LIABILITIES (NET)**
**( Amount in ₹ )**

As at	Open Balance on 01.04.2022	Addition	Closing Balance on 31.03.2023
001 <b>DEFERRED TAX LIABILITIES (NET)</b>			
002 Difference of book depreciation and tax depreciation	0.00	0.00	0.00
003 Less: Deferred tax assets			
004 Provisions & Other disallowances for tax purposes	0.00	0.00	0.00
005 Unabsorbed Depreciation	0.00	0.00	0.00
006 Disallowances u/s 43B of the Income Tax Act, 1961	0.00	0.00	0.00
007 Others	0.00	0.00	0.00
008 Opening Balance	0.00	0.00	0.00
009 Additions during the year	0.00	0.00	0.00
010 Amounts adjusted during the year	0.00	0.00	0.00
011 Amounts reversed during the year	0.00	0.00	0.00
012 Closing Balance	0.00	0.00	0.00
013 MAT credit entitlement	0.00	0.00	0.00
014 <b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
016	0.00	0.00	0.00
017 <b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
018 Breakup of deferred tax assets	0.00	0.00	0.00
019 Provision	0.00	0.00	0.00
020 Statutory dues	0.00	0.00	0.00
021 Leave encashment	0.00	0.00	0.00
022 Others	0.00	0.00	0.00
023	0.00	0.00	0.00
024	0.00	0.00	0.00





RIHAND SUPER THERMAL POWER STATION

NOTE NO. 28 TO THE FS-NCL-OTHER NON-CURRENT LIABILITIES

( Amount in ₹ )

As at	31.03.2023	31.03.2022
001 Other Non current Liabilities	0.00	0.00
002 Advances from customers and others	0.00	0.00
003 Deposits from contractors and others	0.00	0.00
004 Grants	0.00	0.00
006	0.00	0.00
007 <b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 29 TO THE FS-CL-BORROWINGS**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
001 <b>Short Term Borrowings</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Loans repayable on demand</b>	<b>0.00</b>	<b>0.00</b>
003 <b>From Banks</b>	<b>0.00</b>	<b>0.00</b>
004 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
005 Cash Credit	0.00	0.00
006 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
007 Cash Credit	0.00	0.00
008 <b>Other loans-unsecured</b>	<b>0.00</b>	<b>0.00</b>
009 Commercial Papers	0.00	0.00
010 Less: Unamortised discount on Commercial Papers	0.00	0.00
011 <b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
012 <b>Current maturity of long term borrowings</b>	<b>0.00</b>	<b>0.00</b>
013 Bonds-Secured	0.00	0.00
014 Foreign Currency Fixed Rate Notes	0.00	0.00
015 <b>From Banks</b>	<b>0.00</b>	<b>0.00</b>
016 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
017 Rupee Term Loan	0.00	0.00
018 Foreign currency loans	0.00	0.00
019 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
020 Foreign currency loans	0.00	0.00
021 Rupee term loans	0.00	0.00
022 <b>From Others</b>	<b>0.00</b>	<b>0.00</b>
023 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
024 Rupee Term Loan	0.00	0.00
025 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
026 Foreign currency loans (Guaranteed by Government of India)	0.00	0.00
027 Other foreign currency loans	0.00	0.00
028 Rupee term loans	0.00	0.00
029 Fixed deposits	0.00	0.00
031 Sub Total	0.00	0.00
032	0.00	0.00
034 <b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 29A TO THE FS-CL-LEASE BORROWINGS

( Amount in ₹ )

	As at	31.03.2023	31.03.2022
001	<b>Current financial liabilities - Lease liabilities</b>	<b>0.00</b>	<b>0.00</b>
002	Current maturity of finance lease obligations (secured)	0.00	0.00
003	Current maturity of finance lease obligations (unsecured)	15,569,307.00	0.00
005	<b>Total</b>	<b>15,569,307.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 30 TO THE FS-CL-TRADE PAYABLES**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
001 <b>TRADE PAYABLES</b>	<b>0.00</b>	<b>0.00</b>
002 For Goods and Services	0.00	0.00
003 - Micro & Small Enterprises	177,806,736.80	220,046,789.16
004 - Others	2,778,477,798.80	3,104,879,539.52
005	0.00	0.00
007 <b>Total</b>	<b>2,956,284,535.60</b>	<b>3,324,926,328.68</b>
008	0.00	0.00
172 <b>Trade payable</b>	<b>0.00</b>	<b>0.00</b>
173 <b>MSME</b>	<b>0.00</b>	<b>0.00</b>
174 Unbilled	74,792,751.08	75,353,748.01
175 Not due	73,630,183.72	111,869,021.20
176 <b>Due</b>	<b>29,383,802.00</b>	<b>32,824,020.00</b>
177 Disputed	0.00	0.00
178 Undisputed	29,383,802.00	32,824,020.00
179	0.00	0.00
180 <b>Sub-total (A)</b>	<b>177,806,736.80</b>	<b>220,046,789.21</b>
181	0.00	0.00
182 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
183 Unbilled	526,354,427.03	512,665,789.10
184 Not due	313,362,335.66	210,843,363.50
185 <b>Due</b>	<b>1,938,761,036.11</b>	<b>2,381,370,387.00</b>
186 Disputed	0.00	0.00
187 Undisputed	1,938,761,036.11	2,381,370,387.00
188	0.00	0.00
189 <b>Sub-total (B)</b>	<b>2,778,477,798.80</b>	<b>3,104,879,539.60</b>
190	0.00	0.00
191 <b>Total</b>	<b>2,956,284,535.60</b>	<b>3,324,926,328.81</b>
192	0.00	0.00
193 <b>Ageing</b>	<b>0.00</b>	<b>0.00</b>
194 <b>MSME</b>	<b>0.00</b>	<b>0.00</b>
195 <b>Disputed</b>	<b>0.00</b>	<b>0.00</b>
196 Less than 1 year	0.00	0.00
197 1-2 years	0.00	0.00
198 2-3 years	0.00	0.00
199 More than 3 years	0.00	0.00
200 <b>Sub Total (I)</b>	<b>0.00</b>	<b>0.00</b>
201	0.00	0.00
202 <b>Undisputed</b>	<b>0.00</b>	<b>0.00</b>
203 Less than 1 year	29,383,802.00	32,824,020.00
204 1-2 years	0.00	0.00
205 2-3 years	0.00	0.00
206 More than 3 years	0.00	0.00
207 <b>Sub Total (II)</b>	<b>29,383,802.00</b>	<b>32,824,020.00</b>
208	0.00	0.00
209 <b>Total MSME (III)</b>	<b>29,383,802.00</b>	<b>32,824,020.00</b>
210	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**  
**NOTE NO. 30 TO THE FS-CL-TRADE PAYABLES**

( Amount in ₹ )

As at	31.03.2023	31.03.2022
211 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
212 <b>Disputed</b>	<b>0.00</b>	<b>0.00</b>
213 Less than 1 year	0.00	0.00
214 1-2 years	0.00	0.00
215 2-3 years	0.00	0.00
216 More than 3 years	0.00	0.00
217 <b>Sub Total (IV)</b>	<b>0.00</b>	<b>0.00</b>
218	0.00	0.00
219 <b>Undisputed</b>	<b>0.00</b>	<b>0.00</b>
220 Less than 1 year	1,209,670,512.11	1,676,015,685.00
221 1-2 years	42,685,077.00	85,164,135.00
222 2-3 years	84,846,453.00	193,027,381.00
223 More than 3 years	601,558,994.00	427,163,186.00
224 <b>Sub Total (V)</b>	<b>1,938,761,036.11</b>	<b>2,381,370,387.00</b>
225	0.00	0.00
226 <b>Total Others (VI)</b>	<b>1,938,761,036.11</b>	<b>2,381,370,387.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 31 TO THE FS-CL-OTHER FINANCIAL LIABILITIES**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
001 <b>OTHER FINANCIAL LIABILITIES (CURRENT)</b>	<b>0.00</b>	<b>0.00</b>
020 Interest accrued but not due on Unsecured Short Term Borrowing	0.00	0.00
021 Interest accrued but not due on secured borrowings	0.00	0.00
022 Interest accrued but not due on unsecured borrowings	0.00	0.00
023 Unpaid Dividends*	0.00	0.00
024 Unpaid matured deposits and interest accrued thereon*	0.00	0.00
025 Unpaid matured bonds and interest accrued thereon*	0.00	0.00
026 Unpaid bond refund money-Tax free bonds *	0.00	0.00
027 Book Overdraft	0.00	0.00
028 Payable to Customers	0.00	0.00
029 Liability under forward exchange contract	0.00	0.00
030 Hedging cost payable to beneficiaries	0.00	0.00
031 Derivative MTM Liability	0.00	0.00
032 <b>Payable for Capital Expenditure</b>	<b>0.00</b>	<b>0.00</b>
033 - Micro & Small Enterprises	54,992,423.13	113,167,223.51
034 - Others	4,136,529,470.41	3,485,636,092.15
035 <b>Others Payables</b>	<b>0.00</b>	<b>0.00</b>
036 Deposits from contractors and others	85,777,478.98	85,251,588.78
037 Gratuity Obligations	0.00	0.00
038 Payable to employees	34,784,381.31	19,782,024.00
039 Payable to holding company	0.00	0.00
040 Retention on A/c BG encashment (Solar)	0.00	0.00
041 Payable to Solar Payment Security Account	0.00	0.00
042 Others **	17,075,074.39	96,581,271.22
043 Unspent CSR balance on ongoing Approved CSR projects	0.00	0.00
045	0.00	0.00
046	0.00	0.00
047 <b>Total</b>	<b>4,329,158,828.22</b>	<b>3,800,418,199.66</b>
048 * Represents the amounts which have not been claimed by the investor/holders of the bonds/ fixed deposits. Out of the above, no amount is due for payment to Investor Education and Protection Fund.	0.00	0.00
049 ** Include Payable to Hospital and other payable.	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION****NOTE NO. 32 TO THE FS-CL-OTHER CURRENT LIABILITIES****( Amount in ₹ )**

As at	31.03.2023	31.03.2022
001 <b>OTHER CURRENT LIABILITIES</b>	<b>0.00</b>	<b>0.00</b>
002 Advances from customers and others	25,885,048.95	66,809,931.25
003 Deferred discount on forward exchange contact	0.00	0.00
004 Tax deducted at source and other statutory dues	98,415,828.69	83,997,873.09
005 Deposits from contractors and others	0.00	0.00
006 Government grants	0.00	0.00
007 Others	0.00	0.00
009	0.00	0.00
010	0.00	0.00
011 <b>Total</b>	<b>124,300,877.64</b>	<b>150,807,804.34</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 33 TO THE FS-CL-PROVISIONS**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
001 <b>SHORT TERM PROVISIONS</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Provision for Employee Benefits</b>	<b>0.00</b>	<b>0.00</b>
003 Opening balance	0.00	0.00
004 Additions/ (adjustments) during the year	0.00	0.00
005 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
028 <b>Provisions for Obligations Incidental to Land Acquisition</b>	<b>0.00</b>	<b>0.00</b>
029 Opening balance	0.00	0.00
030 Additions during the year	0.00	0.00
031 Amounts paid during the year	0.00	0.00
032 Amounts reversed during the year	0.00	0.00
033 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
035 <b>Provision for Tariff Adjustment</b>	<b>0.00</b>	<b>0.00</b>
036 Opening balance	0.00	0.00
037 Additions during the year	0.00	0.00
038 Amounts adjusted during the year	0.00	0.00
039 Amounts reversed during the year	0.00	0.00
040 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
042 <b>Provision for shortage in Fixed Assets Pending Investigation &amp; Others</b>	<b>0.00</b>	<b>0.00</b>
043 Opening balance	0.00	0.00
044 Additions during the year	0.00	0.00
045 Amounts adjusted during the year	0.00	0.00
046 Amounts reversed during the year	0.00	0.00
047 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
048 <b>Provision for Arbitration</b>	<b>0.00</b>	<b>0.00</b>
049 Opening balance	8,683,664.00	8,265,312.00
050 Additions during the year	418,352.00	418,352.00
051 Amounts used during the year	0.00	0.00
052 Amounts reversed during the year	0.00	0.00
053 <b>Closing Balance</b>	<b>9,102,016.00</b>	<b>8,683,664.00</b>
054 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
055 Opening balance	0.00	0.00
056 Additions during the year	0.00	0.00
057 Amounts used during the year	0.00	0.00
058 Amounts reversed during the year	0.00	0.00
059 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
102	0.00	0.00
104 <b>Total</b>	<b>9,102,016.00</b>	<b>8,683,664.00</b>





RIHAND SUPER THERMAL POWER STATION

NOTE NO. 34 TO THE FS-CL-CURRENT TAX LIABILITIES (NET)

( Amount in ₹ )

As at	31.03.2023	31.03.2022
001 <b>Current liabilities - current tax liabilities (net)</b>	<b>0.00</b>	<b>0.00</b>
002 Opening balance	0.00	0.00
003 Additions during the year	0.00	0.00
004 Amounts adjusted during the year	0.00	0.00
005 Less: Set off against taxes paid	0.00	0.00
007	0.00	0.00
008 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 35 TO THE FS--DEFERRED REVENUE

( Amount in ₹ )

As at	31.03.2023	31.03.2022
001 <b>Deferred Revenue</b>	<b>0.00</b>	<b>0.00</b>
002 On account of advance against depreciation	0.00	0.00
003 On account of income from foreign currency fluctuation	1,576,387,000.00	1,521,099,000.00
004 Government grants	0.00	0.00
007	0.00	0.00
008	0.00	0.00
009 <b>TOTAL</b>	<b>1,576,387,000.00</b>	<b>1,521,099,000.00</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 36 TO THE FS--REGULATORY DEFERRAL ACCOUNT CREDIT BALANCES

( Amount in ₹ )

As at	31.03.2023	31.03.2022
001 Regulatory deferral account credit balances	0.00	0.00
002 Exchange Differences	0.00	0.00
003	0.00	0.00
005 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 37 TO THE FS--REVENUE FROM OPERATIONS**
**( Amount in ₹ )**

	For the Year ended	31.03.2023	31.03.2022
001	<b>REVENUE FROM OPERATIONS</b>	<b>0.00</b>	<b>0.00</b>
002	<b>Sales</b>	<b>0.00</b>	<b>0.00</b>
003	Energy Sales (including Electricity Duty)	59,501,444,689.70	53,502,461,025.00
004	Less : Advance against depreciation deferred (net)	0.00	0.00
005	Add: Revenue recognized out of advance against depreciation	0.00	0.00
006	Add : Exchange fluctuation receivable from customers	-1,007,159,000.00	-1,191,045,000.00
007	Sale of energy through trading	0.00	0.00
008	Commission (NVVN)	0.00	0.00
009	<b>Sub total</b>	<b>58,494,285,689.70</b>	<b>52,311,416,025.00</b>
010	Less: Rebate to customers	365,485,046.28	244,496,889.89
011	<b>Energy Sales (Total)</b>	<b>58,128,800,643.42</b>	<b>52,066,919,135.11</b>
012	Consultancy, project management and supervision fees	0.00	0.00
013	Lease rentals on assets on Operating lease	0.00	0.00
014	Sale of Captive Coal	0.00	0.00
015	Intra Company Elimination	0.00	0.00
017	<b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
018	<b>Total - Sales</b>	<b>58,128,800,643.42</b>	<b>52,066,919,135.11</b>
019	Sale of fly ash/ash products	549,433.49	0.00
020	Less: Transferred to fly ash utilisation reserve fund	-549,433.49	0.00
021	<b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
022	<b>Other Operating Income</b>	<b>0.00</b>	<b>0.00</b>
023	Interest from customers	301,077,404.00	1,049,324,712.00
024	Energy Internally Consumed *	34,769,384.00	31,975,932.00
025	Interest income on Assets under finance lease	0.00	0.00
026	Recognized from deferred revenue - government grant	0.00	0.00
027	Provision written back- Tariff Adjustment	0.00	0.00
028	Income form Trading of ESCerts	7,976,314.67	0.00
029	Income from E-Mobility Business & others	0.00	0.00
030	Others	0.00	0.00
032		0.00	0.00
033		0.00	0.00
034	<b>Total</b>	<b>58,472,623,746.09</b>	<b>53,148,219,779.11</b>
040	* Valued at variable cost of generation and corresponding amount included in power charges ( Note No. 42)	0.00	0.00
041	Excise duty on sale of flyash,cenospere & ash products	0.00	0.00
042	Energy sales of principal nature (NVVN)	0.00	0.00
043	Energy sales of agency nature (NVVN)	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 38 TO THE FS--OTHER INCOME**
**( Amount in ₹ )**

	For the Year ended	31.03.2023	31.03.2022
001	<b>OTHER INCOME</b>	<b>0.00</b>	<b>0.00</b>
002	<b>Interest from</b>	<b>0.00</b>	<b>0.00</b>
004	<b>Financial assets at amortised cost</b>	<b>0.00</b>	<b>0.00</b>
005	Government Securities (8.5% Tax Free Bonds issued by the State Governments)	0.00	0.00
006	Other Bonds	0.00	0.00
007	Non current Trade Receivable	0.00	0.00
008	Interest from Government of India Securities-Non-Trade	0.00	0.00
009	Less: Amortziation of premium	0.00	0.00
010	<b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
011	Interest from others	0.00	0.00
012	Loan to State Government in settlement of dues from customers	0.00	0.00
013	Loan to Subsidiary Companies	0.00	0.00
014	Loan to Employees	14,118,222.87	15,984,260.52
015	Deposit with banks	0.00	0.00
016	Foreign Banks	0.00	0.00
017	Interest from Contractors	825,495.00	915,881.70
018	Interest from Income Tax Refunds	0.00	0.00
019	Less : Refundable to Customers	0.00	0.00
020	<b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
021	Deposits with banks-flyash utilisation reserve fund	0.00	0.00
022	Less: transferred to flyash utilisation reserve fund	0.00	0.00
023	<b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
024	Deposits with banks- DDUGJY funds	0.00	0.00
025	Interest from Contractors- DDUGJY funds	0.00	0.00
026	Transfer to DDUGJY-Advance from customers	0.00	0.00
027	Sub-total	0.00	0.00
030	Others	689,007.00	1,179,995.49
031	Other investments in Joint venture companies	0.00	0.00
032	<b>Dividend from</b>	<b>0.00</b>	<b>0.00</b>
033	<b>Longterm investments in</b>	<b>0.00</b>	<b>0.00</b>
034	Subsidiaries	0.00	0.00
035	Joint Ventures	0.00	0.00
036	Equity Instruments	0.00	0.00
037	<b>Current Investments in</b>	<b>0.00</b>	<b>0.00</b>
038	Mutual Funds measured at fairvalue through profit or loss	0.00	0.00
039	Current investments in mutual funds-flyash utilisation reserve fund	0.00	0.00
040	Less: transferred to flyash utilisation reserve fund	0.00	0.00
041	Lease Rent # Ash Brick Plant	0.00	0.00
042	Less: transferred to flyash utilisation reserve fund	0.00	0.00
043	Other non-operating income	0.00	0.00
044	Profit on disposal of PPE	113,631.34	3,591.10
045	Profit on redemption of GOI securities	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 38 TO THE FS--OTHER INCOME**
**( Amount in ₹ )**

	For the Year ended	31.03.2023	31.03.2022
046	Net gain on sale of investments	0.00	0.00
047	Surcharge received from customers	156,699,458.00	890,083,371.00
048	Hire charges for equipment	498,590.40	0.00
049	Gain on option contract / Discount on F.ExchContract	6,390,259.00	27,567,170.36
050	Provision written back-others	3,573,171.43	8,667,761.36
051	Fair value gains/(losses) on investments in mutual funds at fair value through profit or loss	0.00	0.00
052	Interest from Solar payment security account	0.00	0.00
053	Less : Transferred to SPSA fund	0.00	0.00
054	Interest on "Retention on A/c BG encashment (Solar)"	0.00	0.00
055	Less : Transferred to "Retention on A/c BG encashment (Solar)"	0.00	0.00
056	Miscellaneous Income	301,521,785.10	257,016,760.40
057	<b>Total</b>	<b>484,429,620.14</b>	<b>1,201,418,791.93</b>
058	Less:Transferred to Development of Coal Mines- Note 43A	0.00	0.00
059	Less:Transferred to Expenditure during Construction period (net)- Note 43	104,102.76	96,735.00
060	Less: Others	0.00	0.00
061	Less:Transferred to payable to Govt. of Jharkhand	0.00	0.00
063		0.00	0.00
064		0.00	0.00
065	<b>Total</b>	<b>484,325,517.38</b>	<b>1,201,322,056.93</b>
066		0.00	0.00
067	<b>Details of Miscellaneous Income</b>	<b>0.00</b>	<b>0.00</b>
068	Vehicle Hire Charges.	90,000.00	118,000.00
069	Sale of by products & residuals	0.00	0.00
070	Township recoveries(exl. Hospital Recoveries).	32,573,133.11	22,530,387.46
071	Depreciation written back	0.00	0.00
072	Sale of Scrap.	217,087,073.50	118,949,651.93
073	Receipt under loss of profit policy.	0.00	0.00
074	Receipts under MBD/Fire Policy.	0.00	0.00
075	Management development programme.	0.00	0.00
076	Management Fee - Misc (NVVN)	0.00	0.00
077	Others	51,771,578.49	115,418,721.01
078		0.00	0.00
079	<b>Total (Miscellaneous Income)</b>	<b>301,521,785.10</b>	<b>257,016,760.40</b>
080		0.00	0.00
081	<b>Details of Provision written back others</b>	<b>0.00</b>	<b>0.00</b>
082	Doubtful debts	0.00	0.00
083	Doubtful Loans, Advances and Claims	0.00	0.00
084	Doubtful Construction Advances	0.00	0.00
085	Shortage in Construction Stores	1,458,151.13	548,546.87
086	Shortage in Stores	1,607,821.96	6,867,724.99
087	Obsolescence in Stores	507,198.34	1,251,489.50



**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 38 TO THE FS--OTHER INCOME**

**( Amount in ₹ )**

	For the Year ended	31.03.2023	31.03.2022
088	Unserviceable capital works	0.00	0.00
089	Other Obligation including Arbitration	0.00	0.00
090	Shortage in Fixed Assets	0.00	0.00
091	Diminution in value of Investment	0.00	0.00

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 38A TO THE FS--FUEL COST

( Amount in ₹ )

For the Year ended		31.03.2023	31.03.2022
001	<b>FUEL COST</b>	<b>0.00</b>	<b>0.00</b>
002	Coal	0.00	0.00
003	Captive	0.00	0.00
004	Other than captive	34,092,322,865.30	30,357,469,404.43
005	Gas	0.00	0.00
006	Naptha	0.00	0.00
007	Oil	422,532,356.80	286,119,163.76
008	Biomass Pellets & Others	0.00	0.00
009		0.00	0.00
010	<b>Total</b>	<b>34,514,855,222.10</b>	<b>30,643,588,568.19</b>
011		0.00	0.00



**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 39 TO THE FS--EMPLOYEE BENEFITS EXPENSE**
**( Amount in ₹ )**

For the Year ended		31.03.2023	31.03.2022
001	<b>EMPLOYEE BENEFITS EXPENSE</b>	<b>0.00</b>	<b>0.00</b>
002	Salaries and wages	1,521,094,969.69	1,545,790,249.09
003	Contribution to provident and other funds	203,254,370.35	207,134,289.14
004	Unwinding of deferred payroll expense	8,416,475.20	10,256,372.76
005	Staff welfare expenses	203,775,030.45	185,590,759.88
006	Less : Expenses transferred to Consultancy group	0.00	0.00
007		0.00	0.00
008	<b>Sub Total</b>	<b>1,936,540,845.69</b>	<b>1,948,771,670.87</b>
009	Less: Employee benefits expense allocated to fuel inventory	124,169,760.51	112,502,448.72
010	Less: Transferred/Allocated to development of coal mines	0.00	0.00
011	Less: Others	0.00	0.00
012	Less: Transferred to fly ash utilisation reserve fund	0.00	0.00
013	Less: Transferred to CSR Expenses	0.00	0.00
014	Reimbursements for employees on secondment	3,276,040.25	3,377,875.77
015	Less: Transferred to expenditure during construction period (net)- Note 43	31,691,938.82	24,926,059.94
016	Less: Transfer to Govt of Jharkhand A/c as recoverable	0.00	0.00
018		0.00	0.00
019	<b>TOTAL</b>	<b>1,777,403,106.11</b>	<b>1,807,965,286.44</b>
020	<b>Managerial Remuneration paid/ payable to Directors included above (except for Directors fee which is included in Note 42)</b>	<b>0.00</b>	<b>0.00</b>
021	Salaries and wages	0.00	0.00
022	Contribution to provident and other funds	0.00	0.00
023	Staff welfare expenses	0.00	0.00
024	Directors fee	0.00	0.00
025		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 40 TO THE FS--FINANCE COSTS**
**( Amount in ₹ )**

	For the Year ended	31.03.2023	31.03.2022
001	<b>FINANCE COSTS</b>	<b>0.00</b>	<b>0.00</b>
002	Finance charges on financial liabilities measured at amortised cost	0.00	0.00
003	Bonds	731,574,881.93	710,804,516.35
004	Government of India Loans	0.00	0.00
005	Foreign currency term loans	40,412,501.47	19,995,984.52
006	Rupee term loans	450,875,180.00	438,724,318.00
007	Public deposits	0.00	0.00
008	Foreign currency bonds/notes	99,701,512.71	316,443,493.96
009	Cash Credit	0.00	0.00
010	Unwinding of discount on account of vendor liabilities	11,815,161.51	79,228,121.55
011	Commercial Papers	0.00	0.00
012	<b>Sub Total</b>	<b>1,334,379,237.62</b>	<b>1,565,196,434.38</b>
013	Interest on non financial items	0.00	0.00
014	<b>Other Borrowing Costs</b>	<b>0.00</b>	<b>0.00</b>
015	Bonds servicing & public deposit exp.	858,707.62	863,783.14
016	Guarantee fee	0.00	0.00
017	Management fee	0.00	0.00
018	Committ charges/exposure premium	129,975.15	1,126,265.00
019	Bond issue expenses	0.00	0.00
020	Legal exp on foreign currency loans	0.00	0.00
021	Foreign currency bonds/notes exp.	0.00	0.00
022	Up-front fee	0.00	0.00
023	Insurance premium on foreign currency loans	0.00	0.00
024		0.00	0.00
025	Others	0.00	0.00
026	<b>Sub Total (Other Borrowing cost)</b>	<b>988,682.77</b>	<b>1,990,048.14</b>
027		0.00	0.00
028	<b>Exchange differences regarded as an adjustment to borrowing costs</b>	<b>16,291,816.52</b>	<b>-2,773,694.67</b>
029	<b>Sub Total</b>	<b>1,351,659,736.91</b>	<b>1,564,412,787.85</b>
030	Less: Transferred to Expenditure during construction period (net) - Note 43	67,839,767.20	98,307,037.97
031	Less: Transferred to development of coal mines- Note 43A	0.00	0.00
032		0.00	0.00
034	<b>Total</b>	<b>1,283,819,969.71</b>	<b>1,466,105,749.88</b>

**RIHAND SUPER THERMAL POWER STATION****NOTE NO. 41 TO THE FS--DEPRECIATION AND AMORTIZATION EXPENSES****( Amount in ₹ )**

	For the Year ended	31.03.2023	31.03.2022
001	<b>Depreciation and amortization expenses</b>	<b>0.00</b>	<b>0.00</b>
002	On property, plant and equipment- Note 2	4,896,131,231.52	4,722,518,393.06
003	On investment property	0.00	0.00
004	On intangible assets- Note 4	28,393.75	0.00
005		0.00	0.00
006	Sub-total	4,896,159,625.27	4,722,518,393.06
007	Less:	0.00	0.00
008	Allocated to fuel inventory	380,700,405.43	374,595,518.15
009	Transferred to Expenditure during Construction Period (net)- Note 43	659.26	0.00
010		0.00	0.00
011	Transferred/Allocated to development of coal mines	0.00	0.00
012	Adjustment with deferred revenue from deferred foreign currency fluctuation	207,462,000.00	165,193,000.00
013		0.00	0.00
015	<b>Total</b>	<b>4,307,996,560.58</b>	<b>4,182,729,874.91</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 42 TO THE FS--OTHER EXPENSE**
**( Amount in ₹ )**

	For the Year ended	31.03.2023	31.03.2022
001 <b>OTHER EXPENSES</b>		<b>0.00</b>	<b>0.00</b>
002 Power charges		36,602,545.00	31,976,053.83
003 Less: Recovered from contractors & employees		16,759,983.93	18,059,198.89
004 <b>Sub-Total(Power Charges)</b>		<b>19,842,561.07</b>	<b>13,916,854.94</b>
005 Water charges		139,871,225.00	139,871,225.00
006 Stores consumed		72,975,803.55	52,633,011.12
007 Rent		0.00	0.00
008 Less:Recoveries		0.00	0.00
009 <b>Sub-Total (Rent)</b>		<b>0.00</b>	<b>0.00</b>
010 Cost of captive coal produced		0.00	0.00
011 <b>Repairs &amp; maintenance</b>		<b>0.00</b>	<b>0.00</b>
012 Buildings		158,149,415.92	129,376,643.93
013 Plant & machinery		0.00	0.00
014 Power stations		2,228,227,417.39	1,746,499,355.61
015 Construction equipment		0.00	0.00
016 Others		133,139,689.40	106,882,579.98
017 <b>Sub-total (Repairs &amp; maintenance)</b>		<b>2,519,516,522.71</b>	<b>1,982,758,579.52</b>
019 Load Dispatch Center Charges		13,176,411.00	25,361,760.00
021 Insurance		176,259,470.09	141,466,994.50
022 Interest to beneficiaries		0.00	0.00
023 Rates and taxes		-6,259,316.14	14,847,960.99
024 Water cess & environment protection cess		0.00	0.00
025 Training & recruitment expenses		2,049,738.99	688,607.70
026 Less: Receipts		0.00	0.00
027 <b>Sub-total (Training and recruitment expenses)</b>		<b>2,049,738.99</b>	<b>688,607.70</b>
028 Communication expenses		18,055,262.15	21,264,678.98
029 Inland Travel		73,825,041.75	66,788,667.74
030 Foreign Travel		153,377.00	0.00
031 Tender expenses		0.00	0.00
032 Less: Receipt from sale of tenders		0.00	0.00
033 <b>Sub-total (Tender expenses)</b>		<b>0.00</b>	<b>0.00</b>
034 Payment to auditors		0.00	0.00
035 Audit fee		0.00	0.00
036 Tax audit fee		0.00	0.00
037 Other services		0.00	0.00
038 Reimbursement of expenses		0.00	0.00
039 <b>Sub-total (Payment to Auditors)</b>		<b>0.00</b>	<b>0.00</b>
040 Advertisement and publicity		715,426.60	1,007,008.21
041 Electricity duty		0.00	0.00
042 Security expenses		450,957,342.53	375,343,967.09
043 Entertainment expenses		26,443,229.39	25,139,954.44
044 Expenses for guest house		20,529,003.23	18,821,757.77
045 Less:Recoveries		5,102,224.90	2,432,785.40
046 <b>Sub-Total (Guest house expenses)</b>		<b>15,426,778.33</b>	<b>16,388,972.37</b>
047 Education expenses		60,990,719.00	58,099,926.00
049 Donations		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 42 TO THE FS--OTHER EXPENSE**
**( Amount in ₹ )**

	For the Year ended	31.03.2023	31.03.2022
050	Ash utilisation & marketing expenses	1,205,661,111.07	796,403,425.57
051	Directors sitting fee	0.00	0.00
053	Professional charges and consultancy fees	85,099,069.19	2,058,930.20
054	Legal expenses	25,564,410.00	15,869,702.68
055	EDP hire and other charges	9,686,180.09	778,677.16
056	Printing and stationery	2,413,162.68	1,845,738.55
057	Oil & gas exploration expenses	0.00	0.00
059	Hiring of vehicles	36,342,493.81	25,296,051.88
061	Reimbursement of L.C.charges on sales realisation	0.00	0.00
062	LOSS ON FAIR VALUATION OF NON- CURRENT TRADE RECEIVABLE AT AMORTISED COST	0.00	0.00
063	Cost of Hedging	0.00	0.00
064	Derivatives MTM loss/gain (Net)	0.00	0.00
065	Net loss/(gain) in foreign currency transactions & translations	15,280,472.25	-89,322,683.55
066	Transport Vehicle running expenses	1,883,079.38	1,160,422.83
067	Horticulture Expenses	82,919,539.21	63,583,840.61
068	Hire charges- helicopter/aircraft.	0.00	0.00
069	Hire charges of construction equipment	0.00	0.00
070	Demurrage Charges	0.00	0.00
072		0.00	0.00
073	Miscellaneous expenses	54,556,145.78	55,867,107.84
074	Loss on disposal/write-off of PPE	81,328,604.99	68,736,584.56
075	<b>Sub-Total</b>	<b>5,184,733,861.47</b>	<b>3,877,855,966.93</b>
076	Less: Other expenses allocated to fuel inventory	584,991,830.30	588,057,845.97
077	Less: Transferred/Allocated to development of coal mines	0.00	0.00
078	Less: Transferred to fly ash utilisation reserve fund	25,183,231.73	73,498,661.01
079	Less: Hedging cost Net recoverable/payable from/to beneficiaries	0.00	0.00
080	Less: Others	0.00	0.00
081	Less: Transferred to CSR Expenses	0.00	58,647,288.00
082	Less: Transferred to Expenditure during Construction period(net)-Note 43	2,525,818.02	-2,659,409.99
083	Less: Transfer to Govt of Jharkhand A/c as recoverable	0.00	0.00
084	<b>Net (Generation, Administration and Other expenses)</b>	<b>4,572,032,981.42</b>	<b>3,160,311,581.94</b>
085	Corporate Social Responsibility Expenses	35,175,677.26	98,681,095.39
086	Less: Grants-in-aid	0.00	0.00
087	<b>Sub-total (Corporate Social Responsibility Expenses)</b>	<b>35,175,677.26</b>	<b>98,681,095.39</b>
088	<b>Provisions</b>	<b>0.00</b>	<b>0.00</b>
089	Doubtful Debts	0.00	0.00
090	Doubtful loans, advances and claims	0.00	0.00
091	Doubtful Construction Advances	0.00	0.00
092	Shortage in stores	222,450.81	1,655,918.65

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 42 TO THE FS--OTHER EXPENSE**
**( Amount in ₹ )**

	For the Year ended	31.03.2023	31.03.2022
093	Obsolete/Dimunition in the value of surplus stores	10,612,444.94	12,120,326.93
094	Shortage in construction stores	88,397.16	1,469,730.55
095	Dimunition in value of long term investments	0.00	0.00
096	Shortage in Fixed assets	0.00	0.00
097	Unfinished minimum work progress from oil & gas exploration	0.00	0.00
098	Unserviceable capital works	0.00	0.00
099	Tariff Adjustment	154,854,000.00	147,770,000.00
100	Others :	0.00	0.00
101	(i) Provision for arbitration cases	418,352.00	418,352.00
102	(ii) Other provisions	0.00	0.00
103	<b>Total (Provisions)</b>	<b>166,195,644.91</b>	<b>163,434,328.13</b>
104		0.00	0.00
106	<b>Total</b>	<b>4,773,404,303.59</b>	<b>3,422,427,005.46</b>
107		0.00	0.00
108	<b>Breakup of miscellaneous expenses.</b>	<b>0.00</b>	<b>0.00</b>
110	Hire charges of office equipment	2,178,920.46	1,714,504.43
112	Operating expenses of construction equipment	0.00	0.00
113	Operating expenses of D.G. sets	0.00	0.00
114	Furnishing expenses	253,934.89	111,933.41
115	Subscription to trade and other associations.	0.00	0.00
117	Visa and entry permit charges	0.00	0.00
118	Tree plantation exp.-NTPC Land	0.00	0.00
119	Research & development expenses .	0.00	0.00
120	Less : Grants received for Research & development expenses.	0.00	0.00
121	Sub-total (Research & development expenses)	0.00	0.00
122	Bank charges	90,956.68	57,713.83
123	Business Development Expenditure	0.00	0.00
124	Surcharge (NVVN)	0.00	0.00
125	Power Trading Expenses	30,539,939.00	23,017,240.00
126	Brokerage & commission	8,616,631.00	8,510,225.90
130	Books and periodicals	408,733.00	61,430.00
131	Claims/advances written off	0.00	0.00
132	Stores written off	0.00	0.00
133	Survey &Investigation expenses written off	0.00	2,987,667.50
134	Others	12,467,030.75	19,406,392.77
135	<b>Total</b>	<b>54,556,145.78</b>	<b>55,867,107.84</b>
136		0.00	0.00
137		0.00	0.00
138		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 43 TO THE FS--EXPENDITURE DURING CONSTRUCTION PERIOD (NET)**
**( Amount in ₹ )**

	For the Year ended 31.03.2023	31.03.2022
001 <b>EXPENDITURE DURING CONSTRUCTION PERIOD (NET)</b>	<b>0.00</b>	<b>0.00</b>
002 A. Employee benefits expense	0.00	0.00
003 Salaries and wages	26,501,611.63	21,286,958.63
004 Contribution to provident and other funds	3,509,615.20	2,431,771.71
005 Unwinding of deffered payroll expenses	0.00	0.00
006 Staff welfare expenses	1,680,711.99	1,207,329.60
007 <b>Total (A)</b>	<b>31,691,938.82</b>	<b>24,926,059.94</b>
008 <b>B. Finance Costs</b>	<b>0.00</b>	<b>0.00</b>
009 Finance charges on financial liabilities measured at amortised cost	0.00	0.00
010 Bonds	9,928,869.03	5,668,439.23
011 Foreign currency term loans	26,164,411.47	3,847,461.50
012 Rupee term loans	16,080,739.00	12,081,882.00
013 Foreign currency bonds/notes	0.00	0.00
014 Unwinding of discount on account of vendor liabilities	0.00	74,018,223.04
015 Others	0.00	0.00
016	0.00	0.00
017 Other Borrowings Costs	0.00	0.00
018 Guarantee Commission	0.00	0.00
019 Management Fees/Arrangers Fees	0.00	0.00
020 Commitment charges/Exposure Premium	129,975.15	1,126,265.00
021 Legal Expenses on foreign currency loans	0.00	0.00
022 Foreign currency bonds/notes expenses	0.00	0.00
023 Foreign Credit Insurance Premium	0.00	0.00
024 Upfront Fee	0.00	0.00
025 Exchange Differences	0.00	0.00
026 Others	3,705,070.96	1,564,768.20
027 Exchange differences regarded as adjustment to interest cost	11,830,701.59	-1.00
028 <b>Total (B)</b>	<b>67,839,767.20</b>	<b>98,307,037.97</b>
029	0.00	0.00
030 C. Depreciation and amortisation	659.26	0.00
031 <b>D. Generation , administration and other expenses</b>	<b>0.00</b>	<b>0.00</b>
032 Power charges	314,305.00	872,302.00
033 Less: Recovered from contractors & employees	39,741.55	6,316,951.40
034 <b>Sub-total(Net power charges)</b>	<b>274,563.45</b>	<b>-5,444,649.40</b>
035 Water charges	0.00	0.00
036 Rent	0.00	0.00
037 Repairs & maintenance	0.00	0.00
038 Buildings	0.00	0.00
039 Construction equipment	0.00	0.00
040 Others	456.75	0.00
041	0.00	0.00
042 Insurance	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 43 TO THE FS--EXPENDITURE DURING CONSTRUCTION PERIOD (NET)**
**( Amount in ₹ )**

	For the Year ended	31.03.2023	31.03.2022
043	Rates and taxes	108.00	93.60
044	Communication expenses	463,943.00	194,837.00
045	Travelling expenses	1,173,914.46	863,550.68
046	Tender expenses	0.00	0.00
047	Less: Income from sale of tenders	0.00	0.00
048	<b>Sub-total (Net tender expenses)</b>	<b>0.00</b>	<b>0.00</b>
049	Advertisement and publicity	0.00	0.00
050	Security expenses	0.00	0.00
051	Entertainment expenses	109,860.70	82,552.00
052	Guest house expenses	0.00	0.00
053	Less: Receipt from guest house	0.00	0.00
054	<b>Sub-total (Net Guest House Expenses)</b>	<b>0.00</b>	<b>0.00</b>
055	Education expenses	0.00	0.00
056	Brokerage & Commission	0.00	0.00
057	Books and periodicals	0.00	0.00
058	Community development expenses	0.00	0.00
059	Professional charges and consultancy fee	0.00	0.00
060	Legal expenses	0.00	0.00
061	EDP Hire and other charges	0.00	0.00
062	Printing and stationery	19,534.00	0.00
063	Miscellaneous expenses	483,437.66	1,644,206.13
064	<b>Total (D)</b>	<b>2,525,818.02</b>	<b>-2,659,409.99</b>
065	<b>Total (A+B+C+D)</b>	<b>102,058,183.30</b>	<b>120,573,687.92</b>
066	<b>E. Less: Other Income</b>	<b>0.00</b>	<b>0.00</b>
067	Interest from	0.00	0.00
068	Indian banks	0.00	0.00
069	Foreign banks	0.00	0.00
070	Others	0.00	0.00
071	Contractors	0.00	0.00
072	Hire charges	0.00	0.00
073	Sale of scrap	0.00	0.00
074	Exchange Differences	0.00	0.00
075	Miscellaneous income	104,102.76	96,735.00
076	<b>TOTAL (E)</b>	<b>104,102.76</b>	<b>96,735.00</b>
077	F. Net actuarial gain/loss OCI	-397,461.79	85,940.56
078		0.00	0.00
079	<b>GRAND TOTAL (A+B+C+D-E+F)</b>	<b>101,556,618.75</b>	<b>120,562,893.48</b>
080		0.00	0.00
081	<b>* Balance carried to Capital Work-in-progress - (Note 3)</b>	<b>101,556,618.75</b>	<b>120,562,893.48</b>



**RIHAND SUPER THERMAL POWER STATION**  
**NOTE NO. 43A TO THE FS--EDC- COAL MINING**

( Amount in ₹ )

	For the Year ended	31.03.2023	31.03.2022
001	<b>EDC- Coal Mining</b>	<b>0.00</b>	<b>0.00</b>
002	A. Employee benefits expense	0.00	0.00
003	Salaries and wages	0.00	0.00
004	Contribution to provident and other funds	0.00	0.00
005	Unwinding of deferred payroll expenses	0.00	0.00
006	Staff welfare expenses	0.00	0.00
007	<b>Total (A)</b>	<b>0.00</b>	<b>0.00</b>
008	<b>B. Finance Costs</b>	<b>0.00</b>	<b>0.00</b>
009	Finance charges on financial liabilities measured at amortised cost	0.00	0.00
010	Bonds	0.00	0.00
011	Foreign currency term loans	0.00	0.00
012	Rupee term loans	0.00	0.00
013	Foreign currency bonds/notes	0.00	0.00
014	Unwinding of discount on account of vendor liabilities	0.00	0.00
015	Others	0.00	0.00
016		0.00	0.00
017	Other Borrowings Costs	0.00	0.00
018	Guarantee Commission	0.00	0.00
019	Management Fees/Arrangers Fees	0.00	0.00
020	Commitment charges/Exposure Premium	0.00	0.00
021	Legal Expenses on foreign currency loans	0.00	0.00
022	Foreign currency bonds/notes expenses	0.00	0.00
023	Foreign Credit Insurance Premium	0.00	0.00
024	Upfront Fee	0.00	0.00
025	Exchange Differences	0.00	0.00
026	Others	0.00	0.00
027	Exchange differences regarded as adjustment to interest cost	0.00	0.00
028	<b>Total (B)</b>	<b>0.00</b>	<b>0.00</b>
029		0.00	0.00
030	C. Depreciation and amortisation	0.00	0.00
031	<b>D. Generation , administration and other expenses</b>	<b>0.00</b>	<b>0.00</b>
032	Power charges	0.00	0.00
033	Less: Recovered from contractors & employees	0.00	0.00
034	<b>Sub-total(Net power charges)</b>	<b>0.00</b>	<b>0.00</b>
035	Water charges	0.00	0.00
036	Rent	0.00	0.00
037	Repairs & maintenance	0.00	0.00
038	Buildings	0.00	0.00
039	Construction equipment	0.00	0.00
040	Others	0.00	0.00
041	Cost of Captive Coal	0.00	0.00
042	Insurance	0.00	0.00
043	Rates and taxes	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**  
**NOTE NO. 43A TO THE FS--EDC- COAL MINING**

( Amount in ₹ )

For the Year ended	31.03.2023	31.03.2022
044 Communication expenses	0.00	0.00
045 Travelling expenses	0.00	0.00
046 Tender expenses	0.00	0.00
047 Less: Income from sale of tenders	0.00	0.00
048 <b>Sub-total (Net tender expenses)</b>	<b>0.00</b>	<b>0.00</b>
049 Advertisement and publicity	0.00	0.00
050 Security expenses	0.00	0.00
051 Entertainment expenses	0.00	0.00
052 Guest house expenses	0.00	0.00
053 Less: Receipt from guest house	0.00	0.00
054 <b>Sub-total (Net Guest House Expenses)</b>	<b>0.00</b>	<b>0.00</b>
055 Education expenses	0.00	0.00
056 Brokerage & Commission	0.00	0.00
057 Books and periodicals	0.00	0.00
058 Community development expenses	0.00	0.00
059 Professional charges and consultancy fee	0.00	0.00
060 Legal expenses	0.00	0.00
061 EDP Hire and other charges	0.00	0.00
062 Printing and stationery	0.00	0.00
063 Miscellaneous expenses	0.00	0.00
064 <b>Total (D)</b>	<b>0.00</b>	<b>0.00</b>
065 <b>Total (A+B+C+D)</b>	<b>0.00</b>	<b>0.00</b>
066 <b>E. Less: Other Income</b>	<b>0.00</b>	<b>0.00</b>
067 Interest from	0.00	0.00
068 Indian banks	0.00	0.00
069 Foreign banks	0.00	0.00
070 Others	0.00	0.00
071 Contractors	0.00	0.00
072 Hire charges	0.00	0.00
073 Sale of scrap	0.00	0.00
074 Exchange Differences	0.00	0.00
075 Miscellaneous income	0.00	0.00
076 <b>TOTAL (E)</b>	<b>0.00</b>	<b>0.00</b>
077 F. Net actuarial gain/loss OCI	0.00	0.00
078	0.00	0.00
079 <b>GRAND TOTAL (A+B+C+D-E+F)</b>	<b>0.00</b>	<b>0.00</b>
080	0.00	0.00
081 <b>* Balance carried to Capital Work-in-progress - (Note 3)</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 44-A TO THE FINANCIAL STATEMENTS**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
001 Balance sheet	0.00	0.00
002 Freehold land for which conveyancing of the title is awaiting completion of legal formalities	0.00	0.00
003 (a) area (in acres)	1,272.13	1,277.87
004 (b) value (in rs)	116,742,467.99	50,838,469.84
005 Right-of-use land for which execution of lease deed is awaiting completion of legal formalities	0.00	0.00
006 (a) area (in acres)	227.63	1,966.04
007 (b) value (in rs)	208,310,187.38	312,091,923.56
008 Right-of-use land acquired on perpetual lease and accordingly not amortised	0.00	0.00
009 (a) area (in acres)	0.00	0.00
010 (b) value (in rs.)	0.00	0.00
011 Land in physical possession of the company which has not been shown in the books pending settlement of price (in acres)	0.00	0.00
012 Deposit with government authorities towards land in possession of the company included in cost of land which is subject to adjus	0.00	0.00
<b>013 Land not in possession of the company</b>	<b>0.00</b>	<b>0.00</b>
014 (a) area (in acres)	0.00	0.00
015 -Freehold	776.45	786.37
016 -Right of Use	72.33	72.47
017 (b) value (in rs)	0.00	0.00
018 -Freehold	71,250,885.34	14,409,326.78
019 -Right of Use	30,718,588.01	31,000,000.00
020 Right-of-use buildings pending completion of legal fomalities - value (in rs.)	0.00	0.00
021 Estimated amount of contracts remaining to be executed on capital account and not provided for	0.00	0.00
022 Property, plant & equipment	13,566,754,374.00	17,596,562,343.00
023 Intangible assets	0.00	0.00
024 Details of precommissioning expenditure	0.00	0.00
025 (a) precommissioning expenses	0.00	0.00
026 (b) precommissioning income	0.00	0.00
027 (c) net precommissioning expenditure	0.00	0.00
028	0.00	0.00
029	0.00	0.00
030	0.00	0.00
031 Exchange rate variation taken to revenue during the year (with -ve sign, if favourable)	19,741,587.18	-92,096,377.22
045 Exchange rate variation capitalised during the year (with -ve sign, if favourable)	282,259,548.61	154,890,055.40
064 Short Term Leases	0.00	0.00
065 A) Rent	0.00	0.00
066 Company lease accomodation - executives	0.00	0.00
067 Company lease accomodation - directors	0.00	0.00
068 Others	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 44-A TO THE FINANCIAL STATEMENTS**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
069 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
101 Borrowing cost capitalised during the year	67,839,767.20	24,288,814.93
102 Revenue grants recognized during the year	0.00	0.00
103 Revenue expenditure on research and development	0.00	0.00
104 Capital expenditure on research and development.	0.00	0.00
105 Expenditure on sustainability development - capital	1,321,815.00	0.00
106 Expenditure on csr- capital	0.00	0.00
107 Opening balance - CSR Liability	5,794,153.00	39,305,330.19
108 Paid/Adjusted during the Year out of Opening above	-1,456,484.00	36,690,803.19
109 Amount yet to be paid against Cr Year CSR Exp	1,408,871.00	-3,179,626.00
110 Closing Balance CSR- Liability ( 110)	5,746,540.00	-5,794,153.00
111	0.00	0.00
112	0.00	0.00
113	0.00	0.00
114	0.00	0.00
115 Disclosure under msmed act 2006.	0.00	0.00
116 (i) (a) the principal amount remaining unpaid as at year end	237,294,393.36	344,066,958.09
117 (i) (b) interest due there on remaining unpaid as at Year end	0.00	0.00
118 (ii) the amount of interest paid by the buyer in terms of section 16, along with the amounts of the payment made to the supplier	0.00	0.00
119 (iii) the amount of interest due and payable for the period of delay in making payment(which has been paid but beyond the appoin	0.00	0.00
120 (iv) the amount of interest accrued and remaining unpaid at the end of the year; and	0.00	0.00
121 (v) the amount of further interest remaining due and payable even in the succeeding years, until such date when the interest due	0.00	0.00
122 Amount of inventories recognized as an expense (including fuel)	36,118,519,159.86	31,594,433,719.35
123 Amount of inventories capitalised as overhauling assets out of 122 above	479,006,817.39	138,552,137.00
124 Amount capitalised as edc out of 122 above	0.00	0.00
133 Value of Imported Material Consumed during the Year	0.00	0.00
134	0.00	0.00
135 Contingent liabilities	0.00	0.00
136 A. Claims against the company not acknowledged as debts in respect of :	0.00	0.00
137 (i)Capital works	0.00	0.00
138 (ii)Land compensation cases	35,769,736.80	35,769,736.80
139 (iii)Others by state authorities towards:-	0.00	0.00
140 (a) Water royalty / water charges / nala tax	0.00	0.00
141 (b) Diversion of land / building permission fees	0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 44-A TO THE FINANCIAL STATEMENTS**
**( Amount in ₹ )**

As at	31.03.2023	31.03.2022
142 (c) Other demands by state authorities	4,590,000.00	4,590,000.00
143 (iv) Others by fuel companies	0.00	0.00
144 (a) Disputes related to grade slippage-third party sampling	1,346,927,154.99	521,176,520.00
145 (b) Surface transportation charges on coal	911,712,917.69	911,712,917.66
146 (c) Take or pay claim - Gas stations	0.00	0.00
147 (d) Other claims by fuel companies not acknowledged as debt	686,853,915.00	291,000,980.00
149 B.Disputed tax demands	0.00	0.00
150 (i) Income tax	0.00	0.00
151 (ii) Excise duty	3,691,823.00	3,691,823.00
152 (iii) Sales tax	146,412,646.00	145,060,360.00
153 (iv) Service tax/GST	4,225,770.93	4,080,007.53
154 (v) Entry tax	0.00	0.00
155 C. Others	183,583,292.71	240,865,291.85
156 <b>Total</b>	<b>3,323,767,257.12</b>	<b>2,157,947,636.84</b>
157 D. Possible reimbursement on account of contingent liabilities	0.00	0.00
158 (i) Capital works	0.00	0.00
159 (ii) Land compensation cases	0.00	0.00
160 (iii) Others (by state authorities)	0.00	0.00
161	0.00	0.00
162 (iv) Others by fuel companies	2,945,493,987.65	1,723,890,417.66
163 (v) Disputed income tax demand	0.00	0.00
164 (vi) Disputed tax demands -others	150,104,469.00	148,752,183.00
165 (vii) Others	58,203.00	118,267,099.00
167 <b>Total</b>	<b>3,095,656,659.65</b>	<b>1,990,909,699.66</b>
168 E.AMOUNT PAID UNDER PROTEST/ADJUSTED BY AUTHORITIES - TAX CASES	812,756.00	812,756.00
169 F.CONTINGENT ASSETS	0.00	0.00
170 Intangible under development : less than 1 year	0.00	0.00
171 Intangible under development #: 1-2 year	0.00	0.00
227 Intangible under development #: 2-3 year	0.00	0.00
277 Intangible under development #: More than 3 years	0.00	0.00
278 <b>Capital-Work-in Progress (CWIP)</b>	<b>0.00</b>	<b>0.00</b>
279 Projects in progress	8,960,205,455.82	6,758,466,834.90
280 Projects temporarily suspended	0.00	0.00
281	0.00	0.00
282	0.00	0.00
283 <b>Projects in progress</b>	<b>0.00</b>	<b>0.00</b>
284 Less than 1 year	3,744,284,084.47	4,445,877,958.44
285 1-2 years	3,074,034,597.30	1,791,003,583.98
286 2-3 years	1,738,373,963.21	268,220,634.24
287 More than 3 years	403,512,810.84	253,364,658.24
288 <b>Sub Total (I)</b>	<b>8,960,205,455.82</b>	<b>6,758,466,834.90</b>
289	0.00	0.00



RIHAND SUPER THERMAL POWER STATION  
NOTE NO. 44-A TO THE FINANCIAL STATEMENTS

( Amount in ₹ )

As at	31.03.2023	31.03.2022
290 <b>Projects temporarily suspended</b>	<b>0.00</b>	<b>0.00</b>
291 Less than 1 year	0.00	0.00
292 1-2 years	0.00	0.00
293 2-3 years	0.00	0.00
294 More than 3 years	0.00	0.00
295 <b>Sub Total (II)</b>	<b>0.00</b>	<b>0.00</b>
296	0.00	0.00
380 Previous year figures have been regrouped/rearranged wherever necessary.	0.00	0.00



**RIHAND SUPER THERMAL POWER STATION**

**BALANCE SHEET**

( Amount in ₹ )

As at	Note	31.03.2024	31.03.2023
001	<b>ASSETS</b>	<b>0.00</b>	<b>0.00</b>
002		<b>0.00</b>	<b>0.00</b>
003	<b>NON-CURRENT ASSETS</b>	<b>0.00</b>	<b>0.00</b>
004	PROPERTY, PLANT & EQUIPMENT	48,149,067,190.98	49,621,309,183.69
005	CAPITAL-WORK-IN-PROGRESS	12,848,933,527.77	8,960,205,455.82
006	INVESTMENT PROPERTY	0.00	0.00
007	INTANGIBLE ASSETS	745,236.92	79,793.65
008	INTANGIBLE ASSETS UNDER DEVELOPMENT	0.00	0.00
009	<b>FINANCIAL ASSETS</b>	<b>0.00</b>	<b>0.00</b>
010	I) EQUITY INVESTMENTS IN SUBSIDIARIES AND JOINT VENTURES	0.00	0.00
011	II) OTHER INVESTMENTS	0.00	0.00
012	III) LOANS	117,068,687.39	111,577,788.06
013	IV) TRADE RECEIVABLES	0.00	0.00
014	V) OTHER FINANCIAL ASSETS	0.00	0.00
016	OTHER NON-CURRENT ASSETS	461,005,117.71	686,673,672.57
017	<b>TOTAL NON-CURRENT ASSETS</b>	<b>61,576,819,760.77</b>	<b>59,379,845,893.79</b>
018		<b>0.00</b>	<b>0.00</b>
019	<b>CURRENT ASSETS</b>	<b>0.00</b>	<b>0.00</b>
020	INVENTORIES	7,732,979,740.05	7,344,113,893.60
021	<b>FINANCIAL ASSETS</b>	<b>0.00</b>	<b>0.00</b>
022	I) OTHER INVESTMENTS	0.00	0.00
023	II) TRADE RECEIVABLES	0.00	1,737,334.04
024	III) CASH AND CASH EQUIVALENTS	0.00	0.00
025	IV) BANK BALANCES OTHER THAN CASH AND CASH EQUIVALENTS	0.00	0.00
026	V) LOANS	68,365,126.48	69,609,653.92
027	VI) OTHER FINANCIAL ASSETS	123,372,990.93	126,338,115.86
028	CURRENT TAX ASSETS (NET)	0.00	0.00
029		0.00	0.00
030	OTHER CURRENT ASSETS	599,590,417.73	682,394,358.11
031		0.00	0.00
032	<b>TOTAL CURRENT ASSETS</b>	<b>8,524,308,275.19</b>	<b>8,224,193,355.53</b>
033	ASSETS HELD FOR SALE	6,036,716.90	6,037,344.90
036	REGULATORY DEFERRAL ACCOUNT DEBIT BALANCES	-227,495,204.34	-43,260,292.59
037	<b>TOTAL ASSETS</b>	<b>69,879,669,548.52</b>	<b>67,566,816,301.63</b>
038	<b>EQUITY AND LIABILITIES</b>	<b>0.00</b>	<b>0.00</b>
039	<b>EQUITY</b>	<b>0.00</b>	<b>0.00</b>
040	EQUITY SHARE CAPITAL	0.00	0.00
041	OTHER EQUITY	201,165,336,384.38	189,186,278,816.05
044	<b>TOTAL EQUITY</b>	<b>201,165,336,384.38</b>	<b>189,186,278,816.05</b>
045		0.00	0.00
046	<b>LIABILITIES</b>	<b>0.00</b>	<b>0.00</b>
047	<b>NON-CURRENT LIABILITIES</b>	<b>0.00</b>	<b>0.00</b>
048	<b>FINANCIAL LIABILITIES</b>	<b>0.00</b>	<b>0.00</b>
049	I) BORROWINGS	0.00	0.00



RIHAND SUPER THERMAL POWER STATION

BALANCE SHEET

( Amount in ₹ )

Table with columns: As at, Note, 31.03.2024, 31.03.2023. Rows include Lease Liabilities, Trade Payables, Current Liabilities, and Equity and Liabilities.

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( Head of Unit )







**RIHAND SUPER THERMAL POWER STATION**

**STATEMENT OF PROFIT AND LOSS**

( Amount in ₹ )

	For the Year ended	Note	31.03.2024	31.03.2023
001	<b>Revenue</b>		<b>0.00</b>	<b>0.00</b>
002	Revenue from operations	40	61,383,428,894.96	58,630,687,159.09
003	Other income	41	370,257,225.47	484,325,517.38
005	<b>Total Income</b>		<b>61,753,686,120.43</b>	<b>59,115,012,676.47</b>
007	<b>Expenses</b>		<b>0.00</b>	<b>0.00</b>
008	Fuel including cost of captive coal	42	35,194,069,965.70	34,514,855,222.10
009	Employee benefits expense	43	1,711,955,663.11	1,777,403,106.11
010	Electricity purchased for trading		0.00	0.00
011	Finance costs	44	1,002,897,400.49	1,283,819,969.71
012	Depreciation, amortization and impairment expenses	45	4,670,852,246.89	4,307,996,560.58
013			0.00	0.00
014	Other expenses	46	6,154,530,321.04	4,827,491,739.59
015	CC expenses charge to revenue		860,491,973.00	900,990,130.26
016	Less: Unit expenses transferred to CC		0.00	0.00
017	<b>Total expenses</b>		<b>49,594,797,570.23</b>	<b>47,612,556,728.35</b>
020	<b>Profit before exceptional items &amp; tax</b>		<b>12,158,888,550.20</b>	<b>11,502,455,948.12</b>
021	Exceptional items		0.00	0.00
024	<b>Profit before tax</b>		<b>12,158,888,550.20</b>	<b>11,502,455,948.12</b>
027	<b>Tax expense:</b>		<b>0.00</b>	<b>0.00</b>
028	Current tax		0.00	0.00
031	Deferred tax		0.00	0.00
034			0.00	0.00
035	<b>Total Tax expense</b>		<b>0.00</b>	<b>0.00</b>
036	<b>Profit for the period before regulatory deferral account balances</b>		<b>12,158,888,550.20</b>	<b>11,502,455,948.12</b>
037	<b>Movement in regulatory deferral account balances</b>		<b>0.00</b>	<b>0.00</b>
038	Regulatory deferred account - deferred		0.00	0.00
039	Others		-184,234,911.75	-1,024,362,313.78
040	Tax impact on regulatory deferral account balances		0.00	0.00
041	<b>Net movement in regulatory deferral account balances (net of tax)</b>		<b>-184,234,911.75</b>	<b>-1,024,362,313.78</b>
042	<b>Profit for the period/ year</b>		<b>11,974,653,638.45</b>	<b>10,478,093,634.34</b>
055	<b>Other comprehensive income</b>		<b>0.00</b>	<b>0.00</b>
056	<b>(A) Items that will not be reclassified to profit or loss</b>		<b>0.00</b>	<b>0.00</b>
057	- Net gains/(losses) on fair value of equity instruments through other comprehensive income		0.00	0.00
058	Income tax on above that will not be reclassified to profit or loss		0.00	0.00
059	- Net actuarial gains/(losses) on defined benefit plans		4,403,929.88	-19,544,151.77
060	Income tax on above that will not be reclassified to profit or loss		0.00	0.00
064			0.00	0.00
065	<b>Other comprehensive income for the year, net of income tax</b>		<b>4,403,929.88</b>	<b>-19,544,151.77</b>
070			0.00	0.00
071			0.00	0.00
072	<b>Total Comprehensive Income for the year</b>		<b>11,979,057,568.33</b>	<b>10,458,549,482.57</b>



RIHAND SUPER THERMAL POWER STATION

STATEMENT OF PROFIT AND LOSS

( Amount in ₹ )

	For the Year ended	Note	31.03.2024	31.03.2023
086			0.00	0.00
087	<b>Earnings per equity share:</b>		<b>0.00</b>	<b>0.00</b>
088	Basic & Diluted		0.00	0.00
089	Material Accounting Policies		0.00	0.00
090			0.00	0.00
091	The accompanying notes 1 to 48 form an integral part of these financial statements.		0.00	0.00

SUYASH  
SOMNATH  
KAPUR

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( Head of Finance )

Pankaj  
Mediratta

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( Head of Unit )

**RIHAND SUPER THERMAL POWER STATION**

**OTHER COMPREHENSIVE INCOME**

( Amount in ₹ )

	For the Year ended	31.03.2024	31.03.2023
001		0.00	0.00
002	<b>Other comprehensive income</b>	<b>0.00</b>	<b>0.00</b>
003	<b>(A) Items that will not be reclassified to profit or loss</b>	<b>0.00</b>	<b>0.00</b>
004	- Net gains/(losses) on fair value of equity instruments through other comprehensive income	0.00	0.00
005	Income tax on above that will not be reclassified to profit or loss	0.00	0.00
006	- Net actuarial gains/(losses) on defined benefit plans	4,403,929.88	-19,544,151.77
007	Income tax on above that will not be reclassified to profit or loss	0.00	0.00
008		0.00	0.00
009	(B) Items that will be reclassified to profit or loss	0.00	0.00
010	Income tax relating to above items that will be reclassified to profit or loss	0.00	0.00
011		0.00	0.00
012	<b>Other comprehensive income for the year, net of income tax</b>	<b>4,403,929.88</b>	<b>-19,544,151.77</b>
013		0.00	0.00
014	<b>Total comprehensive income for the year (A+B)</b>	<b>4,403,929.88</b>	<b>-19,544,151.77</b>

Note forming part of Balance Sheet  
**NOTE NO. 2 TO THE FS-NCA-PROPERTY, PLANT AND EQUIPMENT**  
**Business Area :1005**

Asset Class	Opening Gross Block As At 01.04.2023	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2024	Opening Depreciation As At 01.04.2023	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2024	Net Block As At 31.03.2024	Net Block As At 31.03.2023
<b>1 TANGIBLE ASSETS</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>2 Land : (including development expenses)</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>3 Freehold</b>	355016843.25	0.00	0.00	355016843.25	0.00	0.00	0.00	0.00	355016843.25	355016843.25
<b>4 Right of Use</b>	678137733.98	32546505.48	0.00	710684239.46	99423606.49	23536626.93	0.00	122960233.42	587724006.04	578714127.49
<b>5 Submergence</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>6 Right of use - Coal Bearing Area Land</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>7 Roads,bridges, culverts &amp; helipads</b>	636337614.70	0.00	0.00	636337614.70	180157124.43	23626463.25	0.00	203783587.68	432554027.02	456180490.27
<b>8 Building :</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 Freehold</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>10 Main plant</b>	1869800747.79	980.66	0.00	1869801728.45	501564138.50	63390639.75	0.00	564954778.25	1304846950.20	1368236609.29
<b>11 Others</b>	2574811225.22	91130304.03	(201140.39)	2665740388.86	673767508.77	177207020.14	0.00	850974528.91	1814765859.95	1901043716.45
<b>12 Right of Use</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>13 Temporary erection</b>	231168.13	832000.00	0.00	1063168.13	231168.13	624000.00	0.00	855168.13	208000.00	0.00
<b>14 Water Supply, drainage &amp; sewerage system</b>	546222044.04	913668.44	0.00	547135712.48	171339645.41	24175812.19	0.00	195515457.60	351620254.88	374882398.63
<b>15 Hydraulic works, barrages, dams, tunnels and power channel</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>16 MGR track and signalling system</b>	1354309444.15	0.00	(2292175.64)	1352017268.51	487460446.31	57038141.70	0.00	544498588.01	807518680.50	866848997.84
<b>17 Railway siding</b>	1528212.48	0.00	0.00	1528212.48	776912.19	64482.46	0.00	841394.65	686817.83	751300.29
<b>18 Earth dam reservoir</b>	1456921.40	0.00	0.00	1456921.40	0.00	0.00	0.00	0.00	1456921.40	1456921.40
<b>19 Plant and machinery(including associated civil works)</b>	76960566665.36	3668820918.91	(481206360.20)	80148181224.07	33744072418.19	4821123153.64	(336854991.71)	38228340580.12	41919840643.95	43216494247.17
<b>Owned Asset</b>										

  
 Chief Financial Officer (Accounting)  
 Ashi General Manager (Accounting)  
 एन सी ई लिमिटेड/NPEC LIMITED

Note forming part of Balance Sheet  
**NOTE NO. 2 TO THE FS-NCA-PROPERTY, PLANT AND EQUIPMENT**  
**Business Area :1005**

Asset Class	Opening Gross Block As At 01.04.2023	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2024	Opening Depreciation As At 01.04.2023	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2024	Net Block As At 31.03.2024	Net Block As At 31.03.2023
20 Plant and machinery(including associated civil works) -Right of use Asset	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21 Furniture and fixtures	176641068.54	5613399.10	0.00	182254467.64	88220455.66	8592917.30	0.00	96813372.96	85441094.68	88420612.88
22 Assets under 5 Km Scheme	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23 Vehicles including speedboats / helicopter- Owned	9034115.35	2809838.00	0.00	11843953.35	3879093.90	878459.75	0.00	4757553.65	7086399.70	5155021.45
24 Vehicles including speedboats / helicopter - Right of Use	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25 Office equipment	100813473.54	132053544.87	4313542.89	237180561.30	66352770.64	13950822.72	1220794.20	81524387.56	155656173.74	34460702.90
26 EDP, WP machines and satcom equipment	125778344.32	8349424.51	(22304907.51)	111822861.32	70281077.93	21296402.28	(13488215.74)	78089264.47	33733596.85	55497266.39
27 Construction equipments	65110895.86	0.00	0.00	65110895.86	31101580.64	2027269.30	0.00	33128849.94	31982045.92	34009315.22
28 Electrical Installations	331078040.99	0.00	0.00	331078040.99	161206158.08	20440092.85	0.00	181646250.93	149431790.06	169871882.91
29 Communication equipments	32811847.30	1102000.00	9617420.83	43531268.13	25087864.37	3179304.32	5088397.55	33355566.24	10175701.89	7723982.93
30 Hospital equipments	36163197.06	419979.92	0.00	36583176.98	20726067.81	2773084.36	0.00	23499152.17	13084024.81	15437129.25
31 Laboratory and workshop equipments	150982759.77	3755889.57	0.00	154738649.34	59875142.09	8626148.94	0.00	68501291.03	86237358.31	91107617.68
32 Capital expenditure on assets not owned by the Company	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33 Assets of Government	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

  
 Chief General Manager (Commercial)  
 Air India Limited

Note forming part of Balance Sheet  
**NOTE NO. 2 TO THE FS-NCA-PROPERTY, PLANT AND EQUIPMENT**  
**Business Area :1005**

Asset Class	Opening Gross Block As At 01.04.2023	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2024	Opening Depreciation As At 01.04.2023	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2024	Net Block As At 31.03.2024	Net Block As At 31.03.2023
34 Less:Grants from Government	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35 Less: Recoverable from GOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36 Assets for ash utilisation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37 (Less):-Adjusted from fly ash utilisation reserve fund	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38 Site Restoration Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39 Mining Properties	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Grand Total (Tangible)</b>	86006832363.23	3948348453.49	(492073620.02)	89463107196.70	36385523179.54	5272550841.88	(344034015.70)	41314040005.72	48149067190.98	49621309183.69
<b>Grand Total Prev Year (Tangible)</b>	82762860205.13	3815958810.11	(571986652.01)	86006832363.23	32238221992.08	4896131231.52	(748830044.06)	36385523179.54	49621309183.69	50524638213.05

  
 Ashok Kumar (Commanding)  
 Ashok Kumar (Commanding)  
 Ashok Kumar (Commanding)

Note forming part of Balance Sheet  
**NOTE NO. 2 TO THE FS-NCA-PROPERTY, PLANT AND EQUIPMENT**  
**Business Area :1005**

<b>Details of Adjustments of Gross Block and Depreciation/Amortization</b>				
<b>Particulars</b>	<b>Gross Block</b>		<b>Depreciation/Amortization</b>	
	<b>Tangible As At: 31.03.2024</b>	<b>Tangible As At: 31.03.2023</b>	<b>Tangible As At: 31.03.2024</b>	<b>Tangible As At: 31.03.2023</b>
Disposal of assets	(4490895.36)	(11218922.70)	(4490895.36)	(11218922.70)
Retirement of assets	(473215802.77)	(832440819.19)	(331266377.67)	(738408039.74)
Cost adjustments	(5073602.86)	254681373.92	0.00	0.00
Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Depreciation on construction equipment capitalised as EDC	0.00	0.00	0.00	0.00
Prior Period Depreciation due to Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Special Depreciation (As per New Policy)	0.00	0.00	0.00	0.00
Transfer in /out because of Inter Unit transfers	(10213221.96)	26964560.27	(9196645.60)	796918.38
Others	919902.93	(9972844.31)	919902.93	0.00
<b>TOTAL</b>	<b>(492073620.02)</b>	<b>(571986652.01)</b>	<b>(344034015.70)</b>	<b>(748830044.06)</b>

Note:- Additions during the year includes capital expenditure towards CSR (in Rs.) : 0.00

  
 आर्य समाजवादी (पब्लिक लिमिटेड)  
 Arya Samajwadi (Public Limited)  
 ए. टी. सी. लि. लिमिटेड/ATPC LIMITED

**Note forming part of Balance Sheet**  
**NOTE NO. 3 TO THE FS-NCA-CAPITAL WORK-IN-PROGRESS**  
**Business Area: RIHAND SUPER THERMAL POWER STATION**

SI No	Asset Class	As At 01.04.2023	Addition	Deduction/ Adjustment	Capitalized	As At 31.03.2024
	1	2	3	4	5	6
1	CAPITAL WORK-IN-PROGRESS					
2	Development of land					
3	Roads, bridges, culverts & helipads					
4	Piling and foundation					
5	Buildings :					
6	Main plant					
7	Others	128058530.12	39533683.72	(1320674.48)		166271539.36
8	Temporary erection					
9	Water supply, drainage and sewerage system		913668.44	(913668.44)		
10	Hydraulic works, barrages, dams, tunnels and power channel					
11	MGR track and signalling system					
12	Railway siding					
13	Earth dam reservoir					
14	Plant and equipment	8716518065.07	6303220680.72	(1025443862.29)	1514617344.31	12479677539.19
15	Furniture and fixtures					
16	Vehicles					
17	Office equipment		153600.00			153600.00
18	EDP/WP machines & satcom equipment					
19	Construction equipments		4400000.87			4400000.87
20	Electrical installations					
21	Communication equipment					
22	Hospital equipments					
23	Laboratory and workshop equipments					
24	Assets under 5Km Scheme of the GOI					
25	Capital expenditure on assets not owned by the company					
26	Expenditure towards development of coal mines					
27	Survey,Investigation,Consultancy & Supervision Cha	391613.00	(391613.00)			
28	Difference in exchange on foreign currency loans					



Note forming part of Balance Sheet  
**NOTE NO. 3 TO THE FS-NCA-CAPITAL WORK-IN-PROGRESS**  
**Business Area: RIHAND SUPER THERMAL POWER STATION**

SI No	Asset Class	As At 01.04.2023	Addition	Deduction/ Adjustment	Capitalized	As At 31.03.2024
	1	2	3	4	5	6
29	Expenditure towards diversion of forest land					
30	Pre-commissioning expenses (net)					
31	ExpPendAlloca-oth ex attribut Project					
32	Expenditure During Construction Period (net)*		180736283.64	2202066.94		182938350.58
33	LESS : Allocated to related works		182938350.58			182938350.58
34	LESS : Provision for Unservicable works					
35	<b>Construction stores (At Cost)</b>					
36	Steel	2592059.75		(461242.18 )		2130817.57
37	Cement	1723908.87		(9323.78 )		1714585.09
38	Others	111009676.17	20465330.00	65006759.50		196481765.67
39	<b>Sub-total</b>	<b>115325644.79</b>	<b>20465330.00</b>	<b>64536193.54</b>		<b>200327168.33</b>
40	LESS : Provision for shortages	88397.16		1807922.82		1896319.98
41	<b>Sub-total</b>	<b>115237247.63</b>	<b>20465330.00</b>	<b>62728270.72</b>		<b>198430848.35</b>
42	<b>Total CWIP</b>	<b>8960205455.82</b>	<b>6366093283.81</b>	<b>(962747867.55 )</b>	<b>1514617344.31</b>	<b>12848933527.77</b>
43						
44						
45	<b>PREVIOUS YEAR TOTAL</b>	<b>6758466834.90</b>	<b>4893710462.03</b>	<b>(1270467177.70 )</b>	<b>1167430596.92</b>	<b>8960205455.82</b>

Note:- Additions during the year includes capital expenditure towards CSR (in Rs.) :

0.00

Note forming part of Balance Sheet  
**NOTE NO. 4 TO THE FS-NCA-INVESTMENT PROPERTY**  
**Business Area :1005**

Asset Class	Opening Gross Block As At 01.04.2023	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2024	Opening Depreciation As At 01.04.2023	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2024	Net Block As At 31.03.2024	Net Block As At 31.03.2023
<b>INVESTMENT PROPERTY</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>1 Free Hold Land</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>2 ROU Land</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Grand Total (Investment Property)</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Grand Total Prev Year (Investment Property)</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

  
 Chief Financial Officer (Accounting)  
 Add. General Manager (Commercial)  
 एन सी सी लिमिटेड/NPFC LIMITED

Note forming part of Balance Sheet  
**NOTE NO. 4 TO THE FS-NCA-INVESTMENT PROPERTY**  
**Business Area :1005**

(Amount in Rupees)

<b>Details of Adjustments of Gross Block and Depreciation/Amortization</b>				
<b>Particulars</b>	<b>Gross Block</b>		<b>Depreciation/Amortization</b>	
	<b>Investment Property As At: 31.03.2024</b>	<b>Investment Property As At: 31.03.2023</b>	<b>Investment Property As At: 31.03.2024</b>	<b>Investment Property As At: 31.03.2023</b>
Disposal of assets	0.00	0.00	0.00	0.00
Retirement of assets	0.00	0.00	0.00	0.00
Cost adjustments	0.00	0.00	0.00	0.00
Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Depreciation on construction equipment capitalised as EDC	0.00	0.00	0.00	0.00
Prior Period Depreciation due to Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Special Depreciation (As per New Policy)	0.00	0.00	0.00	0.00
Transfer in /out because of Inter Unit transfers	0.00	0.00	0.00	0.00
Others	0.00	0.00	0.00	0.00
<b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Note:- Additions during the year includes capital expenditure towards CSR (in Rs.) : 0.00



अनिल कुमार (अधिकारी)  
 Anil Kumar (Manager) (Commercial)  
 एन टी सी लिमिटेड/NTPL LIMITED

Note forming part of Balance Sheet  
**NOTE NO. 5 TO THE FS-NCA-INTANGIBLE ASSETS**  
**Business Area :1005**

Asset Class	Opening Gross Block As At 01.04.2023	Additions	Deductions/ Adjustments	Closing Gross Block As At 31.03.2024	Opening Depreciation As At 01.04.2023	Additions	Deductions/ Adjustments	Closing Depreciation As At 31.03.2024	Net Block As At 31.03.2024	Net Block As At 31.03.2023
<b>INTANGIBLE ASSETS</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>1 Right to Use- Land</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>2 -Others</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>3 -Software</b>	4866792.26	985404.00	0.00	5852196.26	4786998.61	319960.73	0.00	5106959.34	745236.92	79793.65
<b>Grand Total (Intangible)</b>	4866792.26	985404.00	0.00	5852196.26	4786998.61	319960.73	0.00	5106959.34	745236.92	79793.65
<b>Grand Total Prev Year (Intangible)</b>	4773867.26	92925.00	0.00	4866792.26	4758604.86	28393.75	0.00	4786998.61	79793.65	15262.40

  
 Chief Financial Officer (Accounting)  
 Add. General Manager (Commercial)  
 एन टी सी लिमिटेड/NTPC LIMITED

Note forming part of Balance Sheet  
**NOTE NO. 5 TO THE FS-NCA-INTANGIBLE ASSETS**  
**Business Area :1005**

<b>Details of Adjustments of Gross Block and Depreciation/Amortization</b>				
<b>Particulars</b>	<b>Gross Block</b>		<b>Depreciation/Amortization</b>	
	<b>InTangible As At: 31.03.2024</b>	<b>InTangible As At: 31.03.2023</b>	<b>InTangible As At: 31.03.2024</b>	<b>InTangible As At: 31.03.2023</b>
Disposal of assets	0.00	0.00	0.00	0.00
Retirement of assets	0.00	0.00	0.00	0.00
Cost adjustments	0.00	0.00	0.00	0.00
Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Depreciation on construction equipment capitalised as EDC	0.00	0.00	0.00	0.00
Prior Period Depreciation due to Assets capitalised with retrospective effect / Write back of excess capitalisation	0.00	0.00	0.00	0.00
Special Depreciation (As per New Policy)	0.00	0.00	0.00	0.00
Transfer in /out because of Inter Unit transfers	0.00	0.00	0.00	0.00
Others	0.00	0.00	0.00	0.00
<b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Note:- Additions during the year includes capital expenditure towards CSR (in Rs.) : 0.00

  
 Anil Kumar (Anil Kumar)  
 Anil Kumar (Anil Kumar)  
 Anil Kumar (Anil Kumar)

## Note forming part of Balance Sheet

## NOTE NO. 6 TO THE FS-NCA-INTANGIBLE ASSETS UNDER DEVELOPMENT

## Business Area: RIHAND SUPER THERMAL POWER STATION

SI No	Asset Class	As At 01.04.2023	Addition	Deduction/ Adjustment	Capitalized	As At 31.03.2024
	1	2	3	4	5	6
1	INTANGIBLE ASSETS UNDER DEVELOPMENT					
2	Software					
3	Right to use Others					
4	Exploration and Evaluation Expenditure - Coal Mini					
5	Exploratory wells-in-progress					
6	<b>Less: Provision for exploratory wells-in-progress</b>					
7	<b>Total</b>					
8	<b>PREVIOUS YEAR TOTAL-I</b>					

Note:- Additions during the year includes capital expenditure towards CSR (in Rs.) :

0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 7 TO THE FS-NCA-EQUITY INVESTMENTS IN SUBSIDIARIES AND JOINT VENTURES ( Amount in ₹ )**

As at	No. of shares	Face value	31.03.2024	31.03.2023
001	<b>NON CURRENT INVESTMENTS- INVESTMENTS IN SUBSIDIARIES AND JOINT VENTURES</b>		<b>0.00</b>	<b>0.00</b>
012	<b>EQUITY INSTRUMENTS - UNQUOTED-(FULLY PAID UP UNLESS OTHERWISE STATED, AT COST)</b>		<b>0.00</b>	<b>0.00</b>
013	<b>SUBSIDIARY COMPANIES</b>		<b>0.00</b>	<b>0.00</b>
014	PATRATU VIDYUT UTPADAN NIGAM LTD.		0.00	0.00
015	NTPC ELECTRIC SUPPLY COMPANY LTD.		0.00	0.00
016	NTPC VIDYUT VYAPAR NIGAM LTD.		0.00	0.00
017	NABINAGAR POWER GENERATING COMPANY LTD.		0.00	0.00
018	KANTI BIJLEE UTPADAN NIGAM LTD.		0.00	0.00
019	BHARTIYA RAIL BIJLEE COMPANY LTD.		0.00	0.00
020	NTPC MINING LTD (NML)		0.00	0.00
021	THDC INDIA LTD.		0.00	0.00
022	NEEPCO LTD.		0.00	0.00
023	NTPC EDMC Waste Solutions Pvt Ltd		0.00	0.00
024	NTPC Renewables Energy Ltd		0.00	0.00
025	Ratnagiri Gas & Power Pvt. Limited (RGPPL)		0.00	0.00
026	NTPC Green Energy Limited		0.00	0.00
027	Green Valley Renewable Energy Limited		0.00	0.00
028			0.00	0.00
029			0.00	0.00
030	<b>SUB TOTAL</b>		<b>0.00</b>	<b>0.00</b>
055	<b>JOINT VENTURE COMPANIES</b>		<b>0.00</b>	<b>0.00</b>
056	Utility Powertech Ltd.		0.00	0.00
057	NTPC GE Power Services Pvt.Ltd.		0.00	0.00
058	NTPC-SAIL Power Company Ltd.		0.00	0.00
059	NTPC-Tamil Nadu Energy Company Ltd.		0.00	0.00



## RIHAND SUPER THERMAL POWER STATION

### NOTE NO. 7 TO THE FS-NCA-EQUITY INVESTMENTS IN SUBSIDIARIES AND JOINT VENTURES ( Amount in ₹ )

As at	No. of shares	Face value	31.03.2024	31.03.2023
060	Ratnagiri Gas & Power Pvt. Limited (RGPPL)		0.00	0.00
061	ARAVALI POWER COMPANY PRIVATE LTD.		0.00	0.00
062	Jhabua Power Ltd.		0.00	0.00
063	NTPC BHEL POWER PROJECTS PRIVATE LTD.		0.00	0.00
064	MEJA URJA NIGAM PRIVATE LIMITED		0.00	0.00
065	BF-NTPC ENERGY SYSTEMS LTD.		0.00	0.00
066			0.00	0.00
067	NABINAGAR POWER GENERATING COMPANY LTD.		0.00	0.00
068	TRANSFORMER AND ELECTRICAL KERALA LTD.		0.00	0.00
069	NATIONAL HIGH POWER TEST LABORTORY PRIVATE LTD.		0.00	0.00
070			0.00	0.00
071	CIL NTPC URJA PRIVATE LTD.		0.00	0.00
072	ANUSHAKTI VIDHYUT NIGAM LTD.		0.00	0.00
073	ENERGY EFFICIENCY SERVICES LTD.		0.00	0.00
074			0.00	0.00
075	TRINCOMALEE POWER COMPANY LTD.		0.00	0.00
076	BANGLADESH-INDIA FRIENDSHIP POWER COMPANY (PVT.) LTD.		0.00	0.00
077	HINDUSTAN URVARAK & RASAYAN LIMITED		0.00	0.00
078	KONKAN LNG LTD		0.00	0.00
085	<b>SUB TOTAL</b>		<b>0.00</b>	<b>0.00</b>
109	AGGREGATE AMOUNT OF IMPAIRMENT IN THE VALUE OF INVESTMENTS		0.00	0.00
110	TOTAL (NET OF IMPAIRMENT) OF JV		0.00	0.00
111	<b>Gross Total of Investments</b>		<b>0.00</b>	<b>0.00</b>
134	<b>Total</b>		<b>0.00</b>	<b>0.00</b>
135	Details of Investments		0.00	0.00
136	Aggregate amount of Unquoted Investments		0.00	0.00





RIHAND SUPER THERMAL POWER STATION

NOTE NO. 7 TO THE FS-NCA-EQUITY INVESTMENTS IN SUBSIDIARIES AND JOINT VENTURES ( Amount in ₹ )

As at	No. of shares	Face value	31.03.2024	31.03.2023
141			0.00	0.00
142			0.00	0.00
143			0.00	0.00
144			0.00	0.00
145			0.00	0.00
153	Valuation of Investments as per Note 1.		0.00	0.00
154			0.00	0.00
202			0.00	0.00
233			0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 8 TO THE FS-NCA-OTHER INVESTMENTS**

( Amount in ₹ )

As at	No. of shares	Face value	31.03.2024	31.03.2023
001 Non-current financial assets (investments)			0.00	0.00
006 <b>Long Term - Trade</b>			<b>0.00</b>	<b>0.00</b>
007 <b>Equity Instruments (fully paid up-unless otherwise stated)</b>			<b>0.00</b>	<b>0.00</b>
008 <b>Quoted</b>			<b>0.00</b>	<b>0.00</b>
009 <b>JOINT VENTURE COMPANIES</b>			<b>0.00</b>	<b>0.00</b>
010 PTC India Ltd.			0.00	0.00
070 INTERNATIONAL COAL VENTURES PRIVATE LTD.			0.00	0.00
075 BF-NTPC ENERGY SYSTEMS LTD.			0.00	0.00
098 Jhabua Power Limited-8.5% Non convertible debentures - private placement			0.00	0.00
110 COOPERATIVE SOCIETIES			0.00	0.00
111			0.00	0.00
112 <b>SUB TOTAL</b>			<b>0.00</b>	<b>0.00</b>
113 AGGREGATE AMOUNT OF IMPAIRMENT IN THE VALUE OF INVESTMENTS			0.00	0.00
115 <b>TOTAL</b>			<b>0.00</b>	<b>0.00</b>
120			0.00	0.00
146 NTPC EMPLOYEES CONSUMERS AND THRIFT CO-OPERATIVE SOCIETY LTD. KORBA			0.00	0.00
147 NTPC EMPLOYEES CONSUMERS AND THRIFT COOPERATIVE SOCIETY LTD. RSTPP			0.00	0.00
148 NTPC EMPLOYEES CONSUMERS COOPERATIVE SOCIETY LTD. FARAKKA			0.00	0.00
149 NTPC EMPLOYEES CONSUMERS COOPERATIVE SOCIETY LTD. VINDHYACHAL			0.00	0.00
150 NTPC EMPLOYEES CONSUMERS COOPERATIVE SOCIETY LTD. ANTA			0.00	0.00
151 NTPC EMPLOYEES CONSUMERS COOPERATIVE SOCIETY LTD. KAWAS			0.00	0.00
152 NTPC Employees Consumers Cooperative Society Ltd. Kaniha			0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 9 TO THE FS-NCA-LOANS**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
001 <b>LOANS (NON CURRENT)</b>	<b>0.00</b>	<b>0.00</b>
004 RELATED PARTIES	0.00	0.00
005 SECURED	0.00	0.00
006 UN-SECURED	0.00	0.00
007 WITH SIGNIFICANT INCREASE IN CREDIT RISK	0.00	0.00
008 CREDIT IMPAIRED	0.00	0.00
009	0.00	0.00
010 EMPLOYEES(INCLUDING ACCRUED INTEREST)	0.00	0.00
011 SECURED	100,515,451.47	94,523,507.55
012 UNSECURED	45,987,192.18	45,547,966.97
013 WITH SIGNIFICANT INCREASE IN CREDIT RISK	0.00	0.00
014 CREDIT IMPAIRED	0.00	0.00
015 LESS : EMPLOYEE LOANS DISCOUNTING	0.00	0.00
016 SECURED	22,007,280.80	22,171,388.03
017 UNSECURED	7,426,675.46	6,322,298.43
018 LOAN TO STATE GOVERNMENT IN SETTLEMENT OF DUES FROM CUSTOMERS (UNSECURED)	0.00	0.00
019 OTHERS	0.00	0.00
020 SECURED	0.00	0.00
021 UNSECURED	0.00	0.00
022 WITH SIGNIFICANT INCREASE IN CREDIT RISK	0.00	0.00
023 CREDIT IMPAIRED	0.00	0.00
024 LESS: ALLOWANCE FOR CREDIT IMPAIRED LOANS	0.00	0.00
026 <b>SUB TOTAL</b>	<b>117,068,687.39</b>	<b>111,577,788.06</b>
027	0.00	0.00
028 <b>TOTAL</b>	<b>117,068,687.39</b>	<b>111,577,788.06</b>
029	0.00	0.00
030	0.00	0.00
031 <b>Due from Directors and Officers of the Company</b>	<b>0.00</b>	<b>0.00</b>
032 Directors	0.00	0.00
033 Officers	0.00	0.00
034	<b>0.00</b>	<b>0.00</b>
035 <b>Loans to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
036 i)Key management personel	0.00	0.00
037 ii)Subsidiary companies	0.00	0.00
038 iii)Joint Venture companies	0.00	0.00
039 iv)Others	0.00	0.00
040	<b>0.00</b>	<b>0.00</b>
055 Other loans represent loans given to	0.00	0.00
056 a) APIIC	0.00	0.00
061	0.00	0.00
062 RPD	0.00	0.00
063 i)Key management personel	0.00	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 9 TO THE FS-NCA-LOANS

( Amount in ₹ )

As at	31.03.2024	31.03.2023
064 ii)Subsidiary companies	0.00	0.00
065 iii)Joint Venture companies	0.00	0.00
066 iv)Others	0.00	0.00
067 <b>Total</b>	<b>0.00</b>	<b>0.00</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 10 TO THE FS-NCA-TRADE RECEIVABLES

( Amount in ₹ )

As at	31.03.2024	31.03.2023
001 Non-current financial assets - Trade receivables	0.00	0.00
002 UNSECURED, CONSIDERED GOOD	0.00	0.00
003 CREDIT IMPAIRED	0.00	0.00
004	0.00	0.00
006 <b>Total</b>	<b>0.00</b>	<b>0.00</b>



RIHAND SUPER THERMAL POWER STATION  
ANNEXURE TO NOTE 9- RPD (LOANS) SUBSIDIARIES

( Amount in ₹ )

As at	31.03.2024	31.03.2023
010	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 11 TO THE FS-NCA-OTHER FINANCIAL ASSETS**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
001 <b>Other Financial Assets (non current)</b>	<b>0.00</b>	<b>0.00</b>
002	0.00	0.00
003 <b>Share application money pending allotment in (Subsidiary Companies) :</b>	<b>0.00</b>	<b>0.00</b>
004 NTPC Electric Supply Company Ltd.	0.00	0.00
005 NTPC Vidyut Vyapar Nigam Ltd.	0.00	0.00
006 Nabinagar Power Generating Company Ltd.	0.00	0.00
007 Kanti Bijlee Utpadan Nigam Ltd.	0.00	0.00
008 Bhartiya Rail Bijlee Company Ltd.	0.00	0.00
009 Patratu Vidyut Utpadan Nigam Ltd.	0.00	0.00
010 NTPC Mining Limited	0.00	0.00
011 THDC Ltd.	0.00	0.00
012 NEEPCO Ltd	0.00	0.00
013	0.00	0.00
014 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
015 <b>Share application money pending allotment (Joint Venture)</b>	<b>0.00</b>	<b>0.00</b>
016 Utility Powertech Ltd.	0.00	0.00
017 NTPC GE Power Services Pvt.Ltd.	0.00	0.00
018 NTPC-SAIL Power Company Ltd.	0.00	0.00
019 NTPC-Tamil Nadu Energy Company Ltd.	0.00	0.00
020 Ratnagiri Gas & Power Private Ltd.	0.00	0.00
021 Aravali Power Company Private Ltd.	0.00	0.00
022	0.00	0.00
023 NTPC BHEL Power Projects Private Ltd.	0.00	0.00
024 Meja Urja Nigam Private Limited	0.00	0.00
025 BF-NTPC Energy Systems Ltd.	0.00	0.00
026 Anushakti Vidhyut Nigam Ltd.	0.00	0.00
027 Nabinagar Power Generating Company Ltd.	0.00	0.00
028 Energy Efficiency Services Ltd.	0.00	0.00
029 National High Power Test Labortory Private Ltd.	0.00	0.00
030	0.00	0.00
031 CIL NTPC Urja Private Ltd.	0.00	0.00
032 Trincomalee Power Company Ltd.	0.00	0.00
033 Hindustan Urvarak & Rasayan Limited	0.00	0.00
034 Bangladesh-India Friendship Power Company Private Ltd.	0.00	0.00
035 <b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
036	0.00	0.00
037 Claims Recoverable	0.00	0.00
038 Finance Lease Recoverable	0.00	0.00
039 Mine Closure Deposit	0.00	0.00
040 Financial Deposit	0.00	0.00
041	0.00	0.00
042 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 12 TO THE FS-NCA-OTHER NON-CURRENT ASSETS**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
001 <b>Other Non-current Assets</b>	<b>0.00</b>	<b>0.00</b>
002	<b>0.00</b>	<b>0.00</b>
003 <b>CAPITAL ADVANCES</b>	<b>0.00</b>	<b>0.00</b>
004 SECURED	0.00	0.00
005 Unsecured	0.00	0.00
006 COVERED BY BANK GUARANTEE	314,389,169.00	600,930,914.00
007 OTHERS	112,549,980.49	54,522,506.49
008 CONSIDERED DOUBTFUL	0.00	0.00
009 LESS: ALLOWANCE FOR BAD & DOUBTFUL ADVANCES	0.00	0.00
010 <b>Sub-Total</b>	<b>426,939,149.49</b>	<b>655,453,420.49</b>
011	0.00	0.00
012 Advances other than capital advances	0.00	0.00
013 SECURITY DEPOSITS	1,524,280.00	1,524,280.00
019 Advances to Related parties	0.00	0.00
022 <b>Advances to Contractors &amp; Suppliers</b>	<b>0.00</b>	<b>0.00</b>
023 SECURED	0.00	0.00
024 UNSECURED	0.00	0.00
025 CONSIDERED DOUBTFUL	0.00	0.00
026 LESS: ALLOWANCE FOR BAD & DOUBTFUL ADVANCES	0.00	0.00
027 <b>Sub Total</b>	<b>1,524,280.00</b>	<b>1,524,280.00</b>
028 RECEIVABLE FROM MCP ESCROW A/C	0.00	0.00
029 Pre Paid expenses	0.00	0.00
039 ADVANCE TAX & TAX DEDUCTED AT SOURCE	12,506,572.01	9,747,424.13
040 LESS:- PROVISION FOR CURRENT TAX	0.00	0.00
041	0.00	0.00
042 <b>Sub Total</b>	<b>12,506,572.01</b>	<b>9,747,424.13</b>
043 DEFERRED PAYROLL EXPENSES (SECURED)	14,750,249.21	15,584,840.68
044 DEFERRED PAYROLL EXPENSES (UNSECURED)	5,284,867.00	4,362,707.27
045 <b>Sub Total</b>	<b>20,035,116.21</b>	<b>19,947,547.95</b>
046 DEFERRED FOREIGN CURRENCY FLUCTUATION ASSET	0.00	1,000.00
049	0.00	0.00
050 <b>Total</b>	<b>461,005,117.71</b>	<b>686,673,672.57</b>
051	0.00	0.00
052	0.00	0.00
062 Advances include amount due from the following Private Companies in which Directors of the Company are also Directors in such Companies	0.00	0.00
064	0.00	0.00
065 NTPC GE Power Services Pvt.Ltd.	0.00	0.00
066	0.00	0.00
067 Ratnagiri Gas & Power Private Ltd.	0.00	0.00
068 Aravali Power Company Private Ltd.	0.00	0.00
069 NTPC-SCCL Global Ventures Private Ltd.	0.00	0.00



**RIHAND SUPER THERMAL POWER STATION****NOTE NO. 12 TO THE FS-NCA-OTHER NON-CURRENT ASSETS****( Amount in ₹ )**

As at	31.03.2024	31.03.2023
070 NTPC BHEL Power Projects Private Ltd.	0.00	0.00
071 Meja Urja Nigam Private Limited	0.00	0.00
072 Nabinagar Power Generating Company Ltd.	0.00	0.00
073 National High Power Test Labortory Private Ltd.	0.00	0.00
075 CIL NTPC Urja Private Ltd.	0.00	0.00
077	0.00	0.00
078 <b>Related Party (Adv)</b>	<b>0.00</b>	<b>0.00</b>
079 Key Management personel	0.00	0.00
080 Subsidiary companies	0.00	0.00
081 Joint Venture companies	0.00	0.00
082 Contractors	0.00	0.00
083 Others	0.00	0.00
085	0.00	0.00
086 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 13 TO THE FS-CA-INVENTORIES**
**( Amount in ₹ )**

As at		31.03.2024	31.03.2023
001	<b>INVENTORIES</b>	<b>0.00</b>	<b>0.00</b>
002		<b>0.00</b>	<b>0.00</b>
003	Coal	2,320,889,949.63	2,580,101,057.99
004	Fuel oil	579,514,381.49	547,439,933.51
005	Naphtha	0.00	0.00
006	Stores and spares	3,748,306,665.33	3,448,710,137.80
007	Chemicals & consumables	78,857,515.31	76,411,103.07
008	Loose tools	2,454,415.01	2,161,544.92
009	Others	1,131,368,725.79	733,319,482.94
010		0.00	0.00
011		0.00	0.00
012	<b>Sub Total</b>	<b>7,861,391,652.56</b>	<b>7,388,143,260.23</b>
013	Less: Provision for shortages	5,923,534.81	222,450.81
014	Less: Provision for obsolete/ unserviceable/dimunitation in value of surplus inventory	122,488,377.70	43,806,915.82
016		0.00	0.00
017	<b>Total</b>	<b>7,732,979,740.05</b>	<b>7,344,113,893.60</b>
018	<b>Inventories include material in transit</b>	<b>0.00</b>	<b>0.00</b>
019	Coal	0.00	0.00
020	Fuel oil	0.00	0.00
021	Naphtha	0.00	0.00
022	Stores and spares	1,527,560.48	180,646.08
023	Chemicals & consumables	2,300,535.00	1,207,500.10
024	Loose tools	0.00	0.00
025	Others	1,104,669.12	0.00
026		<b>0.00</b>	<b>0.00</b>
028		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 14 TO THE FS-CA-OTHER INVESTMENTS**

( Amount in ₹ )

	As at	No. of shares	Face value	31.03.2024	31.03.2023
001	<b>CURRENT INVESTMENTS</b>			<b>0.00</b>	<b>0.00</b>
002	<b>(Valuation as per Note 1)</b>			<b>0.00</b>	<b>0.00</b>
003	Jhabua Power Limited-8.5% Non convertible debentures - private placement			0.00	0.00
033	Investment in Mutual Funds (Details as under)			0.00	0.00
034	SBI-Magnum Insta Cash Fund-DDR			0.00	0.00
035	SBI Premier Liquid Fund Super-IP-DDR			0.00	0.00
036	SBI-SHF Ultra Short Term Fund-IP-DDR			0.00	0.00
037	UTI Money Market- IP-Direct-Growth			0.00	0.00
038	IDBI-Liquid plan- Direct-Growth			0.00	0.00
039	Canara Robeco Liquid Fund Super-IP-DDR			0.00	0.00
040	Canara Robeco Treasury Advantage Fund Super-IP-DDR			0.00	0.00
041	IDBI Liquid Fund-DDR			0.00	0.00
042	SBI Premier Liquid fund-Direct DDR (Ash Fund)			0.00	0.00
043	UTI Liquid CashPlan - IP - DDR (Ash Funds)			0.00	0.00
044	IDBI Liquid Fund - DDR - (Ash Funds)			0.00	0.00
045	Baroda Liquid Fund - Direct - Growth			0.00	0.00
046				0.00	0.00
047				0.00	0.00
048	<b>Sub Total</b>			<b>0.00</b>	<b>0.00</b>
049				<b>0.00</b>	<b>0.00</b>
052	<b>Unquoted Investments</b>			<b>0.00</b>	<b>0.00</b>
054				0.00	0.00
066	<b>TOTAL</b>			<b>0.00</b>	<b>0.00</b>
067				0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 15 TO THE FS-CA-TRADE RECEIVABLES**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
001 <b>TRADE RECEIVABLES (current)*</b>	<b>0.00</b>	<b>0.00</b>
002	0.00	0.00
003 Secured, Considered Good	0.00	0.00
004 Unsecured , considered good	0.00	1,737,334.04
005 Credit impaired	0.00	0.00
006 Unbilled Revenue	0.00	0.00
007 <b>Sub-Total</b>	<b>0.00</b>	<b>1,737,334.04</b>
008 <b>Total</b>	<b>0.00</b>	<b>1,737,334.04</b>
009 Less: Allowance for credit impaired receivables	0.00	0.00
010 <b>Total</b>	<b>0.00</b>	<b>1,737,334.04</b>
012 Less: Discom Clearing	0.00	0.00
014	0.00	0.00
015 <b>Grand Total</b>	<b>0.00</b>	<b>1,737,334.04</b>
016 Other Unsecured	0.00	0.00
017 Long-term trade receivables	0.00	0.00
018 TCS Clearing	0.00	0.00
019 Discom Clearing	0.00	0.00
228 <b>Trade Receivable</b>	<b>0.00</b>	<b>0.00</b>
230 Not due	0.00	0.00
231 Due	0.00	0.00
232 (i) Undisputed Trade receivables # considered good	0.00	1,737,334.04
233 (ii) Undisputed Trade Receivables # which have significant increase in credit risk	0.00	0.00
234 (iii) Undisputed Trade Receivables # credit impaired	0.00	0.00
235 (iv) Disputed Trade Receivables#considered good	0.00	0.00
236 (v) Disputed Trade Receivables # which have significant increase in credit risk	0.00	0.00
237 (vi) Disputed Trade Receivables # credit impaired	0.00	0.00
238 Unbilled	0.00	0.00
239 <b>Total</b>	<b>0.00</b>	<b>1,737,334.04</b>
240	0.00	0.00
241 <b>(i) Undisputed Trade receivables # considered good</b>	<b>0.00</b>	<b>0.00</b>
242 Less than 6 months	0.00	1,737,334.04
243 6 months -1 year	0.00	0.00
244 1-2 years	0.00	0.00
245 2-3 years	0.00	0.00
246 More than 3 years	0.00	0.00
247 <b>Sub Total (I)</b>	<b>0.00</b>	<b>1,737,334.04</b>
248 <b>(ii) Undisputed Trade Receivables # which have significant increase in credit risk</b>	<b>0.00</b>	<b>0.00</b>
249 Less than 6 months	0.00	0.00
250 6 months -1 year	0.00	0.00
251 1-2 years	0.00	0.00
252 2-3 years	0.00	0.00

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 15 TO THE FS-CA-TRADE RECEIVABLES

( Amount in ₹ )

As at	31.03.2024	31.03.2023
253 More than 3 years	0.00	0.00
254 <b>Sub Total (II)</b>	<b>0.00</b>	<b>0.00</b>
255 <b>(iii) Undisputed Trade Receivables -credit impaired</b>	<b>0.00</b>	<b>0.00</b>
256 Less than 6 months	0.00	0.00
257 6 months -1 year	0.00	0.00
258 1-2 years	0.00	0.00
259 2-3 years	0.00	0.00
260 More than 3 years	0.00	0.00
261 <b>Sub Total (III)</b>	<b>0.00</b>	<b>0.00</b>
262	0.00	0.00
263 <b>(iv) Disputed Trade Receivables#considered good</b>	<b>0.00</b>	<b>0.00</b>
264 Less than 6 months	0.00	0.00
265 6 months -1 year	0.00	0.00
266 1-2 years	0.00	0.00
267 2-3 years	0.00	0.00
268 More than 3 years	0.00	0.00
269 <b>Sub Total (IV)</b>	<b>0.00</b>	<b>0.00</b>
270 <b>(v) Disputed Trade Receivables # which have significant increase in credit risk</b>	<b>0.00</b>	<b>0.00</b>
271 Less than 6 months	0.00	0.00
272 6 months -1 year	0.00	0.00
273 1-2 years	0.00	0.00
274 2-3 years	0.00	0.00
275 More than 3 years	0.00	0.00
276 <b>Sub Total (V)</b>	<b>0.00</b>	<b>0.00</b>
277 <b>(vi) Disputed Trade Receivables # credit impaired</b>	<b>0.00</b>	<b>0.00</b>
278 Less than 6 months	0.00	0.00
279 6 months -1 year	0.00	0.00
280 1-2 years	0.00	0.00
281 2-3 years	0.00	0.00
282 More than 3 years	0.00	0.00
283 <b>Sub Total (VI)</b>	<b>0.00</b>	<b>0.00</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 16 TO THE FS-CA-CASH AND CASH EQUIVALENTS

( Amount in ₹ )

As at	31.03.2024	31.03.2023
001 <b>CASH &amp; BANK BALANCES</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Cash &amp; Cash Equivalents</b>	<b>0.00</b>	<b>0.00</b>
003 Balances with Banks	0.00	0.00
004 Cheques & Drafts on hand	0.00	0.00
005 Cash on hand	0.00	0.00
006 Others (stamps in hand)	0.00	0.00
007 Bank deposits with original maturity upto three months	0.00	0.00
008 Balances with RBI	0.00	0.00
009	0.00	0.00
011 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 17 TO THE FS-CA-BANK BALANCES OTHER THAN CASH AND CASH EQUIVALENTS ( Amount in ₹ )**

As at	31.03.2024	31.03.2023
001 <b>Other Bank Balances</b>	<b>0.00</b>	<b>0.00</b>
002 Deposits with original maturity of more than three months but not more than twelve months	0.00	0.00
003 Earmarked balances with banks*	0.00	0.00
004 <b>SubTotal</b>	<b>0.00</b>	<b>0.00</b>
005 Interest accrued on deposits	0.00	0.00
006	0.00	0.00
008 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
009	0.00	0.00
010 <b>Earmarked balances with banks consist of :</b>	<b>0.00</b>	<b>0.00</b>
011 Unpaid dividend account balance	0.00	0.00
012 Towards public deposit repayment reserve	0.00	0.00
013 Towards redemption of bonds due for repayment within one year	0.00	0.00
014 Security with Government/other authorities	0.00	0.00
015 Unpaid refund/interest account balance - Tax free bonds/ Bonus Debentures	0.00	0.00
016 Earmarked for RGGVY/DDUGJY/SAUBHAGYA Fund/RDSS	0.00	0.00
017 Earmarked for Flyash Utilisation Reserve Fund	0.00	0.00
018 Deposits with original maturity upto three months as per court orders	0.00	0.00
019 Payment Security Scheme of MNRE NSM (NTPC)	0.00	0.00
020 Payment Security Scheme of MNRE NSM (NVVN)	0.00	0.00
021 Enforcement Directorate of Solar Plant(NVVN)	0.00	0.00
022 Bank guarantee Fund of MNRE (NVVN)	0.00	0.00
023 Others	0.00	0.00
024 Margin Money	0.00	0.00
025	0.00	0.00
026	0.00	0.00
027	0.00	0.00
031 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
032	0.00	0.00
033 Bank deposits with original maturity of less than three months- other than earmarked	0.00	0.00
034 Bank deposits with original maturity of more than three months but not more than twelve months- other than earmarked	0.00	0.00
035 Earmarked bank balances (current account)	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 18 TO THE FS-CA-LOANS**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
001 <b>Current financial assets - Loans</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Loans (current)-including interest accrued</b>	<b>0.00</b>	<b>0.00</b>
004 <b>Related Parties</b>	<b>0.00</b>	<b>0.00</b>
005 Secured	0.00	0.00
006 Un-Secured	0.00	0.00
007 With significant increase in Credit Risk	0.00	0.00
008 Credit impaired	0.00	0.00
009	<b>0.00</b>	<b>0.00</b>
010 <b>Employees</b>	<b>0.00</b>	<b>0.00</b>
011 Secured	20,444,141.39	20,505,267.61
012 Unsecured	47,920,985.09	49,104,386.31
013 With significant increase in Credit Risk	0.00	0.00
014 Credit impaired	0.00	0.00
015 Less : Employee Loans Discounting	0.00	0.00
016 <b>Loan to State Government in settlement of dues from customers (Unsecured)</b>	<b>0.00</b>	<b>0.00</b>
017	0.00	0.00
018 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
019 Secured	0.00	0.00
020 Unsecured	0.00	0.00
021 With significant increase in Credit Risk	0.00	0.00
022 Credit impaired	0.00	0.00
023	<b>0.00</b>	<b>0.00</b>
024 Less: Allowance for credit impaired loans	0.00	0.00
026	0.00	0.00
027 <b>Total (Loans)</b>	<b>68,365,126.48</b>	<b>69,609,653.92</b>
028	<b>0.00</b>	<b>0.00</b>
029 <b>Due from Directors and Officers of the Company</b>	<b>0.00</b>	<b>0.00</b>
030 Directors	0.00	0.00
031 Officers	0.00	0.00
032	<b>0.00</b>	<b>0.00</b>
033 <b>Loans to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
034 i)Key management personel	0.00	0.00
035 ii)Subsidiary companies	0.00	0.00
036 KBUNL	0.00	0.00
037 RGPPL	0.00	0.00
038 NVVN	0.00	0.00
039 iii)Joint Venture companies	0.00	0.00
040 iv)others	0.00	0.00
041	0.00	0.00
060 RPD	0.00	0.00
061 i)Key management personel	0.00	0.00
062 ii)Subsidiary companies	0.00	0.00
063 iii)Joint Venture companies	0.00	0.00
064 iv)Others	0.00	0.00
065	0.00	0.00





RIHAND SUPER THERMAL POWER STATION

NOTE NO. 18 TO THE FS-CA-LOANS

( Amount in ₹ )

	As at	31.03.2024	31.03.2023
066	<b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 19 TO THE FS-CA-OTHER FINANCIAL ASSETS**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
001 <b>Other Financial Assets (current)</b>	<b>0.00</b>	<b>0.00</b>
002	0.00	0.00
003 <b>ADVANCES</b>	<b>0.00</b>	<b>0.00</b>
004	<b>0.00</b>	<b>0.00</b>
005 <b>Related Parties</b>	<b>0.00</b>	<b>0.00</b>
006 Secured	0.00	0.00
007 Un-Secured	83,198,965.55	84,291,452.19
008 Considered doubtful	0.00	0.00
009	<b>0.00</b>	<b>0.00</b>
010 <b>Employees</b>	<b>0.00</b>	<b>0.00</b>
012 Unsecured	2,570,249.72	4,592,765.26
013 Considered Doubtful	0.00	0.00
014	<b>0.00</b>	<b>0.00</b>
020 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
021 Secured	0.00	0.00
022 Unsecured	0.00	0.00
023 Considered Doubtful	0.00	0.00
024	<b>0.00</b>	<b>0.00</b>
025 Less: Allowance for bad & doubtful advances	0.00	0.00
026	<b>0.00</b>	<b>0.00</b>
033 <b>Total (Advances)</b>	<b>85,769,215.27</b>	<b>88,884,217.45</b>
044	<b>0.00</b>	<b>0.00</b>
045 <b>Claims Recoverable</b>	<b>0.00</b>	<b>0.00</b>
046 Secured	0.00	0.00
047 Unsecured, considered good	6,009,309.00	9,951,203.69
048 Considered Doubtful	0.00	0.00
049 Less:- Allowance for doubtful claims	0.00	0.00
050 Others-Claims Recoverable	0.00	0.00
051	<b>0.00</b>	<b>0.00</b>
052 Contract Asset- Revenue	2,663,746.83	2,663,746.83
053 Hedging cost recoverable from beneficiaries	0.00	0.00
054 Derivative MTM Asset	0.00	0.00
055 Finance Lease Receivable	0.00	0.00
056 Mine Closure Deposit	0.00	0.00
057 Financial Deposit	0.00	0.00
059 <b>Other Accrued Income</b>	<b>0.00</b>	<b>0.00</b>
060 Secured,Considered Good	0.00	0.00
061 Unsecured , considered good	28,930,719.83	24,838,947.89
062 Credit impaired	0.00	0.00
063	0.00	0.00
064 <b>Sub-Total</b>	<b>28,930,719.83</b>	<b>24,838,947.89</b>
065 Less: Allowance for credit impaired receivables	0.00	0.00
066 <b>Total</b>	<b>28,930,719.83</b>	<b>24,838,947.89</b>
067	0.00	0.00
068 Others*	0.00	0.00
070	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION****NOTE NO. 19 TO THE FS-CA-OTHER FINANCIAL ASSETS****( Amount in ₹ )**

As at	31.03.2024	31.03.2023
071 <b>Total</b>	<b>123,372,990.93</b>	<b>126,338,115.86</b>
072 * Other include amount recoverable from contractors and other parties towards hire charges, rent/electricity etc.	0.00	0.00
073 <b>Advances to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
074 i)Key management personnel	0.00	0.00
075	0.00	0.00
076 iii)Joint Venture companies	0.00	0.00
077	0.00	0.00
078 v)Others	0.00	0.00
079	<b>0.00</b>	<b>0.00</b>
080 Advances include amount due from the following Private Companies in which Directors of the Company are also Directors in such Companies	0.00	0.00
081 Related Party (Adv)- Employee	0.00	0.00
082 Related Party (Adv)- Subsidiaries	82,273,936.55	83,366,423.19
083 Related Party (Adv)- Joint Ventures	925,029.00	925,029.00
084	0.00	0.00
085 Related Party (Adv)- Others	0.00	0.00
086	0.00	0.00
099	0.00	0.00
100	0.00	0.00
101 <b>Total</b>	<b>83,198,965.55</b>	<b>84,291,452.19</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 20 TO THE FS-CA-OTHER CURRENT ASSETS**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
<b>001 OTHER CURRENT ASSETS</b>	<b>0.00</b>	<b>0.00</b>
002 Security Deposits (Unsecured)	0.00	0.00
003 Deposit with Customs, port trust & others*	812,756.00	812,756.00
<b>004 ADVANCES</b>	<b>0.00</b>	<b>0.00</b>
005	<b>0.00</b>	<b>0.00</b>
<b>006 Related Parties</b>	<b>0.00</b>	<b>0.00</b>
007 Secured	0.00	0.00
008 Un-Secured	1,407,513.00	1,407,513.00
009 Considered doubtful	0.00	0.00
010	<b>0.00</b>	<b>0.00</b>
<b>011 Employees(including imprest)</b>	<b>0.00</b>	<b>0.00</b>
012 Secured	0.00	0.00
013 Unsecured	303,927.00	1,322,275.00
014 Considered Doubtful	0.00	0.00
015	<b>0.00</b>	<b>0.00</b>
<b>016 Contractors &amp; Suppliers</b>	<b>0.00</b>	<b>0.00</b>
017 Secured	0.00	0.00
018 Unsecured	189,173,545.01	205,359,772.28
019 Considered Doubtful	0.00	0.00
020	0.00	0.00
<b>021 Others**</b>	<b>0.00</b>	<b>0.00</b>
022 Secured	0.00	0.00
023 Unsecured	17,155,797.00	18,994,496.00
024 Considered Doubtful	0.00	0.00
025 Less: Allowance for bad & doubtful advances	0.00	0.00
026 Receivable from MCP Escrow A/c	0.00	0.00
027 Deferred Payroll Expenses (Secured)	1,712,152.62	1,972,468.83
028 Deferred Payroll Expenses (Unsecured)	3,511,865.88	3,069,573.18
<b>029 Sub-total</b>	<b>5,224,018.50</b>	<b>5,042,042.01</b>
<b>030 Interest accrued on :</b>	<b>0.00</b>	<b>0.00</b>
031 Advances to contractors	0.00	0.00
032	<b>0.00</b>	<b>0.00</b>
<b>033 Claims Recoverable</b>	<b>0.00</b>	<b>0.00</b>
034 Secured	0.00	0.00
035 Unsecured, considered good	378,936,323.22	445,294,831.82
036 Considered Doubtful	26,600,000.00	26,600,000.00
037 Less:- Allowance for doubtful claims	26,600,000.00	26,600,000.00
038	<b>0.00</b>	<b>0.00</b>
039 Deferred premium on forward exchange contract/ Option Assets	0.00	0.00
041	0.00	0.00
042 Others	6,576,538.00	4,160,672.00
043	0.00	0.00
<b>045 Total (Other Current Assets)</b>	<b>599,590,417.73</b>	<b>682,394,358.11</b>
046 **Include Prepaid Expenses	17,061,077.00	18,220,222.00
047 *Includes sales tax/Entry tax/VAT deposited under protest with Sales Tax Authorities	812,756.00	812,756.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 20 TO THE FS-CA-OTHER CURRENT ASSETS**

( Amount in ₹ )

As at	31.03.2024	31.03.2023
048 *Includes deposited with courts	0.00	0.00
049 *Includes deposited with LIC for annuity payments	0.00	0.00
050 * Includes deposits with WRD / against BG in r/o finance lease	0.00	0.00
051 Other include amount recoverable from contractors and other parties towards hire charges, rent/electricity etc.	0.00	0.00
053 <b>Advances to related parties include:</b>	<b>0.00</b>	<b>0.00</b>
054 i)Key management personel	0.00	0.00
055 ii)Subsidiary companies	0.00	0.00
056 iii)Joint Venture companies	0.00	0.00
057 Contractors	0.00	0.00
058 Others	0.00	0.00
059	0.00	0.00
060 Advances include amount due from the following Private Companies in which Directors of the Company are also Directors in such Companies	0.00	0.00
061	<b>0.00</b>	<b>0.00</b>
062	0.00	0.00
063 Related Party (Adv)- Employee	0.00	0.00
064 Related Party (Adv)- Subsidiaries	0.00	0.00
065 Related Party (Adv)- Joint Venture	1,407,513.00	1,407,513.00
066	0.00	0.00
067	0.00	0.00
068 <b>Total</b>	<b>1,407,513.00</b>	<b>1,407,513.00</b>
069	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION****NOTE NO. 21 TO THE FS-ASSETS HELD FOR SALE****( Amount in ₹ )**

As at	31.03.2024	31.03.2023
001 <b>ASSET HELD FOR SALE</b>	<b>0.00</b>	<b>0.00</b>
002	0.00	0.00
003 Assets held for Sale	6,036,716.90	6,037,344.90
004	0.00	0.00
005 <b>Total</b>	<b>6,036,716.90</b>	<b>6,037,344.90</b>
031	0.00	0.00
032 <b>Assets held for sale includes:-</b>	<b>0.00</b>	<b>0.00</b>
033	0.00	0.00
034 Land	0.00	0.00
035 Building	0.00	0.00
036 Plant and equipment	5,995,260.51	5,995,260.51
037 Other assets	41,456.39	42,084.39
038 <b>Total</b>	<b>6,036,716.90</b>	<b>6,037,344.90</b>
039	0.00	0.00
040	0.00	0.00
041	0.00	0.00
042	0.00	0.00
043	0.00	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 22 TO THE FS--REGULATORY DEFERRAL ACCOUNT DEBIT BALANCES

( Amount in ₹ )

As at	31.03.2024	31.03.2023
001 On account of Exchange Differences	-311,910,538.67	-127,675,626.92
002 On account of employee benefit exp	84,415,334.33	84,415,334.33
003 Regulatory deferred account - deferred	0.00	0.00
004 Deferred asset for ash transportation	0.00	0.00
005 Deferred asset for Arbitration Award	0.00	0.00
008	0.00	0.00
009 <b>Total</b>	<b>-227,495,204.34</b>	<b>-43,260,292.59</b>



RIHAND SUPER THERMAL POWER STATION  
ANNEXURE TO NOTE 9- RPD (LOANS) JOINT VENTURE

( Amount in ₹ )

As at

31.03.2024

31.03.2023



**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 23 TO THE FS-EQUITY-EQUITY SHARE CAPITAL**

( Amount in ₹ )

As at	31.03.2024	31.03.2023
001 <b>SHARE CAPITAL</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Equity Share Capital</b>	<b>0.00</b>	<b>0.00</b>
003 <b>Authorised</b>	<b>0.00</b>	<b>0.00</b>
004 16,60,00,00,000 equity shares of Rs.10/- each (Previous year 10,000,000,000 equity shares of Rs.10/- each)	0.00	0.00
005 <b>Issued,Subscribed and fully Paid-up</b>	<b>0.00</b>	<b>0.00</b>
006 9,69,66,66,134 equity shares of Rs.10/- (Pv. Year 9,894,557,280 equity shares of Rs.10/- each)	0.00	0.00
007	<b>0.00</b>	<b>0.00</b>
008 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
009 During FY 2018-19, the company has issued 1,649,092,880 equity shares of Rs.10/- each as fully paid bonus shares	0.00	0.00
010 The holders of the equity shares are entitled to receive dividends as declared from time to time, and are entitled to one vote per share at meetings of the company.	0.00	0.00
011 Details of shareholders holding more than 5% shares in the company	0.00	0.00
012 - President of India	0.00	0.00
013 No. of Shares	0.00	0.00
014 % of holding	0.00	0.00
015 - Life Insurance Corporation of India/ICICI Prudential Mutual Fund	0.00	0.00
016 No. of Shares	0.00	0.00
017 % of holding	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 24 TO THE FS-EQUITY-OTHER EQUITY**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
001 RESERVE AND SURPLUS	0.00	0.00
002	<b>0.00</b>	<b>0.00</b>
003 <b>Capital Reserve</b>	<b>0.00</b>	<b>0.00</b>
004 As per last financial statements	0.00	0.00
006 Add : Grants received during the year	0.00	0.00
007 Add: Transfer from Surplus	0.00	0.00
008 Less: Write back during the year/period	0.00	0.00
009 Less: Adjustments during the year/period	0.00	0.00
010 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
011	0.00	0.00
017	0.00	0.00
018 <b>SECURITIES PREMIUM ACCOUNT</b>	<b>0.00</b>	<b>0.00</b>
019 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
020 ADD: ADDITIONS DURING THE YEAR/PERIOD	0.00	0.00
021 LESS: ADJUSTMENTS DURING THE YEAR/PERIOD	0.00	0.00
022 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
023 <b>BONDS REDEMPTION RESERVE</b>	<b>0.00</b>	<b>0.00</b>
024 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
025 ADD: TRANSFER FROM SURPLUS	0.00	0.00
026 LESS: TRANSFER TO SURPLUS ON REDEMPTION	0.00	0.00
027 LESS: ADJUSTMENTS DURING THE YEAR/ PERIOD	0.00	0.00
028 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
029 <b>CAPITAL REDEMPTION RESERVE</b>	<b>0.00</b>	<b>0.00</b>
030 As per last financial statements	0.00	0.00
031 Add: Transfer from Surplus	0.00	0.00
032 Less: Transfer to surplus on redemption	0.00	0.00
033 Less: Adjustments during the year/ period	0.00	0.00
034 <b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
035 <b>Share Application money pending Allotment</b>	<b>0.00</b>	<b>0.00</b>
036 As per last financial statements	0.00	0.00
037 Add: Addition during the year	0.00	0.00
038 Less: Utilised for allotment during the year	0.00	0.00
039 Less: Adjustments during the year/ period	0.00	0.00
040 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
046 <b>FLY-ASH UTILISATION RESERVE FUND</b>	<b>0.00</b>	<b>0.00</b>
047 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
048 TRANSFERRED TO CC	0.00	0.00
049 ADD:TRANSFER FROM REVENUE FROM OPERATIONS	4,409,268.00	549,433.49
050 ADD:TRANSFER FROM OTHER INCOME	0.00	0.00
051 LESS: UTILISED DURING THE YEAR	0.00	0.00
052 TANGIBLE ASSETS	0.00	0.00
053 EMPLOYEE BENEFIT EXPENSES	0.00	0.00
054 GENERATION,ADMN. AND OTHER EXPENSES	4,409,268.00	549,433.49

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**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 24 TO THE FS-EQUITY-OTHER EQUITY**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
055 TAX EXPENSES	0.00	0.00
056 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
057 Self Insurance Reserve	0.00	0.00
058 As per last financial statements	0.00	0.00
059 Add: Addition during the year	0.00	0.00
060 Less: Utilised for allotment during the year	0.00	0.00
061 Less: Adjustments during the year/ period	0.00	0.00
062 SUB-TOTAL	0.00	0.00
063 <b>SPECIAL ALLOWANCE RESERVE FUND</b>	<b>0.00</b>	<b>0.00</b>
064 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
065 ADD: ADDITION DURING THE YEAR	0.00	0.00
066 LESS: UTILISED FOR ALLOTMENT DURING THE YEAR	0.00	0.00
067 LESS: ADJUSTMENTS DURING THE YEAR/ PERIOD	0.00	0.00
068 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
069 <b>CORPORATE SOCIAL RESPONSIBILITY (CSR) RESERVE</b>	<b>0.00</b>	<b>0.00</b>
070 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
071 ADD : TRANSFER FROM SURPLUS	0.00	0.00
072 LESS:-WRITE BACK DURING THE YEAR	0.00	0.00
073 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
074 <b>GENERAL RESERVE</b>	<b>0.00</b>	<b>0.00</b>
075 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
076 ADD: TRANSFER FROM SURPLUS	0.00	0.00
077 LESS: TRANSFER TO SURPLUS	0.00	0.00
078 LESS: WRITE BACK DURING THE YEAR /PERIOD	0.00	0.00
079 LESS: ADJUSTMENTS DURING THE YEAR /PERIOD	0.00	0.00
080 <b>SUB-TOTAL</b>	<b>0.00</b>	<b>0.00</b>
081	<b>0.00</b>	<b>0.00</b>
082 <b>RETAINED EARNINGS</b>	<b>0.00</b>	<b>0.00</b>
083 AS PER LAST FINANCIAL STATEMENTS	189,412,419,211.48	178,934,325,577.14
084 ADD(LESS):-CHANGES IN ACCOUNTING POLICY / PRIOR PERIOD ERRORS	0.00	0.00
085 ADD(LESS):-PROFIT (LOSS) AFTER TAX FOR THE YEAR FROM STATEMENT OF PROFIT & LOSS	11,974,653,638.45	10,478,093,634.34
087 ADD: WRITE BACK FROM BOND REDEMPTION RESERVE	0.00	0.00
088 ADD: WRITE BACK FROM CAPITAL RESERVE	0.00	0.00
089 ADD: WRITE BACK FROM FOREIGN PROJECT RESERVE	0.00	0.00
090 ADD: WRITE BACK FROM CSR RESERVE	0.00	0.00
091 ADD: WRITE BACK FROM GENERAL RESERVE	0.00	0.00
093 LESS: TRANSFER TO BONDS REDEMPTION RESERVE	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 24 TO THE FS-EQUITY-OTHER EQUITY**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
094 LESS: TRANSFER TO SPECIAL ALLOWANCE RESERVE FUND	0.00	0.00
095 LESS: TRANSFER TO FOREIGN PROJECT RESERVE	0.00	0.00
096 LESS: TRANSFER TO CAPITAL RESERVE	0.00	0.00
097 LESS: TRANSFER TO CSR RESERVE	0.00	0.00
098 LESS: TRANSFER TO GENERAL RESERVE	0.00	0.00
099 LESS: INTERIM DIVIDEND PAID	0.00	0.00
100 LESS: TAX ON INTERIM DIVIDEND PAID	0.00	0.00
101 LESS: FINAL DIVIDEND PAID	0.00	0.00
102 LESS: TAX ON FINAL DIVIDEND PAID	0.00	0.00
103 LESS: ISSUE OF BONUS DEBENTURE	0.00	0.00
104 LESS: TAX ON ISSUE OF BONUS DEBENTURE	0.00	0.00
105 <b>SUB-TOTAL</b>	<b>201,387,072,849.93</b>	<b>189,412,419,211.48</b>
110	0.00	0.00
111 <b>REMEASUREMENT OF DEFINED BENEFIT PLANS</b>	<b>0.00</b>	<b>0.00</b>
112 AS PER LAST FINANCIAL STATEMENTS	-226,140,395.43	-206,596,243.66
113 ADD/(LESS):- ACTUARIAL GAINS/LOSS THROUGH OCI	4,403,929.88	-19,544,151.77
114 <b>SUB-TOTAL</b>	<b>-221,736,465.55</b>	<b>-226,140,395.43</b>
115	0.00	0.00
116 <b>FVTOCI Reserve</b>	<b>0.00</b>	<b>0.00</b>
117 AS PER LAST FINANCIAL STATEMENTS	0.00	0.00
118 ADD/(LESS):- NET GAIN/LOSS OF EQUITY INSTRUMENTS THROUGH OCI	0.00	0.00
119 <b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
120	<b>0.00</b>	<b>0.00</b>
121 <b>Total Other equity</b>	<b>201,165,336,384.38</b>	<b>189,186,278,816.05</b>
122	0.00	0.00
123	0.00	0.00
124	0.00	0.00
125	0.00	0.00
126	0.00	0.00
127	0.00	0.00
128 The fly ash utilization reserve fund is controlled at Corporate Centre.	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 25 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

	As at	31.03.2024	31.03.2023
001	<b>LONG TERM BORROWINGS</b>	<b>0.00</b>	<b>0.00</b>
002	<b>Bonds</b>	<b>0.00</b>	<b>0.00</b>
003	<b>Secured</b>	<b>0.00</b>	<b>0.00</b>
004	7.37 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2035 (Fifty Sixth Issue - Public Issue - Series 3A).	0.00	0.00
005	7.62 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2035 (Fifty Sixth Issue - Public Issue - Series 3 B).	0.00	0.00
006	8.61% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4th March 2034 (Fifty First Issue C - Private Placement)	0.00	0.00
007	8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2033 ( Fiftieth Issue - Public Issue - Series 3A)	0.00	0.00
008	8.91% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2033 ( Fiftieth Issue - Public Issue - Series 3B)	0.00	0.00
009	7.37% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 14th December 2031 (Sixty Sixth Issue - Private Placement)	0.00	0.00
010	7.49% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 7th November 2031 (Sixty Fourth Issue - Private Placement)	0.00	0.00
011	7.28 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2030 (Fifty Sixth Issue - Public Issue - Series	0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 25 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
2A)		
012 7.53 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2030 (Fifty Sixth Issue - Public Issue - Series 2 B).	0.00	0.00
013 7.32% Secured non-cumulative non-convertible redeemable taxable bonds of Rs 10,00,000/- each redeemable at par in full on 17 July 2029 (Sixty Ninth Issue - Private Placement)	0.00	0.00
014 8.63% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4th March 2029 (Fifty First Issue B - Private Placement)	0.00	0.00
015 8.30% Secured non-cumulative non-convertible redeemable taxable bonds of Rs 10,00,000/- each redeemable at par in full on 15 January 2029 (Sixty Seventh Issue - Private Placement)	0.00	0.00
016 8.48% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2028 ( Fiftieth Issue - Public Issue - Series 2A)	0.00	0.00
017 8.73% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2028 ( Fiftieth Issue - Public Issue - Series 2B)	0.00	0.00
018 7.47% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 16th September 2026 (Sixty Third Issue - Private Placement)	0.00	0.00
019 7.58% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 25 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at		31.03.2024	31.03.2023
full on 23rd August 2026 (Sixty Second Issue - Private Placement)			
020	8.05% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 5th May 2026 (Sixtieth Issue - Private Placement)	0.00	0.00
021	8.19% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 15th December 2025 (Fifty Seventh Issue - Private Placement)	0.00	0.00
022	7.11 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2025 (Fifty Sixth Issue - Public Issue - Series 1A).	0.00	0.00
023	7.36 % Tax free secured non-cumulative non-convertible redeemable bonds-2015 of Rs. 1,000/- each redeemable at par in full on 5th October 2025 (Fifty Sixth Issue - Public Issue - Series 1 B).	0.00	0.00
024	7.15% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of Rs. 10,00,000/- each redeemable at par in full on 21st August 2025 (Fifty Fifth Issue - Private Placement)	0.00	0.00
025	9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 22nd September 2024 (53rd Issue - private placement).	0.00	0.00
026	9.34% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 24th March 2024 (Fifty Second Issue - private placement)	0.00	0.00
027	8.19% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 10,00,000/- each redeemable at	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 25 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

		31.03.2024	31.03.2023
	As at		
	par in full on 4th March 2024 (Fifty First Issue A - Private Placement)		
028	8.41% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2023 ( Fiftieth Issue - Public Issue - Series 1A)	0.00	0.00
029	8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1000/- each redeemable at par in full on 16th December 2023 ( Fiftieth Issue - Public Issue - Series 1B)	0.00	0.00
030	9.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 4th May 2023 and ending on 4th May 2027 (Forty fourth issue - private placement)VII	0.00	0.00
031	8.48% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 1st May 2023 (Seventeenth issue - private placement)I	0.00	0.00
032	8.80% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4th April 2023 (Forty ninth issue -private placement	0.00	0.00
033	8.49% Secured non-cumulative non-convertible redeemable taxable fully paid-up bonus debentures of Rs. 12.50 each redeemable at par in three annual installments of Rs. 2.50, Rs. 5.00 and Rs. 5.00 at the end of 8th year, 9th year and 10th year on 25th March 2023, 25th March 2024 and 25th March 2025 respectively (Fifty Fourth Issue -Bonus Debentures)X - (refer Note 5 d)	0.00	0.00
034	8.73% Secured non-cumulative	0.00	0.00



**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 25 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at		31.03.2024	31.03.2023
	non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 07th March 2023 ( Forty eighth issue - private placement)		
035	9.00% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 25th January 2023 and ending on 25th January 2027 (Forty second issue- private placement)III	0.00	0.00
036	8.84% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4th October 2022 (Forty seventh issue- private placement)VII	0.00	0.00
037	7.93% Secured non-cumulative non-convertible redeemable taxable bonds of ` 10,00,000/- each redeemable at par in full on 03 May 2022 (68th Issue - Private Placement)	0.00	0.00
038	6.72% Secured non-cumulative non-convertible redeemable taxable bonds of Rs. 10,00,000/- each redeemable at par in full on 24th November 2021 (Sixty Fifth Issue - Private Placement)	0.00	0.00
039	8.10% Secured Non-Cumulative Non-Convertible Redeemable Taxable Bonds of Rs. 30,00,000/- each redeemable at par in three equal separately transferable redeemable principal parts (STRPP) at the end of 5th year, 10th year & 15th year on 27th May 2021, 27th May 2026 and 27th May 2031 respectively (Sixty First Issue- Private Placement)	0.00	0.00
040	8.33% Secured non-cumulative non-convertible redeemable taxable bonds of Rs.10,00,000/- each redeemable at par in full on 24th February 2021	0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 25 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at				31.03.2024	31.03.2023
(Fifty Ninth Issue - Private Placement).					
042	8.93%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 19th January 2021 Thirty seventh issue - private placement)III	0.00	0.00
043	8.18%	Secured	non-cumulative non-convertible redeemable taxable bonds of Rs.10,00,000/- each redeemable at par in full on 31st December 2020 (Fifty Eight Issue - Private Placement).	0.00	0.00
044	8.73 %	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 31st March 2020 (Thirty third issue- private placement)III	0.00	0.00
045	8.78 %	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 9th March 2020 (Thirty first issue- private placement)III	0.00	0.00
046	11.25%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in five equal annual installments commencing from 6th Nov 2019 and ending on 6th Nov 2023 (Twenty seventh issue - private placement)III	0.00	0.00
047	7.89%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 5th May 2019 (Thirtieth issue - private placement)III	0.00	0.00
048	8.65%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4th February 2019 (Twenty ninth issue - private placement)III	0.00	0.00
049	7.50%	Secured	non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 25 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at			31.03.2024	31.03.2023
on 12th January 2019 (Nineteenth issue - private placement)II				
050	11%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 21st November 2018 (Twenty eighth issue - private placement)III	0.00	0.00
051	9.3473%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 20th July 2018 and ending on 20th July 2032 (Forty sixth issue - private placement)VII	0.00	0.00
052	9.4376%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 16th May 2018 and ending on 16th May 2032 (Forty fifth issue - private placement)VII	0.00	0.00
053	8.00%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 10th April 2018 (Sixteenth issue -private placement)I	0.00	0.00
054	9.2573%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 2nd March 2018 and ending on 2nd March 2032 (Forty third issue - private placement)III	0.00	0.00
055	9.6713%	Secured non-cumulative non-convertible redeemable taxable bonds	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 25 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at	31.03.2024	31.03.2023
of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 23rd December 2017 and ending on 23rd December 2031 (Forty first issue - private placement)III		
056 9.558% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 29th July 2017 and ending on 29th July 2031(Fourtieth issue-private placement)III	0.00	0.00
057 9.3896% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 9th June 2017 and ending on 9th June 2031(Thirty ninth issue-private placement)III	0.00	0.00
058 9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 22nd March 2017 and ending on 22nd March 2031(Thirty eighth issue-private placement)III	0.00	0.00
059 8.8086% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 25 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at	31.03.2024	31.03.2023
year and in annual installments thereafter upto the end of 20th year respectively commencing from 15th December 2016 and ending on 15th December 2030 (Thirty sixth issue - private placement)III		
060 8.785% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15th September 2016 and ending on 15th September 2030 (Thirty fifth issue - private placement)III	0.00	0.00
061 8.71% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 10th June 2016 and ending on 10th June 2030 (Thirty fourth issue - private placement)III	0.00	0.00
062 8.8493% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 25th March 2016 and ending on 25th March 2030 (Thirty second issue - private placement)III	0.00	0.00
063 9.37% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 70,00,000/- each with fourteen separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 4th June 2012 and ending on 4th December 2018 (Twenty fifth issue -	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 25 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at			31.03.2024	31.03.2023
private placement)III				
065	9.06%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 70,00,000/- each with fourteen separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 4th June 2012 and ending on 4th December 2018 (Twenty sixth issue - private placement)III	0.00	0.00
066	8.6077%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 9th September 2011 and ending on 9th March 2021 (Twenty fourth issue - private placement)IV	0.00	0.00
067	8.3796%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 5th August 2011 and ending on 5th February 2021 (Twenty third issue - private placement)IV	0.00	0.00
068	8.1771%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2nd July 2011 and ending on 2nd January 2021 (Twenty second issue - private placement)IV	0.00	0.00
069	7.7125%	Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2nd August 2010 and ending on 2nd February 2020 (Twenty first issue - private placement)V	0.00	0.00
070	7.552%	Secured non-cumulative non-convertible redeemable taxable bonds	0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 25 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at	31.03.2024	31.03.2023
of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 23rd September 2009 and ending on 23rd March 2019 (Twentieth issue - private placement)VI		
071 9.55% Secured non-cumulative non-convertible taxable redeemable bonds of ₹ 10,00,000/- each with ten equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of the 6th year and in annual installments thereafter upto the end of 15th year respectively from 30th April 2002 (Thirteenth issue - Part B - private placement)VIII	0.00	0.00
072 9.55% Secured non-cumulative non-convertible taxable redeemable bonds of ₹ 10,00,000/- each redeemable at par in ten equal annual installments commencing from the end of 6th year and upto the end of 15th year respectively from 18th April 2002 (Thirteenth issue -Part A - private placement)VIII	0.00	0.00
075	0.00	0.00
076	0.00	0.00
077	0.00	0.00
078	0.00	0.00
079	0.00	0.00
080	0.00	0.00
081	0.00	0.00
082 <b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
083 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
084 6.55% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 17 April 2023 (Seventieth Issue - Private Placement)	0.00	0.00
085 6.29% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 11 April 2031 (Seventy First Issue - Private Placement)	0.00	0.00
086 5.45% Unsecured non-cumulative non-convertible redeemable taxable bonds	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 25 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
of ₹ 10,00,000/- each redeemable at par in full on 15 October 2025 (Seventy Second Issue - Private Placement)		
087 6.43% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 27 January 2031 (Seventy Third Issue - Private Placement)	0.00	0.00
088 6.87% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 21 April 2036 (Seventy Fourth Issue - Private Placement)	0.00	0.00
089 6.69% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 13 September 2031 (Seventy Fifth Issue - Private Placement)	0.00	0.00
090 6.74% Unsecured non-cumulative non-convertible redeemable taxable bonds of Rs.10,00,000/- each redeemable at par in full on 14 April 2032 (Seventy Sixth Issue - Private Placement)	0.00	0.00
091 5.78% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 29 April 2024 (Seventy Seventh Issue - Private Placement)	0.00	0.00
092 7.44% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 25 August 2032 (Seventy Eighth Issue - Private Placement)	0.00	0.00
093 7.44% Unsecured non-cumulative non-convertible redeemable taxable bonds of ` 10,00,000/- each redeemable at par in full on 15 April 2033 (Seventy Ninth Issue - Private Placement)	0.00	0.00
094 7.35% Unsecured non-cumulative non-convertible redeemable taxable bonds of ` 1,00,000/- each redeemable at par in full on 17 April 2026 (Eightieth Issue - Private Placement)	0.00	0.00
095 7.48% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 1,00,000/- each redeemable at par in full on 21 March 2026 (Eighty First Issue - Private Placement)	0.00	0.00
096	0.00	0.00
097	0.00	0.00
098	0.00	0.00
099	0.00	0.00
100 <b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
101 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

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**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 25 TO THE FS-NCL-BORROWINGS**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
102 <b>Foreign Currency Notes-Unsecured</b>	<b>0.00</b>	<b>0.00</b>
103 4.50% Fixed Rate Notes Due for repayment on 19th March 2028	0.00	0.00
104 2.75% Fixed rate notes due for repayment on 1st February 2027	0.00	0.00
105 4.25 % Fixed rate notes due for repayment on 26th February 2026	0.00	0.00
106 4.375% Fixed Rate Note due for repayment on 26th November 2024	0.00	0.00
107 4.75 % Fixed Rate Notes due for repayment on 3rd Oct 2022	0.00	0.00
108 7.25 % Fixed green global INR denominated bonds due on 3 May 2022	0.00	0.00
109 7.375 % Fixed green global INR denominated bonds due on 10 August 2021	0.00	0.00
110 5.625% Fixed Rate Notes due for repayment on 14th July 2021	0.00	0.00
111 3.75 % Fixed rate notes due for repayment on 03 April 2024	0.00	0.00
112	0.00	0.00
113	0.00	0.00
114	0.00	0.00
115 <b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
116 <b>Term Loans</b>	<b>0.00</b>	<b>0.00</b>
117 <b>From Banks</b>	<b>0.00</b>	<b>0.00</b>
118 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
119 Rupee Loans	0.00	0.00
120 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
121 Foreign Currency Loans	0.00	0.00
122 Rupee Loans	0.00	0.00
123 <b>From Others</b>	<b>0.00</b>	<b>0.00</b>
124 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
125 Rupee Loans	0.00	0.00
126 Foreign Currency loans (guaranteed by GOI)	0.00	0.00
127 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
128 Foreign Currency loans (guaranteed by GOI)	0.00	0.00
129 Other Foreign currency loans	0.00	0.00
131 Rupee Loans	0.00	0.00
132 <b>Deposits</b>	<b>0.00</b>	<b>0.00</b>
133 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
134 Fixed Deposits	0.00	0.00
135 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
136 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
137 Bonds Application Money Pending Allotment	0.00	0.00
138 <b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
139 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
140 Less:- Interst accrued but not due on secured	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 25 TO THE FS-NCL-BORROWINGS**

( Amount in ₹ )

As at	31.03.2024	31.03.2023
borrowings		
141 Less:- Interst accrued but not due on unsecured borrowings	0.00	0.00
142 Less:- Current maturities of long term borrowings	0.00	0.00
143 Bonds-Secured	0.00	0.00
144 Fixed Rate Notes	0.00	0.00
146 Foreign currency loans from Banks- unsecured	0.00	0.00
147 Rupee loans from banks- Secured	0.00	0.00
148 Rupee loans from banks- unsecured	0.00	0.00
149 Rupee Term loan from Others - Secured	0.00	0.00
150 Foreign currency loans from others- unsecured (Guaranteed by GOI)	0.00	0.00
151 Other foreign currency loans from others- unsecured	0.00	0.00
152 Rupee loans from others- unsecured	0.00	0.00
153	0.00	0.00
154	0.00	0.00
155	0.00	0.00
156	0.00	0.00
157	0.00	0.00
158	0.00	0.00
159	0.00	0.00
160	0.00	0.00
161	0.00	0.00
201 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 26 TO THE FS-NCL-LEASE LIABILITIES

( Amount in ₹ )

	31.03.2024	31.03.2023
As at		
001 <b>Non-current financial liabilities - Lease liabilities</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Lease liabilities</b>	<b>0.00</b>	<b>0.00</b>
003 Long term maturities of Finance Lease Liabilities (Secured) IX	0.00	0.00
004 Long term maturities of Finance Lease Liabilities (Unsecured) X	244,250,457.69	215,659,908.98
005 <b>Sub-Total</b>	<b>244,250,457.69</b>	<b>215,659,908.98</b>
006 <b>Less: current maturities of lease liabilities</b>	<b>0.00</b>	<b>0.00</b>
007 Finance Lease obligations - secured	0.00	0.00
008 Finance Lease obligations - unsecured	14,911,924.69	14,497,699.11
009 <b>Sub-Total</b>	<b>14,911,924.69</b>	<b>14,497,699.11</b>
011 <b>Total</b>	<b>229,338,533.00</b>	<b>201,162,209.87</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 27 TO THE FS-NCL-TRADE PAYABLES

( Amount in ₹ )

	As at	31.03.2024	31.03.2023
001	<b>TRADE PAYABLES(NON CURRENT)</b>	<b>0.00</b>	<b>0.00</b>
002	<b>For Goods and Services</b>	<b>0.00</b>	<b>0.00</b>
003	- Micro & Small Enterprises	0.00	0.00
004	- Others	0.00	0.00
005		0.00	0.00
007	<b>Total</b>	<b>0.00</b>	<b>0.00</b>

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 28 TO THE FS-NCL-OTHER FINANCIAL LIABILITIES

( Amount in ₹ )

As at	31.03.2024	31.03.2023
001 <b>OTHER FINANCIAL LIABILITIES (NON-CURRENT)</b>	<b>0.00</b>	<b>0.00</b>
002 Payable for Capital Expenditure	0.00	0.00
003 - Micro & Small Enterprises	581,704.72	1,146,502.70
004 - Others	13,812,425.91	44,312,866.51
005 Contractual Obligations	28,050,256.33	10,410,858.12
006 Others	0.00	0.00
007 Deposits from contractors and others	0.00	0.00
008	0.00	0.00
009	0.00	0.00
011 <b>Total</b>	<b>42,444,386.96</b>	<b>55,870,227.33</b>
020	0.00	0.00
021 <b>Payable for Capital Expenditure - SD/retntion</b>	<b>0.00</b>	<b>0.00</b>
022 - Micro & Small Enterprises	581,704.72	1,146,502.70
023 - Others	951,500.41	1,612,484.59
024 <b>Sub-total</b>	<b>1,533,205.13</b>	<b>2,758,987.29</b>
025 <b>Contractual Obligations</b>	<b>0.00</b>	<b>0.00</b>
026 - Micro & Small Enterprises	10,583,409.69	4,753,648.08
027 - Others	17,466,846.64	5,657,210.04
028 <b>Sub-total</b>	<b>28,050,256.33</b>	<b>10,410,858.12</b>
029 <b>Total ( 24+28)</b>	<b>29,583,461.46</b>	<b>13,169,845.41</b>
030	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 29 TO THE FS-NCL-PROVISIONS**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
001 <b>LONG TERM PROVISIONS</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Provision for Employee Benefits</b>	<b>0.00</b>	<b>0.00</b>
003 Opening Balance	0.00	0.00
004 Additions/ (adjustments) during the year	0.00	0.00
005 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
006	0.00	0.00
007 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
008 <b>i) Mine Closure Provision</b>	<b>0.00</b>	<b>0.00</b>
009 Opening Balance	0.00	0.00
010 Additions during the year	0.00	0.00
011 Amounts adjusted during the year	0.00	0.00
012 Amounts reversed during the year	0.00	0.00
013 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
014	0.00	0.00
015 <b>ii) Stripping Activity Adjustments</b>	<b>0.00</b>	<b>0.00</b>
016 Opening Balance	0.00	0.00
017 Additions during the year	0.00	0.00
018 Amounts adjusted during the year	0.00	0.00
019 Amounts reversed during the year	0.00	0.00
020 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
021	0.00	0.00
024	0.00	0.00
026 <b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>

**NOTE NO. 30 TO THE FS-NCL-DEFERRED TAX LIABILITIES (NET)**
**( Amount in ₹ )**

As at	Opening Balance on 01.04.2023	Addition	Closing Balance on 31.03.2024
001 <b>DEFERRED TAX LIABILITIES (NET)</b>			
002 Difference of book depreciation and tax depreciation	0.00	0.00	0.00
003 Less: Deferred tax assets			
004 Provisions & Other disallowances for tax purposes	0.00	0.00	0.00
005 Unabsorbed Depreciation	0.00	0.00	0.00
006 Disallowances u/s 43B of the Income Tax Act, 1961	0.00	0.00	0.00
007 Others	0.00	0.00	0.00
008 Opening Balance	0.00	0.00	0.00
009 Additions during the year	0.00	0.00	0.00
010 Amounts adjusted during the year	0.00	0.00	0.00
011 Amounts reversed during the year	0.00	0.00	0.00
012 Closing Balance	0.00	0.00	0.00
013 MAT credit entitlement	0.00	0.00	0.00
014 <b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
016	0.00	0.00	0.00
017 <b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
018 Breakup of deferred tax assets	0.00	0.00	0.00
019 Provision	0.00	0.00	0.00
020 Statutory dues	0.00	0.00	0.00
021 Leave encashment	0.00	0.00	0.00
022 Others	0.00	0.00	0.00
023	0.00	0.00	0.00
024	0.00	0.00	0.00



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 31 TO THE FS-NCL-OTHER NON-CURRENT LIABILITIES

( Amount in ₹ )

As at	31.03.2024	31.03.2023
001 Other Non current Liabilities	0.00	0.00
002 Advances from customers and others	0.00	0.00
003 Deposits from contractors and others	0.00	0.00
004 Grants	0.00	0.00
006	0.00	0.00
007 <b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>



**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 32 TO THE FS-CL-BORROWINGS**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
001 <b>Short Term Borrowings</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Loans repayable on demand</b>	<b>0.00</b>	<b>0.00</b>
003 <b>From Banks</b>	<b>0.00</b>	<b>0.00</b>
004 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
005 Cash Credit	0.00	0.00
006 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
007 Cash Credit	0.00	0.00
008 <b>Other loans-unsecured</b>	<b>0.00</b>	<b>0.00</b>
009 Commercial Papers	0.00	0.00
010 Less: Unamortised discount on Commercial Papers	0.00	0.00
011 <b>Sub-Total</b>	<b>0.00</b>	<b>0.00</b>
012 <b>Current maturity of long term borrowings</b>	<b>0.00</b>	<b>0.00</b>
013 Bonds-Secured	0.00	0.00
014 Foreign Currency Fixed Rate Notes	0.00	0.00
015 <b>From Banks</b>	<b>0.00</b>	<b>0.00</b>
016 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
017 Rupee Term Loan	0.00	0.00
018 Foreign currency loans	0.00	0.00
019 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
020 Foreign currency loans	0.00	0.00
021 Rupee term loans	0.00	0.00
022 <b>From Others</b>	<b>0.00</b>	<b>0.00</b>
023 <b>Secured</b>	<b>0.00</b>	<b>0.00</b>
024 Rupee Term Loan	0.00	0.00
025 <b>Unsecured</b>	<b>0.00</b>	<b>0.00</b>
026 Foreign currency loans (Guaranteed by Government of India)	0.00	0.00
027 Other foreign currency loans	0.00	0.00
028 Rupee term loans	0.00	0.00
029 Fixed deposits	0.00	0.00
030 Bill discounted	0.00	0.00
031	0.00	0.00
032 Sub Total	0.00	0.00
034	0.00	0.00
035 <b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 33 TO THE FS-CL-LEASE LIABILITIES

( Amount in ₹ )

	As at	31.03.2024	31.03.2023
001	<b>Current financial liabilities - Lease liabilities</b>	<b>0.00</b>	<b>0.00</b>
002	Current maturity of finance lease obligations (secured)	0.00	0.00
003	Current maturity of finance lease obligations (unsecured)	14,911,924.69	14,497,699.11
005	<b>Total</b>	<b>14,911,924.69</b>	<b>14,497,699.11</b>

RIHAND SUPER THERMAL POWER STATION

NOTE NO. 34 TO THE FS-CL-TRADE PAYABLES

( Amount in ₹ )

As at	31.03.2024	31.03.2023
001 <b>TRADE PAYABLES</b>	<b>0.00</b>	<b>0.00</b>
002 For Goods and Services	0.00	0.00
003 - Micro & Small Enterprises	193,435,115.38	124,444,057.60
004 - Others	2,199,580,679.48	2,444,847,958.62
005	0.00	0.00
007 <b>Total</b>	<b>2,393,015,794.86</b>	<b>2,569,292,016.22</b>
008	0.00	0.00
172 <b>Trade payable</b>	<b>0.00</b>	<b>0.00</b>
173 <b>MSME</b>	<b>0.00</b>	<b>0.00</b>
174 Unbilled	111,479,469.38	90,554,124.60
175 Not due	0.00	0.00
176 <b>Due</b>	<b>81,955,646.00</b>	<b>33,889,933.00</b>
177 Disputed	0.00	0.00
178 Undisputed	81,955,646.00	33,889,933.00
179	0.00	0.00
180 <b>Sub-total (A)</b>	<b>193,435,115.38</b>	<b>124,444,057.60</b>
181	0.00	0.00
182 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
183 Unbilled	382,056,604.52	510,593,053.51
184 Not due	0.00	0.00
185 <b>Due</b>	<b>1,817,524,074.96</b>	<b>1,934,254,905.11</b>
186 Disputed	0.00	0.00
187 Undisputed	1,817,524,074.96	1,934,254,905.11
188	0.00	0.00
189 <b>Sub-total (B)</b>	<b>2,199,580,679.48</b>	<b>2,444,847,958.62</b>
190	0.00	0.00
191 <b>Total</b>	<b>2,393,015,794.86</b>	<b>2,569,292,016.22</b>
192	0.00	0.00
193 <b>Ageing</b>	<b>0.00</b>	<b>0.00</b>
194 <b>MSME</b>	<b>0.00</b>	<b>0.00</b>
195 <b>Disputed</b>	<b>0.00</b>	<b>0.00</b>
196 Less than 1 year	0.00	0.00
197 1-2 years	0.00	0.00
198 2-3 years	0.00	0.00
199 More than 3 years	0.00	0.00
200 <b>Sub Total (I)</b>	<b>0.00</b>	<b>0.00</b>
201	0.00	0.00
202 <b>Undisputed</b>	<b>0.00</b>	<b>0.00</b>
203 Less than 1 year	81,955,646.00	33,889,933.00
204 1-2 years	0.00	0.00
205 2-3 years	0.00	0.00
206 More than 3 years	0.00	0.00
207 <b>Sub Total (II)</b>	<b>81,955,646.00</b>	<b>33,889,933.00</b>
208	0.00	0.00
209 <b>Total MSME (III)</b>	<b>81,955,646.00</b>	<b>33,889,933.00</b>
210	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**  
**NOTE NO. 34 TO THE FS-CL-TRADE PAYABLES**

( Amount in ₹ )

As at	31.03.2024	31.03.2023
211 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
212 <b>Disputed</b>	<b>0.00</b>	<b>0.00</b>
213 Less than 1 year	0.00	0.00
214 1-2 years	0.00	0.00
215 2-3 years	0.00	0.00
216 More than 3 years	0.00	0.00
217 <b>Sub Total (IV)</b>	<b>0.00</b>	<b>0.00</b>
218	0.00	0.00
219 <b>Undisputed</b>	<b>0.00</b>	<b>0.00</b>
220 Less than 1 year	520,486,166.86	1,205,164,381.11
221 1-2 years	568,292,226.10	42,685,077.00
222 2-3 years	42,422,625.00	84,846,453.00
223 More than 3 years	686,323,057.00	601,558,994.00
224 <b>Sub Total (V)</b>	<b>1,817,524,074.96</b>	<b>1,934,254,905.11</b>
225	0.00	0.00
226 <b>Total Others (VI)</b>	<b>1,817,524,074.96</b>	<b>1,934,254,905.11</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 35 TO THE FS-CL-OTHER FINANCIAL LIABILITIES**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
001 <b>OTHER FINANCIAL LIABILITIES (CURRENT)</b>	<b>0.00</b>	<b>0.00</b>
020 Interest accrued but not due on Unsecured Short Term Borrowing	0.00	0.00
021 Interest accrued but not due on secured borrowings	0.00	0.00
022 Interest accrued but not due on unsecured borrowings	0.00	0.00
023 Unpaid Dividends*	0.00	0.00
024 Unpaid matured deposits and interest accrued thereon*	0.00	0.00
025 Unpaid matured bonds and interest accrued thereon*	0.00	0.00
026 Unpaid bond refund money-Tax free bonds *	0.00	0.00
027 Book Overdraft	0.00	0.00
028 Payable to Customers	0.00	0.00
029 Liability under forward exchange contract	0.00	0.00
030 Hedging cost payable to beneficiaries	0.00	0.00
031 Derivative MTM Liability	0.00	0.00
032 <b>Payable for Capital Expenditure</b>	<b>0.00</b>	<b>0.00</b>
033 - Micro & Small Enterprises	69,094,120.25	73,235,010.01
034 - Others	4,687,516,054.53	4,118,286,883.53
035 Contractual Obligations	744,674,868.69	386,992,519.38
036 <b>Others Payables</b>	<b>0.00</b>	<b>0.00</b>
037 Deposits from contractors and others	291,609,186.35	85,777,478.98
038 Gratuity Obligations	0.00	0.00
039 Payable to employees	49,496,513.31	34,784,381.31
040 Payable to holding company	0.00	0.00
041 Retention on A/c BG encashment (Solar)	0.00	0.00
042 Payable to Solar Payment Security Account	0.00	0.00
043 Others **	14,692,741.08	17,075,074.39
044 Unspent CSR balance on ongoing Approved CSR projects	0.00	0.00
046	0.00	0.00
047	0.00	0.00
048 <b>Total</b>	<b>5,857,083,484.21</b>	<b>4,716,151,347.60</b>
049 * Represents the amounts which have not been claimed by the investor/holders of the bonds/ fixed deposits. Out of the above, no amount is due for payment to Investor Education and Protection Fund.	0.00	0.00
050 ** Include Payable to Hospital and other payable.	0.00	0.00
051 <b>Payable for Capital Expenditure - SD/retntion</b>	<b>0.00</b>	<b>0.00</b>
052 - Micro & Small Enterprises	51,495,838.26	37,883,895.26
053 - Others	830,776,903.27	870,016,808.78
054 <b>Sub-total</b>	<b>882,272,741.53</b>	<b>907,900,704.04</b>
055 <b>Contractual Obligations</b>	<b>0.00</b>	<b>0.00</b>
056 - Micro & Small Enterprises	134,203,480.99	87,455,777.24
057 - Others	610,471,387.70	299,536,742.14



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 35 TO THE FS-CL-OTHER FINANCIAL LIABILITIES

( Amount in ₹ )

	As at	31.03.2024	31.03.2023
058	<b>Sub-total</b>	<b>744,674,868.69</b>	<b>386,992,519.38</b>
059	<b>Total</b>	<b>1,626,947,610.22</b>	<b>1,294,893,223.42</b>
060		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION****NOTE NO. 36 TO THE FS-CL-OTHER CURRENT LIABILITIES****( Amount in ₹ )**

	31.03.2024	31.03.2023
As at		
001 <b>OTHER CURRENT LIABILITIES</b>	<b>0.00</b>	<b>0.00</b>
002 Advances from customers and others	36,309,666.57	25,885,048.95
003 Deferred discount on forward exchange contact	0.00	0.00
004 Tax deducted at source and other statutory dues	74,289,390.19	98,415,828.69
005 Deposits from contractors and others	0.00	0.00
006 Government grants	0.00	0.00
007 Others	0.00	0.00
009	0.00	0.00
010	0.00	0.00
011 <b>Total</b>	<b>110,599,056.76</b>	<b>124,300,877.64</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 37 TO THE FS-CL-PROVISIONS**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
001 <b>SHORT TERM PROVISIONS</b>	<b>0.00</b>	<b>0.00</b>
002 <b>Provision for Employee Benefits</b>	<b>0.00</b>	<b>0.00</b>
003 Opening balance	0.00	0.00
004 Additions/ (adjustments) during the year	0.00	0.00
005 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
028 <b>Provisions for Obligations Incidental to Land Acquisition</b>	<b>0.00</b>	<b>0.00</b>
029 Opening balance	0.00	0.00
030 Additions during the year	0.00	0.00
031 Amounts paid during the year	0.00	0.00
032 Amounts reversed during the year	0.00	0.00
033 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
035 <b>Provision for Tariff Adjustment</b>	<b>0.00</b>	<b>0.00</b>
036 Opening balance	0.00	0.00
037 Additions during the year	0.00	0.00
038 Amounts adjusted during the year	0.00	0.00
039 Amounts reversed during the year	0.00	0.00
040 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
042 <b>Provision for shortage in Fixed Assets Pending Investigation &amp; Others</b>	<b>0.00</b>	<b>0.00</b>
043 Opening balance	0.00	0.00
044 Additions during the year	3,612,900.00	0.00
045 Amounts adjusted during the year	0.00	0.00
046 Amounts reversed during the year	0.00	0.00
047 <b>Closing Balance</b>	<b>3,612,900.00</b>	<b>0.00</b>
048 <b>Provision for Arbitration</b>	<b>0.00</b>	<b>0.00</b>
049 Opening balance	9,102,016.00	8,683,664.00
050 Additions during the year	418,352.00	418,352.00
051 Amounts used during the year	0.00	0.00
052 Amounts reversed during the year	0.00	0.00
053 <b>Closing Balance</b>	<b>9,520,368.00</b>	<b>9,102,016.00</b>
054 <b>Others</b>	<b>0.00</b>	<b>0.00</b>
055 Opening balance	0.00	0.00
056 Additions during the year	0.00	0.00
057 Amounts used during the year	0.00	0.00
058 Amounts reversed during the year	0.00	0.00
059 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>
102	0.00	0.00
104 <b>Total</b>	<b>13,133,268.00</b>	<b>9,102,016.00</b>





RIHAND SUPER THERMAL POWER STATION

NOTE NO. 38 TO THE FS-CL-CURRENT TAX LIABILITIES (NET)

( Amount in ₹ )

As at	31.03.2024	31.03.2023
001 <b>Current liabilities - current tax liabilities (net)</b>	<b>0.00</b>	<b>0.00</b>
002 Opening balance	0.00	0.00
003 Additions during the year	0.00	0.00
004 Amounts adjusted during the year	0.00	0.00
005 Less: Set off against taxes paid	0.00	0.00
007	0.00	0.00
008 <b>Closing Balance</b>	<b>0.00</b>	<b>0.00</b>



RIHAND SUPER THERMAL POWER STATION  
NOTE NO. 39 TO THE FS--DEFERRED REVENUE

( Amount in ₹ )

	As at	31.03.2024	31.03.2023
001	<b>Deferred Revenue</b>	<b>0.00</b>	<b>0.00</b>
002	On account of advance against depreciation	0.00	0.00
003	On account of income from foreign currency fluctuation	1,356,547,000.00	1,576,387,000.00
004	Government grants	0.00	0.00
007		0.00	0.00
008		0.00	0.00
009	<b>TOTAL</b>	<b>1,356,547,000.00</b>	<b>1,576,387,000.00</b>



RIHAND SUPER THERMAL POWER STATION

NOTE NO. 39A TO THE FS--REGULATORY DEFERRAL ACCOUNT CREDIT BALANCES

( Amount in ₹ )

As at	31.03.2024	31.03.2023
001 Regulatory deferral account credit balances	0.00	0.00
002 Exchange Differences	0.00	0.00
003	0.00	0.00
005 <b>Total</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 40 TO THE FS--REVENUE FROM OPERATIONS**
**( Amount in ₹ )**

	For the Year ended	31.03.2024	31.03.2023
001	<b>REVENUE FROM OPERATIONS</b>	<b>0.00</b>	<b>0.00</b>
002	<b>Sales</b>	<b>0.00</b>	<b>0.00</b>
003	Energy Sales (including Electricity Duty)	58,808,609,858.29	59,510,085,389.70
004	Less : Advance against depreciation deferred (net)	0.00	0.00
005	Add: Revenue recognized out of advance against depreciation	0.00	0.00
006	Add : Exchange fluctuation receivable from customers	-1,000.00	-1,007,159,000.00
007	Sale of energy through trading	0.00	0.00
008	Commission (NVVN)	0.00	0.00
009	<b>Sub total</b>	<b>58,808,608,858.29</b>	<b>58,502,926,389.70</b>
010	Less: Rebate to customers	361,523,638.66	375,810,995.28
011	<b>Energy Sales (Total)</b>	<b>58,447,085,219.63</b>	<b>58,127,115,394.42</b>
012	Consultancy, project management and supervision fees	0.00	0.00
013	Lease rentals on assets on Operating lease	0.00	0.00
014	Sale of Captive Coal	0.00	0.00
015	Intra Company Elimination	0.00	0.00
017	<b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
018	<b>Total - Sales</b>	<b>58,447,085,219.63</b>	<b>58,127,115,394.42</b>
019	Sale of fly ash/ash products	4,409,268.00	549,433.49
020	Less: Transferred to fly ash utilisation reserve fund	-4,409,268.00	-549,433.49
021	<b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>
022	<b>Other Operating Income</b>	<b>0.00</b>	<b>0.00</b>
023	Interest from customers	2,871,210,514.00	460,826,066.00
024	Energy Internally Consumed *	34,638,756.00	34,769,384.00
025	Interest income on Assets under finance lease	0.00	0.00
026	Recognized from deferred revenue - government grant	0.00	0.00
027	Provision written back- Tariff Adjustment	0.00	0.00
028	Income form Trading of ESCerts	30,494,405.33	7,976,314.67
029	Income from E-Mobility Business & others	0.00	0.00
030	Others	0.00	0.00
032		0.00	0.00
033		0.00	0.00
034	<b>Total</b>	<b>61,383,428,894.96</b>	<b>58,630,687,159.09</b>
040	* Valued at variable cost of generation and corresponding amount included in power charges ( Note No. 42)	0.00	0.00
041	Excise duty on sale of flyash,cenospere & ash products	0.00	0.00
042	Energy sales of principal nature (NVVN)	0.00	0.00
043	Energy sales of agency nature (NVVN)	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 41 TO THE FS--OTHER INCOME**
**( Amount in ₹ )**

	For the Year ended	31.03.2024	31.03.2023
001	<b>OTHER INCOME</b>	<b>0.00</b>	<b>0.00</b>
002	<b>Interest from</b>	<b>0.00</b>	<b>0.00</b>
004	<b>Financial assets at amortised cost</b>	<b>0.00</b>	<b>0.00</b>
005	Government Securities (8.5% Tax Free Bonds issued by the State Governments)	0.00	0.00
006	Other Bonds	0.00	0.00
007	Non current Trade Receivable	0.00	0.00
008	Interest from Government of India Securities-Non-Trade	0.00	0.00
009	Less: Amortziation of premium	0.00	0.00
010	<b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
011	Interest from others	0.00	0.00
012	Loan to State Government in settlement of dues from customers	0.00	0.00
013	Loan to Subsidiary Companies	0.00	0.00
014	Loan to Employees	14,636,986.49	14,118,222.87
015	Deposit with banks	0.00	0.00
016	Foreign Banks	0.00	0.00
017	Interest from Contractors	689,008.00	825,495.00
018	Interest from Income Tax Refunds	0.00	0.00
019	Less : Refundable to Customers	0.00	0.00
020	<b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
021	Deposits with banks-flyash utilisation reserve fund	0.00	0.00
022	Less: transferred to flyash utilisation reserve fund	0.00	0.00
023	<b>Sub Total</b>	<b>0.00</b>	<b>0.00</b>
024	Deposits with banks- DDUGJY funds	0.00	0.00
025	Interest from Contractors- DDUGJY funds	0.00	0.00
026	Transfer to DDUGJY-Advance from customers	0.00	0.00
027	Sub-total	0.00	0.00
030	Others	0.00	689,007.00
031	Other investments in Joint venture companies	0.00	0.00
032	<b>Dividend from</b>	<b>0.00</b>	<b>0.00</b>
033	<b>Longterm investments in</b>	<b>0.00</b>	<b>0.00</b>
034	Subsidiaries	0.00	0.00
035	Joint Ventures	0.00	0.00
036	Equity Instruments	0.00	0.00
037	<b>Current Investments in</b>	<b>0.00</b>	<b>0.00</b>
038	Mutual Funds measured at fairvalue through profit or loss	0.00	0.00
039	Current investments in mutual funds-flyash utilisation reserve fund	0.00	0.00
040		0.00	0.00
041	Less: transferred to flyash utilisation reserve fund	0.00	0.00
042	Lease Rent # Ash Brick Plant	0.00	0.00
043	Less: transferred to flyash utilisation reserve fund	0.00	0.00
044	Other non-operating income	0.00	0.00
045	Profit on disposal of PPE	45,389.99	113,631.34

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 41 TO THE FS--OTHER INCOME**
**( Amount in ₹ )**

	For the Year ended	31.03.2024	31.03.2023
046	Profit on redemption of GOI securities	0.00	0.00
047	Net gain on sale of investments	0.00	0.00
048	Surcharge received from customers	33,273,196.00	156,699,458.00
049	Hire charges for equipment	0.00	498,590.40
050	Gain on option contract / Discount on F.ExchContract	73,463.00	6,390,259.00
051	Lease rent from investment property	0.00	0.00
052	Provision written back-others	424,646.47	3,573,171.43
053	Fair value gains/(losses) on investments in mutual funds at fair value through profit or loss	0.00	0.00
054	Interest from Solar payment security account	0.00	0.00
055	Less : Transferred to SPSA fund	0.00	0.00
056	Interest on "Retention on A/c BG encashment (Solar)"	0.00	0.00
057	Less : Transferred to "Retention on A/c BG encashment (Solar)"	0.00	0.00
058		0.00	0.00
059		0.00	0.00
060		0.00	0.00
061	Miscellaneous Income	321,248,438.51	301,521,785.10
062	<b>Total</b>	<b>370,391,128.46</b>	<b>484,429,620.14</b>
063	Less:Transferred to Development of Coal Mines- Note 47A	0.00	0.00
064	Less:Transferred to Expenditure during Construction period (net)- Note 47	133,902.99	104,102.76
065	Less: Others	0.00	0.00
066	Less:Transferred to payable to Govt. of Jharkhand	0.00	0.00
068		0.00	0.00
069		0.00	0.00
070	<b>Total</b>	<b>370,257,225.47</b>	<b>484,325,517.38</b>
071		0.00	0.00
101	<b>Details of Miscellaneous Income</b>	<b>0.00</b>	<b>0.00</b>
102	Vehicle Hire Charges.	66,000.00	90,000.00
103	Sale of by products & residuals	0.00	0.00
104	Township recoveries(exl. Hospital Recoveries).	32,804,843.22	32,573,133.11
105	Depreciation written back	0.00	0.00
106	Sale of Scrap.	162,364,764.27	217,087,073.50
107	Receipt under loss of profit policy.	0.00	0.00
108	Receipts under MBD/Fire Policy.	0.00	0.00
109	Management development programme.	0.00	0.00
110	Management Fee - Misc (NVVN)	0.00	0.00
111	Others	126,012,831.02	51,771,578.49
112		0.00	0.00
113		0.00	0.00
114	<b>Total (Miscellaneous Income)</b>	<b>321,248,438.51</b>	<b>301,521,785.10</b>
115		0.00	0.00
131	<b>Details of Provision written back others</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**

**NOTE NO. 41 TO THE FS--OTHER INCOME**

**( Amount in ₹ )**

	For the Year ended	31.03.2024	31.03.2023
132	Doubtful debts	0.00	0.00
133	Doubtful Loans, Advances and Claims	0.00	0.00
134	Doubtful Construction Advances	0.00	0.00
135	Shortage in Construction Stores	88,397.16	1,458,151.13
136	Shortage in Stores	196,939.31	1,607,821.96
137	Obsolescence in Stores	139,310.00	507,198.34
138	Unserviceable capital works	0.00	0.00
139	Other Obligation including Arbitration	0.00	0.00
140	Shortage in Fixed Assets	0.00	0.00
141	Diminution in value of Investment	0.00	0.00
142		0.00	0.00
143		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION****NOTE NO. 42 TO THE FS--FUEL COST****( Amount in ₹ )**

	For the Year ended	31.03.2024	31.03.2023
001 <b>FUEL COST</b>		<b>0.00</b>	<b>0.00</b>
002 Coal		0.00	0.00
003 Captive		0.00	0.00
004 Other than captive		34,687,386,295.68	34,092,322,865.30
005 Gas		0.00	0.00
006 Naptha		0.00	0.00
007 Oil		506,683,670.02	422,532,356.80
008 Biomass Pellets & Others		0.00	0.00
009		0.00	0.00
010		0.00	0.00
011 <b>Total</b>		<b>35,194,069,965.70</b>	<b>34,514,855,222.10</b>
012		0.00	0.00



**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 43 TO THE FS--EMPLOYEE BENEFITS EXPENSE**
**( Amount in ₹ )**

	For the Year ended	31.03.2024	31.03.2023
001	<b>EMPLOYEE BENEFITS EXPENSE</b>	<b>0.00</b>	<b>0.00</b>
002	Salaries and wages	1,420,229,075.93	1,521,094,969.69
003	Contribution to provident and other funds	230,813,260.68	203,254,370.35
004	Unwinding of deferred payroll expense	8,197,455.70	8,416,475.20
005	Staff welfare expenses	228,872,600.84	203,775,030.45
006	Less : Expenses transferred to Consultancy group	0.00	0.00
007		0.00	0.00
008	<b>Sub Total</b>	<b>1,888,112,393.15</b>	<b>1,936,540,845.69</b>
009	Less: Employee benefits expense allocated to fuel inventory	126,414,506.69	124,169,760.51
010	Less: Transferred/Allocated to development of coal mines - Note 47A	0.00	0.00
011	Less: Others	0.00	0.00
012	Less: Transferred to fly ash utilisation reserve fund	0.00	0.00
013	Less: Transferred to CSR Expenses	0.00	0.00
014	Reimbursements for employees on secondment	3,533,759.52	3,276,040.25
015	Less: Transferred to expenditure during construction period (net)- Note 47	46,208,463.83	31,691,938.82
016	Less: Transfer to Govt of Jharkhand A/c as recoverable	0.00	0.00
018		0.00	0.00
019	<b>TOTAL</b>	<b>1,711,955,663.11</b>	<b>1,777,403,106.11</b>
020	<b>Managerial Remuneration paid/ payable to Directors included above (except for Directors fee which is included in Note 42)</b>	<b>0.00</b>	<b>0.00</b>
021	Salaries and wages	0.00	0.00
022	Contribution to provident and other funds	0.00	0.00
023	Staff welfare expenses	0.00	0.00
024	Directors fee	0.00	0.00
025		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 44 TO THE FS--FINANCE COSTS**
**( Amount in ₹ )**

	For the Year ended	31.03.2024	31.03.2023
001	<b>FINANCE COSTS</b>	<b>0.00</b>	<b>0.00</b>
002	Finance charges on financial liabilities measured at amortised cost	0.00	0.00
003	Bonds	616,779,786.46	731,574,881.93
004	Government of India Loans	0.00	0.00
005	Foreign currency term loans	65,542,908.37	40,412,501.47
006	Rupee term loans	450,346,229.00	450,875,180.00
007	Public deposits	0.00	0.00
008	Foreign currency bonds/notes	0.00	99,701,512.71
009	Cash Credit	0.00	0.00
010	Unwinding of discount on account of vendor liabilities	19,827,484.33	11,815,161.51
011	Commercial Papers	0.00	0.00
012	<b>Sub Total</b>	<b>1,152,496,408.16</b>	<b>1,334,379,237.62</b>
013	Interest on non financial items	18,086.00	0.00
014	<b>Other Borrowing Costs</b>	<b>0.00</b>	<b>0.00</b>
015	Bonds servicing & public deposit exp.	945,192.25	858,707.62
016	Guarantee fee	0.00	0.00
017	Management fee	0.00	0.00
018	Committ charges/exposure premium	0.00	129,975.15
019	Bond issue expenses	0.00	0.00
020	Legal exp on foreign currency loans	0.00	0.00
021	Foreign currency bonds/notes exp.	0.00	0.00
022	Up-front fee	0.00	0.00
023	Insurance premium on foreign currency loans	0.00	0.00
024		0.00	0.00
025	Others	0.00	0.00
026	<b>Sub Total (Other Borrowing cost)</b>	<b>963,278.25</b>	<b>988,682.77</b>
027		0.00	0.00
028	<b>Exchange differences regarded as an adjustment to borrowing costs</b>	<b>-31,247,413.53</b>	<b>16,291,816.52</b>
029	<b>Sub Total</b>	<b>1,122,212,272.88</b>	<b>1,351,659,736.91</b>
030	Less: Transferred to Expenditure during construction period (net) - Note 47	119,314,872.39	67,839,767.20
031	Less: Transferred to development of coal mines- Note 47A	0.00	0.00
032		0.00	0.00
034	<b>Total</b>	<b>1,002,897,400.49</b>	<b>1,283,819,969.71</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 45 TO THE FS--DEPRECIATION, AMORTIZATION AND IMPAIRMENT EXPENSES**
**( Amount in ₹ )**

For the Year ended		31.03.2024	31.03.2023
001	<b>Depreciation, amortization and impairment expenses</b>	<b>0.00</b>	<b>0.00</b>
002	On property, plant and equipment- Note 2	5,272,550,841.88	4,896,131,231.52
003	On investment property- Note 2A	0.00	0.00
004	On intangible assets- Note 4	319,960.73	28,393.75
005		0.00	0.00
006	Sub-total	5,272,870,802.61	4,896,159,625.27
007	Less:	0.00	0.00
008	Allocated to fuel inventory	382,176,014.60	380,700,405.43
009	Transferred to Expenditure during Construction Period (net)- Note 47	2,541.12	659.26
010		0.00	0.00
011	Transferred/Allocated to development of coal mines - Note 47A	0.00	0.00
012	Adjustment with deferred revenue from deferred foreign currency fluctuation	219,840,000.00	207,462,000.00
013		0.00	0.00
015	<b>Total</b>	<b>4,670,852,246.89</b>	<b>4,307,996,560.58</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 46 TO THE FS--OTHER EXPENSE**
**( Amount in ₹ )**

	For the Year ended	31.03.2024	31.03.2023
001 <b>OTHER EXPENSES</b>		<b>0.00</b>	<b>0.00</b>
002 Power charges		114,071,005.38	36,602,545.00
003 Less: Recovered from contractors & employees		21,997,304.57	16,759,983.93
004 <b>Sub-Total(Power Charges)</b>		<b>92,073,700.81</b>	<b>19,842,561.07</b>
005 Water charges		143,348,894.00	139,871,225.00
006 Stores consumed		109,080,768.02	72,975,803.55
007 Rent		0.00	0.00
008 Less:Recoveries		0.00	0.00
009 <b>Sub-Total (Rent)</b>		<b>0.00</b>	<b>0.00</b>
010 Cost of captive coal produced		0.00	0.00
011 <b>Repairs &amp; maintenance</b>		<b>0.00</b>	<b>0.00</b>
012 Buildings		115,052,101.97	158,149,415.92
013 Plant & machinery		0.00	0.00
014 Power stations		2,814,572,400.22	2,228,227,417.39
015 Construction equipment		0.00	0.00
016 Others		119,810,327.85	133,139,689.40
017 <b>Sub-total (Repairs &amp; maintenance)</b>		<b>3,049,434,830.04</b>	<b>2,519,516,522.71</b>
019 Load Dispatch Center Charges		39,049,786.00	13,176,411.00
021 Insurance		177,744,689.07	176,259,470.09
022 Interest to beneficiaries		502,602,488.00	0.00
023 Rates and taxes		12,356,937.15	-6,259,316.14
024 Water cess & environment protection cess		0.00	0.00
025 Training & recruitment expenses		1,295,003.27	2,049,738.99
026 Less: Receipts		0.00	0.00
027 <b>Sub-total (Training and recruitment expenses)</b>		<b>1,295,003.27</b>	<b>2,049,738.99</b>
028 Communication expenses		24,933,224.99	18,055,262.15
029 Inland Travel		70,077,362.54	73,825,041.75
030 Foreign Travel		-13,890.00	153,377.00
031 Tender expenses		0.00	0.00
032 Less: Receipt from sale of tenders		0.00	0.00
033 <b>Sub-total (Tender expenses)</b>		<b>0.00</b>	<b>0.00</b>
034 Payment to auditors		0.00	0.00
035 Audit fee		0.00	0.00
036 Tax audit fee		0.00	0.00
037 Other services		0.00	0.00
038 Reimbursement of expenses		0.00	0.00
039 <b>Sub-total (Payment to Auditors)</b>		<b>0.00</b>	<b>0.00</b>
040 Advertisement and publicity		609,800.66	715,426.60
041 Electricity duty		0.00	0.00
042 Security expenses		500,034,468.77	450,957,342.53
043 Entertainment expenses		22,830,953.50	26,443,229.39
044 Expenses for guest house		22,417,249.24	20,529,003.23
045 Less:Recoveries		4,681,184.90	5,102,224.90
046 <b>Sub-Total (Guest house expenses)</b>		<b>17,736,064.34</b>	<b>15,426,778.33</b>
047 Education expenses		72,472,675.00	60,990,719.00
049 Donations		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 46 TO THE FS--OTHER EXPENSE**
**( Amount in ₹ )**

	For the Year ended	31.03.2024	31.03.2023
050	Ash utilisation & marketing expenses	2,171,797,468.80	1,205,661,111.07
051	Directors sitting fee	0.00	0.00
053	Professional charges and consultancy fees	18,247,979.65	85,099,069.19
054	Legal expenses	28,418,531.00	25,564,410.00
055	EDP hire and other charges	4,342,518.74	9,686,180.09
056	Printing and stationery	2,895,337.34	2,413,162.68
057	Oil & gas exploration expenses	0.00	0.00
059	Hiring of vehicles	37,940,272.90	36,342,493.81
061	Reimbursement of L.C.charges on sales realisation	0.00	0.00
062	LOSS ON FAIR VALUATION OF NON- CURRENT TRADE RECEIVABLE AT AMORTISED COST	0.00	0.00
063	Cost of Hedging	0.00	0.00
064	Derivatives MTM loss/gain (Net)	0.00	0.00
065	Net loss/(gain) in foreign currency transactions & translations	-168,732,271.52	15,280,472.25
066	Transport Vehicle running expenses	1,305,447.75	1,883,079.38
067	Horticulture Expenses	60,083,345.45	82,919,539.21
068	Hire charges- helicopter/aircraft.	0.00	0.00
069	Hire charges of construction equipment	0.00	0.00
070	Demurrage Charges	0.00	0.00
072		0.00	0.00
073	Miscellaneous expenses	131,684,397.10	54,556,145.78
074	Loss on disposal/write-off of PPE	134,550,634.28	81,328,604.99
075	<b>Sub-Total</b>	<b>7,258,201,417.65</b>	<b>5,184,733,861.47</b>
076	Less: Other expenses allocated to fuel inventory	685,238,571.79	584,991,830.30
077	Less: Transferred/Allocated to development of coal mines - Note 47A	0.00	0.00
078	Less: Transferred to fly ash utilisation reserve fund	48,712,813.41	25,183,231.73
079	Less: Hedging cost Net recoverable/payable from/to beneficiaries	0.00	0.00
080	Less: Others	0.00	0.00
081	Less: Transferred to CSR Expenses	0.00	0.00
082	Less:Transferred to Expenditure during Construction period(net)-Note 47	15,557,399.80	2,525,818.02
083	Less: Transfer to Govt of Jharkhand A/c as recoverable	0.00	0.00
084	<b>Net (Generation, Administration and Other expenses)</b>	<b>6,508,692,632.65</b>	<b>4,572,032,981.42</b>
085	Corporate Social Responsibility Expenses	41,264,811.94	35,487,113.26
086	Less: Grants-in-aid	0.00	0.00
087	<b>Sub-total (Corporate Social Responsibility Expenses)</b>	<b>41,264,811.94</b>	<b>35,487,113.26</b>
088	<b>Provisions</b>	<b>0.00</b>	<b>0.00</b>
089	Doubtful Debts	0.00	0.00
090	Doubtful loans, advances and claims	0.00	0.00
091	Doubtful Construction Advances	0.00	0.00
092	Shortage in stores	5,923,534.81	222,450.81

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 46 TO THE FS--OTHER EXPENSE**
**( Amount in ₹ )**

	For the Year ended	31.03.2024	31.03.2023
093	Obsolete/Dimunition in the value of surplus stores	78,820,769.66	10,612,444.94
094	Shortage in construction stores	1,896,319.98	88,397.16
095	Dimunition in value of long term investments	0.00	0.00
096	Shortage in Fixed assets	3,612,900.00	0.00
097	Unfinished minimum work progress from oil & gas exploration	0.00	0.00
098	Unserviceable capital works	0.00	0.00
099	Tariff Adjustment	-486,099,000.00	208,630,000.00
100	Others :	0.00	0.00
101	(i) Provision for arbitration cases	418,352.00	418,352.00
102	(ii) Other provisions	0.00	0.00
103	<b>Total (Provisions)</b>	<b>-395,427,123.55</b>	<b>219,971,644.91</b>
104		0.00	0.00
106	<b>Total</b>	<b>6,154,530,321.04</b>	<b>4,827,491,739.59</b>
107		0.00	0.00
108	<b>Breakup of miscellaneous expenses.</b>	<b>0.00</b>	<b>0.00</b>
110	Hire charges of office equipment	1,014,069.25	2,178,920.46
112	Operating expenses of construction equipment	0.00	0.00
113	Operating expenses of D.G. sets	0.00	0.00
114	Furnishing expenses	1,216,856.77	253,934.89
115	Subscription to trade and other associations.	0.00	0.00
117	Visa and entry permit charges	0.00	0.00
118	Tree plantation exp.-NTPC Land	0.00	0.00
119	Research & development expenses .	0.00	0.00
120	Less : Grants received for Research & development expenses.	0.00	0.00
121	Sub-total (Research & development expenses)	0.00	0.00
122	Bank charges	64,876.52	90,956.68
123	Business Development Expenditure	0.00	0.00
124	Surcharge (NVVN)	0.00	0.00
125	Power Trading Expenses	58,605,449.00	30,539,939.00
126	Brokerage & commission	16,345,004.00	8,616,631.00
130	Books and periodicals	71,235.00	408,733.00
131	Claims/advances written off	0.00	0.00
132	Stores written off	0.00	0.00
133	Survey &Investigation expenses written off	0.00	0.00
134	Others	54,366,906.56	12,467,030.75
135	<b>Total</b>	<b>131,684,397.10</b>	<b>54,556,145.78</b>
136		0.00	0.00
137		0.00	0.00
138		0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 47 TO THE FS--EXPENDITURE DURING CONSTRUCTION PERIOD (NET)**
**( Amount in ₹ )**

For the Year ended		31.03.2024	31.03.2023
001	<b>EXPENDITURE DURING CONSTRUCTION PERIOD (NET)</b>	<b>0.00</b>	<b>0.00</b>
002	A. Employee benefits expense	0.00	0.00
003	Salaries and wages	36,814,049.23	26,501,611.63
004	Contribution to provident and other funds	5,706,688.39	3,509,615.20
005	Unwinding of deferred payroll expenses	0.00	0.00
006	Staff welfare expenses	3,687,726.21	1,680,711.99
007	<b>Total (A)</b>	<b>46,208,463.83</b>	<b>31,691,938.82</b>
008	<b>B. Finance Costs</b>	<b>0.00</b>	<b>0.00</b>
009	Finance charges on financial liabilities measured at amortised cost	0.00	0.00
010	Bonds	12,419,822.69	9,928,869.03
011	Foreign currency term loans	52,297,655.15	26,164,411.47
012	Rupee term loans	60,296,295.00	16,080,739.00
013	Foreign currency bonds/notes	0.00	0.00
014	Unwinding of discount on account of vendor liabilities	0.00	0.00
015	Others	0.00	0.00
016		0.00	0.00
017	Other Borrowings Costs	0.00	0.00
018	Guarantee Commission	0.00	0.00
019	Management Fees/Arrangers Fees	0.00	0.00
020	Commitment charges/Exposure Premium	0.00	129,975.15
021	Legal Expenses on foreign currency loans	0.00	0.00
022	Foreign currency bonds/notes expenses	0.00	0.00
023	Foreign Credit Insurance Premium	0.00	0.00
024	Upfront Fee	0.00	0.00
025	Exchange Differences	0.00	0.00
026	Others	6,131,800.75	3,705,070.96
027	Exchange differences regarded as adjustment to interest cost	-11,830,701.20	11,830,701.59
028	<b>Total (B)</b>	<b>119,314,872.39</b>	<b>67,839,767.20</b>
029		0.00	0.00
030	C. Depreciation and amortisation	2,541.12	659.26
031	<b>D. Generation , administration and other expenses</b>	<b>0.00</b>	<b>0.00</b>
032	Power charges	8,614,842.00	314,305.00
033	Less: Recovered from contractors & employees	144,064.99	39,741.55
034	<b>Sub-total(Net power charges)</b>	<b>8,470,777.01</b>	<b>274,563.45</b>
035	Water charges	0.00	0.00
036	Rent	0.00	0.00
037	Repairs & maintenance	0.00	0.00
038	Buildings	0.00	0.00
039	Construction equipment	0.00	0.00
040	Others	35,196.45	456.75
041		0.00	0.00
042	Insurance	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 47 TO THE FS--EXPENDITURE DURING CONSTRUCTION PERIOD (NET)**
**( Amount in ₹ )**

	For the Year ended	31.03.2024	31.03.2023
043	Rates and taxes	466.20	108.00
044	Communication expenses	182,703.00	463,943.00
045	Travelling expenses	2,240,084.41	1,173,914.46
046	Tender expenses	0.00	0.00
047	Less: Income from sale of tenders	0.00	0.00
048	<b>Sub-total (Net tender expenses)</b>	<b>0.00</b>	<b>0.00</b>
049	Advertisement and publicity	0.00	0.00
050	Security expenses	0.00	0.00
051	Entertainment expenses	133,743.00	109,860.70
052	Guest house expenses	0.00	0.00
053	Less: Receipt from guest house	0.00	0.00
054	<b>Sub-total (Net Guest House Expenses)</b>	<b>0.00</b>	<b>0.00</b>
055	Education expenses	0.00	0.00
056	Brokerage & Commission	0.00	0.00
057	Books and periodicals	0.00	0.00
058	Community development expenses	0.00	0.00
059	Professional charges and consultancy fee	0.00	0.00
060	Legal expenses	67,493.00	0.00
061	EDP Hire and other charges	0.00	0.00
062	Printing and stationery	2,794.00	19,534.00
063	Miscellaneous expenses	4,424,142.73	483,437.66
064	<b>Total (D)</b>	<b>15,557,399.80</b>	<b>2,525,818.02</b>
065	<b>Total (A+B+C+D)</b>	<b>181,083,277.14</b>	<b>102,058,183.30</b>
066	<b>E. Less: Other Income</b>	<b>0.00</b>	<b>0.00</b>
067	Interest from	0.00	0.00
068	Indian banks	0.00	0.00
069	Foreign banks	0.00	0.00
070	Others	0.00	0.00
071	Contractors	0.00	0.00
072	Hire charges	0.00	0.00
073	Sale of scrap	0.00	0.00
074	Exchange Differences	0.00	0.00
075	Miscellaneous income	133,902.99	104,102.76
076	<b>TOTAL (E)</b>	<b>133,902.99</b>	<b>104,102.76</b>
077	F. Net actuarial gain/loss OCI	-213,090.51	-397,461.79
078		0.00	0.00
079	<b>GRAND TOTAL (A+B+C+D-E+F)</b>	<b>180,736,283.64</b>	<b>101,556,618.75</b>
080		0.00	0.00
081	<b>* Balance carried to Capital Work-in-progress - (Note 3)</b>	<b>180,736,283.64</b>	<b>101,556,618.75</b>



**RIHAND SUPER THERMAL POWER STATION**  
**NOTE NO. 47A TO THE FS--EDC- COAL MINING**

( Amount in ₹ )

	For the Year ended	31.03.2024	31.03.2023
001	<b>EDC- Coal Mining</b>	<b>0.00</b>	<b>0.00</b>
002	A. Employee benefits expense	0.00	0.00
003	Salaries and wages	0.00	0.00
004	Contribution to provident and other funds	0.00	0.00
005	Unwinding of deferred payroll expenses	0.00	0.00
006	Staff welfare expenses	0.00	0.00
007	<b>Total (A)</b>	<b>0.00</b>	<b>0.00</b>
008	<b>B. Finance Costs</b>	<b>0.00</b>	<b>0.00</b>
009	Finance charges on financial liabilities measured at amortised cost	0.00	0.00
010	Bonds	0.00	0.00
011	Foreign currency term loans	0.00	0.00
012	Rupee term loans	0.00	0.00
013	Foreign currency bonds/notes	0.00	0.00
014	Unwinding of discount on account of vendor liabilities	0.00	0.00
015	Others	0.00	0.00
016		0.00	0.00
017	Other Borrowings Costs	0.00	0.00
018	Guarantee Commission	0.00	0.00
019	Management Fees/Arrangers Fees	0.00	0.00
020	Commitment charges/Exposure Premium	0.00	0.00
021	Legal Expenses on foreign currency loans	0.00	0.00
022	Foreign currency bonds/notes expenses	0.00	0.00
023	Foreign Credit Insurance Premium	0.00	0.00
024	Upfront Fee	0.00	0.00
025	Exchange Differences	0.00	0.00
026	Others	0.00	0.00
027	Exchange differences regarded as adjustment to interest cost	0.00	0.00
028	<b>Total (B)</b>	<b>0.00</b>	<b>0.00</b>
029		0.00	0.00
030	C. Depreciation and amortisation	0.00	0.00
031	<b>D. Generation , administration and other expenses</b>	<b>0.00</b>	<b>0.00</b>
032	Power charges	0.00	0.00
033	Less: Recovered from contractors & employees	0.00	0.00
034	<b>Sub-total(Net power charges)</b>	<b>0.00</b>	<b>0.00</b>
035	Water charges	0.00	0.00
036	Rent	0.00	0.00
037	Repairs & maintenance	0.00	0.00
038	Buildings	0.00	0.00
039	Construction equipment	0.00	0.00
040	Others	0.00	0.00
041	Cost of Captive Coal	0.00	0.00
042	Insurance	0.00	0.00
043	Rates and taxes	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**  
**NOTE NO. 47A TO THE FS--EDC- COAL MINING**

( Amount in ₹ )

	For the Year ended	31.03.2024	31.03.2023
044	Communication expenses	0.00	0.00
045	Travelling expenses	0.00	0.00
046	Tender expenses	0.00	0.00
047	Less: Income from sale of tenders	0.00	0.00
048	<b>Sub-total (Net tender expenses)</b>	<b>0.00</b>	<b>0.00</b>
049	Advertisement and publicity	0.00	0.00
050	Security expenses	0.00	0.00
051	Entertainment expenses	0.00	0.00
052	Guest house expenses	0.00	0.00
053	Less: Receipt from guest house	0.00	0.00
054	<b>Sub-total (Net Guest House Expenses)</b>	<b>0.00</b>	<b>0.00</b>
055	Education expenses	0.00	0.00
056	Brokerage & Commission	0.00	0.00
057	Books and periodicals	0.00	0.00
058	Community development expenses	0.00	0.00
059	Professional charges and consultancy fee	0.00	0.00
060	Legal expenses	0.00	0.00
061	EDP Hire and other charges	0.00	0.00
062	Printing and stationery	0.00	0.00
063	Miscellaneous expenses	0.00	0.00
064	<b>Total (D)</b>	<b>0.00</b>	<b>0.00</b>
065	<b>Total (A+B+C+D)</b>	<b>0.00</b>	<b>0.00</b>
066	<b>E. Less: Other Income</b>	<b>0.00</b>	<b>0.00</b>
067	Interest from	0.00	0.00
068	Indian banks	0.00	0.00
069	Foreign banks	0.00	0.00
070	Others	0.00	0.00
071	Contractors	0.00	0.00
072	Hire charges	0.00	0.00
073	Sale of scrap	0.00	0.00
074	Exchange Differences	0.00	0.00
075	Miscellaneous income	0.00	0.00
076	<b>TOTAL (E)</b>	<b>0.00</b>	<b>0.00</b>
077	F. Net actuarial gain/loss OCI	0.00	0.00
078		0.00	0.00
079	<b>GRAND TOTAL (A+B+C+D-E+F)</b>	<b>0.00</b>	<b>0.00</b>
080		0.00	0.00
081	<b>* Balance carried to Capital Work-in-progress - (Note 3)</b>	<b>0.00</b>	<b>0.00</b>

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 48A TO THE FINANCIAL STATEMENTS**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
001 Balance sheet	0.00	0.00
002 Freehold land for which conveyancing of the title is awaiting completion of legal formalities	0.00	0.00
003 (a) area (in acres)	1,272.13	1,272.13
004 (b) value (in rs)	116,742,467.99	116,742,467.99
005 Right-of-use land for which execution of lease deed is awaiting completion of legal formalities	0.00	0.00
006 (a) area (in acres)	227.63	227.63
007 (b) value (in rs)	208,310,187.38	208,310,187.38
008 Right-of-use land acquired on perpetual lease and accordingly not amortised	0.00	0.00
009 (a) area (in acres)	0.00	0.00
010 (b) value (in rs.)	0.00	0.00
011 Land in physical possession of the company which has not been shown in the books pending settlement of price (in acres)	0.00	0.00
012 Deposit with government authorities towards land in possession of the company included in cost of land which is subject to adjus	0.00	0.00
<b>013 Land not in possession of the company</b>	<b>0.00</b>	<b>0.00</b>
014 (a) area (in acres)	0.00	0.00
015 -Freehold	787.37	776.45
016 -Right of Use	72.33	72.33
017 (b) value (in rs)	0.00	0.00
018 -Freehold	72,256,386.55	71,250,885.34
019 -Right of Use	32,189,938.59	30,718,588.01
020 Right-of-use buildings pending completion of legal fomalties - value (in rs.)	0.00	0.00
021 Estimated amount of contracts remaining to be executed on capital account and not provided for	0.00	0.00
022 Property, plant & equipment	12,949,342,350.00	13,566,754,374.00
023 Intangible assets	0.00	0.00
024 Details of precommissioning expenditure	0.00	0.00
025 (a) precommissioning expenses	0.00	0.00
026 (b) precommissioning income	0.00	0.00
027 (c) net precommissioning expenditure	0.00	0.00
028	0.00	0.00
029	0.00	0.00
030	0.00	0.00
031 Exchange rate variation taken to revenue during the year (with -ve sign, if favourable)	-188,148,983.85	19,741,587.18
045 Exchange rate variation capitalised during the year (with -ve sign, if favourable)	-5,125,413.86	282,259,548.61
064 Short Term Leases	0.00	0.00
065 A) Rent	0.00	0.00
066 Company lease accomodation - executives	0.00	0.00
067 Company lease accomodation - directors	0.00	0.00
068 Others	0.00	0.00

**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 48A TO THE FINANCIAL STATEMENTS**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
069 <b>Total</b>	<b>0.00</b>	<b>0.00</b>
101 Borrowing cost capitalised during the year	119,314,872.39	67,839,767.20
102 Revenue grants recognized during the year	0.00	0.00
103 Revenue expenditure on research and development	0.00	0.00
104 Capital expenditure on research and development.	0.00	0.00
105 Expenditure on sustainability development - capital	0.00	1,321,815.00
106 Expenditure on csr- capital	0.00	0.00
107 Opening balance - CSR Liability	5,746,540.00	5,794,153.00
108 Paid/Adjusted during the Year out of Opening above	-5,605,546.00	-1,456,484.00
109 Amount yet to be paid against Cr Year CSR Exp	9,271,344.00	1,408,871.00
110 Closing Balance CSR- Liability ( 110)	9,412,338.00	5,746,540.00
111	0.00	0.00
112	0.00	0.00
113 <b>Disclosure under msmed act 2006.</b>	<b>0.00</b>	<b>0.00</b>
114 Long-term	0.00	0.00
115 Short-term	-193,435,115.38	0.00
116 <b>(i) (a) the principal amount remaining unpaid as at year end</b>	<b>-193,435,115.38</b>	<b>0.00</b>
117 (i) (b) interest due there on remaining unpaid as at Year end	0.00	0.00
118 (ii) the amount of interest paid by the buyer in terms of section 16, along with the amounts of the payment made to the supplier	0.00	0.00
119 (iii) the amount of interest due and payable for the period of delay in making payment(which has been paid but beyond the appoin	0.00	0.00
120 (iv) the amount of interest accrued and remaining unpaid at the end of the year; and	0.00	0.00
121 (v) the amount of further interest remaining due and payable even in the succeeding years, until such date when the interest due	0.00	0.00
122 Amount of inventories recognized as an expense (including fuel)	37,170,395,683.42	36,118,519,159.86
123 Amount of inventories capitalised as overhauling assets out of 122 above	398,467,421.52	479,006,817.39
124 Amount capitalised as edc out of 122 above	0.00	0.00
133 Value of Imported Material Consumed during the Year	0.00	0.00
134	0.00	0.00
135 Contingent liabilities	0.00	0.00
136 A. Claims against the company not acknowledged as debts in respect of :	0.00	0.00
137 (i)Capital works	0.00	0.00
138 (ii)Land compensation cases	32,725,296.47	35,769,736.80
139 (iii)Others by state authorities towards:-	0.00	0.00
140 (a) Water royalty / water charges / nala tax	0.00	0.00
141 (b) Diversion of land / building permission fees	0.00	0.00

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**RIHAND SUPER THERMAL POWER STATION**
**NOTE NO. 48A TO THE FINANCIAL STATEMENTS**
**( Amount in ₹ )**

As at	31.03.2024	31.03.2023
142 (c) Other demands by state authorities	4,590,000.00	4,590,000.00
143 (iv) Others by fuel companies	0.00	0.00
144 (a) Disputes related to grade slippage-third party sampling	1,415,704,076.30	1,394,269,079.00
145 (b) Surface transportation charges on coal	911,712,917.66	911,712,917.69
146 (c) Take or pay claim - Gas stations	0.00	0.00
147 (d) Other claims by fuel companies not acknowledged as debt	686,853,915.00	686,853,915.00
149 B.Disputed tax demands	0.00	0.00
150 (i) Income tax	0.00	0.00
151 (ii) Excise duty	3,691,823.00	3,691,823.00
152 (iii) Sales tax	147,764,932.00	146,412,646.00
153 (iv) Service tax/GST	4,371,933.68	4,225,770.93
154 (v) Entry tax	0.00	0.00
155 C. Others	183,594,882.52	183,583,292.71
156 <b>Total</b>	<b>3,391,009,776.63</b>	<b>3,371,109,181.13</b>
157 D. Possible reimbursement on account of contingent liabilities	0.00	0.00
158 (i) Capital works	0.00	0.00
159 (ii) Land compensation cases	0.00	0.00
160 (iii) Others (by state authorities)	0.00	0.00
161	0.00	0.00
162 (iv) Others by fuel companies	3,017,962,731.96	2,992,835,911.66
163 (v) Disputed income tax demand	0.00	0.00
164 (vi) Disputed tax demands -others	147,764,932.00	150,104,469.00
165 (vii) Others	58,203.00	58,203.00
167 <b>Total</b>	<b>3,165,785,866.96</b>	<b>3,142,998,583.66</b>
168 E.AMOUNT PAID UNDER PROTEST/ADJUSTED BY AUTHORITIES - TAX CASES	812,756.00	812,756.00
169 F.CONTINGENT ASSETS	0.00	0.00
170 Intangible under development : less than 1 year	0.00	0.00
171 Intangible under development #: 1-2 year	0.00	0.00
227 Intangible under development #: 2-3 year	0.00	0.00
277 Intangible under development #: More than 3 years	0.00	0.00
278 <b>Capital-Work-in Progress (CWIP)</b>	<b>0.00</b>	<b>0.00</b>
279 Projects in progress	12,848,933,527.77	8,960,205,455.82
280 Projects temporarily suspended	0.00	0.00
281	0.00	0.00
282	0.00	0.00
283 <b>Projects in progress</b>	<b>0.00</b>	<b>0.00</b>
284 Less than 1 year	5,630,293,641.08	3,744,284,084.47
285 1-2 years	2,963,595,270.36	3,074,034,597.30
286 2-3 years	2,462,596,838.61	1,738,373,963.21
287 More than 3 years	1,792,447,777.72	403,512,810.84
288 <b>Sub Total (I)</b>	<b>12,848,933,527.77</b>	<b>8,960,205,455.82</b>
289	0.00	0.00



RIHAND SUPER THERMAL POWER STATION  
NOTE NO. 48A TO THE FINANCIAL STATEMENTS

( Amount in ₹ )

As at	31.03.2024	31.03.2023
290 <b>Projects temporarily suspended</b>	<b>0.00</b>	<b>0.00</b>
291 Less than 1 year	0.00	0.00
292 1-2 years	0.00	0.00
293 2-3 years	0.00	0.00
294 More than 3 years	0.00	0.00
295 <b>Sub Total (II)</b>	<b>0.00</b>	<b>0.00</b>
296	0.00	0.00
380 Previous year figures have been regrouped/rearranged wherever necessary.	0.00	0.00