

Summary of Issues: Farakka Super Thermal Power Station-I&II (1600 MW)

(In compliance with CERC notice dated 07.06.2024)

The major highlights of the Farakka STPS-I&II (1600 MW) Truing up petition are as follows:-

The present petition is being filed 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-9(2) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 for revision of tariff of Farakka Super Thermal Power Station, Stage-I (1600 MW) for the period from 01.04.2024 to 31.03.2029 after the truing up exercise based on actual expenditures as on 31.03.2024.

Farakka STPS-I&II is located at Murshidabad, West Bengal and comprises of three units of 200 MW each and two units of 500 MW each with station COD on 01.07.1996. The power generated from FSTPS-I&II is being supplied to various discoms as per MoP allocation and respective PPAs including West Bengal State Electricity Distribution Corporation Limited, Bihar State Power Holding Company Limited, Jharkhand Urja Vikas Nigam Limited, Grid Corporation of Orissa Limited, Haryana Power Purchase Centre, The Energy and Power Department, Govt of Sikkim, Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO), Punjab State Power Corporation Limited (PSPCL), Uttar Pradesh Power Corporation Limited (UPPCL), Power Development Department, Govt. of J&K, Assam Power Distribution Company Limited, BSES Rajdhani Power Limited, BSES Yamuna Power Limited, Tata Power Delhi Distribution Limited (TPDDL), and Rajasthan Urja Vikas Nigam Limited (RUVNL).

Farakka STPS-I&II completed its useful life in the 2019-24 control period. Hence as per the provisions of Tariff regulations 2024 in 28(2), a special allowance of Rs 860.00 crores is claimed for the 2024-29 period.

The actual Additional Capital Expenditure on cash basis for the FY 2024-25, 2025-26, 2026-27, 2027-28 and 2028-29 are Rs 31.30 cr, Rs 2.63 cr, Rs 105.29 cr, Rs 52.39 cr and Rs 54.44 cr respectively amounting to total of Rs 246.05 crores during the 2024-29 period. The same has been depicted year wise in Form 9A of the Appendix-I along with applicable regulations and justification for the claims. It is humbly requested to approve the actual Additional Capital expenditure during the period of 2024-29.

The petitioner humbly submits that petition no. 227/MP/2024 has been filed by the petitioner concerning Ash Transport Expenditure for its stations which is under active consideration of this Hon'ble Commission and the outcome of the said petition will be applicable to the instant petition also.

It is humbly submitted to allow reimbursement of Ash Transportation Charges directly from the beneficiaries on monthly basis, subject to true up. The ash transportation expenses claim has been depicted in Form 3A of Appendix-I.

Hon'ble Commission may please allow the claims of water charges, capital spares and security expenses for the instant station as per actual, as claimed by the Petitioner in Form 3A of Appendix-I.

- It is mentionable that the bipartite agreement between NTPC Farakka STPS and Farakka Barrage Project directs NTPC to pay water charges on basis of water allocated. It is submitted that water is subject matter under the control of Farakka Barrage Project (under Ministry of WRD) and NTPC has no control over it. It is also an essential input for generation of electricity from a thermal power plant. NTPC is bound to pay the water charges as per the agreement signed with the Farakka Barrage Project. The detailed calculation for the water charges claim as per the agreement is submitted in Form 3A. Hon'ble Commission may please allow the claim of water charges paid on allocation basis. Copy of water agreement between NTPC Farakka STPS and Farakka Barrage Project is enclosed along with the petition at **Annex E**.

- It is further mentioned that the Farakka STPS-I&II is a central government owned thermal power station which is of national importance and located in a state sharing international border with Bangladesh. As such Safety and security of this important infrastructure project against any threat (national or international) is a prime concern. The main security of these central government owned thermal power station is provided by the Central Industrial Security Force (CISF). CISF is a statutory body set up under an Act of the Parliament of India and a central armed police force in India under the Ministry of Home Affairs (MHA) whose primary mission is to provide security to large institutions like FSPTS-I&II. Deployment of the CISF is done as per the security threat perception, survey and as per the guidelines of MHA. In addition to the CISF, certain security is provided by other local and national agencies for critically less sensitive locations as per the plant specific needs. In view of this Hon'ble Commission may please allow the projected claims of security expenses as submitted in Form 3A. The actual claims will be submitted at the time of truing up.
- It is humbly submitted that the capital spares on store issuance basis for the instant station will be claimed by the Petitioner at the time of truing up in Form 3A of Appendix-I.

The Farakka STPS-I&II has opposed wall firing in the boilers of the two 500 MW units. Accordingly, the weighted average specific oil consumption is considered as 0.81 ml/KWhr for Farakka STPS-I&II and Hon'ble Commission may please allow the same as per Regulation 70(D) of the Tariff Regulation 2024.

In the light of above submission and as per the Petition being filed by the Petitioner for revision of tariff of Farakka Super Thermal Power Station, Stage-I&II (1600 MW), The Hon'ble Commission may please approve revised tariff for the tariff period 2024-29 as per provision of Regulation 9(2) of Tariff Regulations 2024.

BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

PETITION NO.....

IN THE MATTER OF : Petition Under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-I&II of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 and Chapter-3, Regulation-9 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 for approval of tariff of **Farakka Super Thermal Power Station Stage-I & II (1600 MW) for the period from 01.04.2024 to 31.03.2029.**

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BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

PETITION NO.....

IN THE : Petition Under Section 62 and 79 (1) (a) of the
MATTER OF Electricity Act, 2003 read with Chapter-I&II of the
Central Electricity Regulatory Commission (Conduct
of Business) Regulations, 2023 and Chapter-3,
Regulation-9 of Central Electricity Regulatory
Commission (Terms and Conditions of Tariff)
Regulations, 2024 for approval of tariff of **Farakka
Super Thermal Power Station Stage-I&II (1600
MW) for the period from 01.04.2024 to 31.03.2029.**

AND
IN THE
MATTER OF

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

Respondents

1. West Bengal State Electricity
Distribution Company Limited
Company Limited Vidyut
Bhawan,
Block-DJ, Sector-II,
Salt Lake City, Kolkata –
700091
2. Bihar State Power Holding
Company Limited
(erstwhile Bihar State
Electricity Board)
Vidyut Bhawan, Bailey Road,
Patna – 800001
3. Jharkhand Bijli Vitran Nigam
Limited
(JBVNL) Engineering
Building,

HEC Township, Dhurwa,
Ranchi – 834004

4. Grid Corporation of Orissa
Limited
24, Janpath, Bhubaneswar –
751007
5. Haryana Power Purchase
Centre
Shakti Bhawan,
Sector – 6, Panchkula,
Haryana – 134109
6. Power Department, Govt. of
Sikkim
Govt. Of Sikkim
Kazi Road, Gangtok
Sikkim – 737101
7. Tamil Nadu Generation &
Distribution Corporation
Ltd.(TANGEDCO)
144, Anna Salai
Chennai - 600002
8. Punjab State Power
Corporation Limited (PSPCL)
THE MALL, PATIALA –
147001
9. Uttar Pradesh Power
Corporation Limited
Shakti Bhawan
14, Ashok Marg
Lucknow -226001
10. Power Development
Department, Govt of J&K
Govt. of J&K Secreteriat
Srinagar
11. Assam Power Distribution
Company Limited
Bijulee Bhawan, Paltan
Bazar
Guwahati – 782001

12. BSES Rajdhani Power Limited
BSES Bhawan, Nehru Place
New Delhi – 110019
13. BSES Yamuna Power Limited
Shakti Kiran Bldg.,
Karkardooma
Delhi
14. Tata Power Delhi Distribution Limited
33 KV Sub Station Bldg.
Hudson Lane, Kingsway
Camp
New Delhi
15. Rajasthan Urja Vikas Nigam Limited
Vidyut Bhawan Janpath
Jaipur -302005 (Rajasthan)

The Petitioner humbly states that:

- 1) The Petitioner herein NTPC Ltd. (hereinafter referred to as '**Petitioner**' or '**NTPC**'), is a company incorporated under provisions of the Company Act, 1956 and a Government Company as defined under Section 2(45) of the Companies Act, 2013. Further, NTPC is a 'Generating Company' as defined under Section 2(28) of the Electricity Act, 2003.
- 2) In terms of Section 79(1)(a) of Electricity Act, 2003, the Hon'ble Commission has been vested with the functions to regulate the tariff of NTPC, being a Generating Company owned and controlled by the Central Government. The regulation of the tariff of NTPC is as provided under Section 79(1)(a) read with Section 61, 62 and 64 of the Electricity Act, 2003 and the Regulations notified by the Hon'ble Commission in exercise of powers under Section 178 read with Section 61 of the Electricity Act, 2003.

- 3) The Petitioner is having power stations/ projects at different regions and places in the country. **Farakka Super Thermal Power Station Stage-I&II** (1600 MW) (hereinafter referred to as FSTPS Stage-I&II is one such station located in the State of West Bengal. The power generated from FSTPS Stage-I&II is being supplied to the respondents herein above.
- 4) The Hon'ble Commission has notified the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2024 (hereinafter 'Tariff Regulations 2024') which came into force from 01.04.2024, specifying the terms & conditions and methodology of tariff determination for the period 01.04.2024 to 31.03.2029.
- 5) Regulation 9(2) of Tariff Regulations 2024 provides as follows:
"(2) In case of an existing generating station or unit thereof, or transmission system or element thereof, the application shall be made by the generating company or the transmission licensee, as the case may be, by 30.11.2024 , based on admitted capital cost including additional capital expenditure already admitted and incurred up to 31.3.2024 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the tariff period 2024-29 along with the true up petition for the period 2019-24 in accordance with the CERC (Terms and Conditions of Tariff) Regulations, 2019."
In terms of above, the Petitioner is filing the present petition for determination of tariff for FSTPS Stage-I&II for the period from 01.04.2024 to 31.03.2029 as per the Tariff Regulations 2024.
- 6) The tariff of the FSTPS Stage-I&II for the tariff period 1.4.2019 to 31.3.2024 was determined by the Hon'ble Commission vide its order dated 25.08.2023 in Petition No.429/GT/2020 in accordance with the CERC (Terms & Conditions of Tariff) Regulations 2019. The petitioner vide affidavit dated 26.11.2024 had filed a separate true up petition for the period 01.04.2019 to 31.03.2024 for revision of tariff in line with the applicable provisions of Tariff Regulations 2019.

- 7) It is submitted that Hon'ble Commission vide order dated 25.08.2023 in Petition no 429/GT/2020 has allowed a capital cost of Rs 3406.48 Cr. as on 31.03.2024 based on the admitted projected capital expenditure for the 2019-24 period. However, the actual closing capital cost as on 31.03.2024 has been worked out in the foresaid true-up petition as Rs. 3544.06 Cr. based on the actual expenditure after truing up exercise for the period 2019-24. Accordingly, the Petitioner has adjusted an amount of Rs.137.58 Cr from the admitted capital cost as on 31.03.2024 and accordingly the opening capital cost as on 01.04.2024 has been considered as Rs 3544.06 Cr. in the instant petition. The Hon'ble Commission may be pleased to accordingly adopt this adjustment in the admitted capital cost as on 31.3.2024 and determine the tariff in the present petition for the period 2024-29.
- 8) The capital cost claimed in the instant petition is based on the opening capital cost as on 01.04.2024 considered as above and projected estimated capital expenditures claimed for the period 2024-29 under Regulation 19 and Regulation 24, 25 and 26 of the Tariff Regulations, 2024.
- 9) The Petitioner further respectfully submits that as per Regulation 36(1)(6) of the Tariff Regulations 2024, the water charges, security expenses, ash transportation expenses and capital spares consumed for thermal generating stations are to be allowed separately. The details in respect of water charges such as type of cooling water system, water consumption, rate of water charges as applicable for 2023-24 have been furnished below. In accordance with provision of the Regulations, the petitioner shall be furnishing the details of actual for the relevant year at the time of truing up and the same shall be subject to retrospective adjustment.

Description	Remarks
Type of Plant	Coal based station
Type of cooling water system	Open Cycle
Consumption of Water	570 Lakh m3
Rate of Water charges	Rs. 33.31 per 1000 galloon
Total Water Charges	Rs. 5018 lacs

- 10)** Similarly, the Petitioner is claiming the security & ash transportation expenses based on the estimated expenses for the period 2024-29, the same shall be subject to retrospective adjustment based on actuals at the time of true-up. In respect of capital spares consumption, it is submitted that the same shall be claimed at the time of true-up in terms of the proviso to the Regulation 36(1)(6) based on actual consumption of spares during the period 2024-29.
- 11)** However, it is submitted that the expenditure towards the ash transportation charges is recurring in nature and the Petitioner has been incurring ash transportation expenditure in its stations in the current tariff period also. In case the same is permitted to be recovered after the issuance of the tariff order for the period 2024-29, there will be additional liability on the beneficiary on account of the interest payment for the period till the time the tariff petitions for the period 2024-29 is decided. To avoid the interest payment liability of the beneficiaries, it is prayed that the petitioner may be allowed to recover/ pass on the ash transportation charges on a monthly basis subject to true-up at the end of the 2024-29 period.
- 12)** The petitioner humbly submits that petition no. 227/MP/2024 has been filed by the petitioner concerning Ash Transport Expenditure for its stations which is under active consideration of this Hon'ble Commission and the outcome of the said petition will be applicable to the instant petition also
- 13)** The Petitioner further respectfully submits that the wage/ salary revision of the employees of the Petitioner will be due with effect from 1.1.2027. As per Regulation 36(1)(8) of the Tariff Regulations 2024, the impact on account of implementation of wage/ pay revision

shall be allowed at the time of truing up of tariff. The Petitioner therefore craves liberty to approach the Hon'ble Commission for allowing the impact on account of implementation of wage/ pay revision of the employees of the Petitioner with effect from 1.1.2027, based on the actual payments whenever paid by it.

- 14)** The present petition is filed on the basis of norms specified in the Tariff Regulations 2024. It is submitted that the petitioner is in the process of installing the Emission Control Systems (ECS) in compliance of the Revised Emission Standards as notified by MOEF vide notification dated 07.12.2015 as amended. Completion of these schemes in compliance of revised emission norms will affect the Station APC, Heat Rate, O&M expenses etc. In addition, the availability of the unit/ station would be also affected due to shutdown of the units for installation of ECS. The petitioner would be approaching this Hon'ble Commission with the details in terms of the Regulation 29 of CERC (Terms& Conditions of Tariff) Regulations 2024.
- 15)** It is submitted that the Petitioner has already paid the requisite filing fee online on 24.04.24 for the year 2024-25 and the details of the same have been duly furnished to the Hon'ble Commission vide our letter dtd. 24.04.24. For the subsequent years, it shall be paid as per the provisions of the CERC (Payment of Fees) Regulations, 2012 as amended. Further Regulation 94 (1) of Tariff Regulations 2024 provides that the application fee and publication expenses may be allowed to be recovered directly from the beneficiaries at the discretion of the Hon'ble Commission. Accordingly, it is prayed that Hon'ble Commission may be pleased to allow recover filing fee and publication fee directly from the beneficiaries.

16) The petitioner has accordingly calculated the tariff for 2024-29 period based on the above and the same is enclosed as **Appendix-I** to this petition.

17)

18) The Petitioner humbly submits that the pay/wage revision for the employees of the Petitioner will be due wef 01.01.2027. Further, the wage/pay revision of CISF and Kendriya Vidyalaya employees will also be due for revision during the tariff period 2024-29. Regulation-36(1)(8) of CERC (Terms & Conditions of Tariff) Regulations-2024 provides as below:

“In the case of a generating company owned by the Central or State Government, the impact on account of implementation of wage or pay revision shall be allowed at the time of truing up of tariff.”

In accordance with the above said regulation, the Petitioner shall approach the Hon'ble Commission for allowing the impact of Pay/wage revision of employees of the Petitioner i.e. NTPC Limited, CISF and Kendriya Vidyalaya (wherever applicable) as additional O&M at the time of truing-up of tariff for the control period 2024-29. Hon'ble Commission may be pleased to consider the impact of wage/pay revision as an additional impact on O&M and allow the same as additional O&M over and above the normative O&M.

19) It is submitted the Petitioner has served the copy of the Petition on to the Respondents mentioned herein above and has posted the Petition on the company website i.e. www.ntpc.co.in.

- 20)** In accordance with the 'Conduct of Business Regulations 2023' of the Hon'ble Commission, the Petitioner shall, within 7 days after filing the tariff petition, publish a notice about such filing in at least two daily leading digital newspapers one in English language and another in any of the Indian languages, having wide circulation in each of the States and Union Territories where the beneficiaries are situated, as per Form 14 appended to these regulations. Subsequently, the Petitioner shall submit the proof of publications as soft copies of the publications under an affidavit through the e-filing portal of the Hon'ble Commission within one week from the date of publication. Further, the Petitioner shall also submit the detail of expenses incurred for publication of the notice along with the prayer for recovery of Publication Expenses as per Regulation-94 of CERC Tariff Regulations 2024.
- 21)** The filing fee for the instant Petition has been paid for FY 2024-25 online (reference attached as Annexure-A) on 24.04.24. as per Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012, as amended from time to time. For subsequent years, it shall be paid as per the provisions of CERC (Payment of Fee) Regulations 2012. Further, the proof of payment of fees is being submitted in Form I specified under Regulation 12 of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012, as amended from time to time. Hon'ble Commission may be pleased to take the above into consideration and allow the recovery of filing fee for the instant station as per Regulation-94 of CERC Tariff Regulations 2024.

- 22) It is submitted that the petitioner is filing this tariff petition subject to the outcome of its various appeals/ petitions pending before different courts. Besides, the petitions filed by NTPC for determination of capital base as on 31.3.2019 through true-up exercise are pending before the Hon'ble Commission and would take some time. The Petitioner, therefore, reserves its right to amend the tariff petition as per the outcome in such appeals/ petitions, if required.

Prayers

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

- i) Approve tariff of Farakka Super Thermal Power Station Stage-I&II (1600 MW) for the tariff period 01.04.2024 to 31.03.2029.
- ii) Allow the recovery of filing fees as & when paid to the Hon'ble Commission and publication expenses from the beneficiaries.
- iii) Allow reimbursement of Ash Transportation Charges directly from the beneficiaries on monthly basis, subject to true up.
- iv) Allow the recovery of pay/wage revision as additional O&M over and above the normative O&M.
- v) Consider station heat rate based on design heat rate with applicable operating margin.
- vi) Pass any other order as it may deem fit in the circumstances mentioned above.

Petitioner

Noida

BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

PETITION NO.....

IN THE MATTER OF



: Petition Under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-III of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 and Chapter-3, Regulation-9 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 for approval of tariff Farakka Super Thermal Power Station Stage-I&II for the period from 01.04.2024 to 31.03.2029

AND
IN THE MATTER OF

Petitioner:

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

Respondents:

1. West Bengal State Electricity Distribution Company Limited, Vidyut Bhawan, Block-DJ, Sector-II, Salt Lake City, Kolkata -700091 and Others

AFFIDAVIT

I, Prashant Chaturvedi, S/o Dr. S.C. Chaturvedi, aged about 48 years, working as Additional General Manager (Commercial) at NTPC Limited, having my office at 7th Floor, EOC, Sector- 24, Noida- 201301, do hereby solemnly affirm and state as under:

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.



प्रशांत चतुर्वेदी / PRASHANT CHATURVEDI
अतिरिक्त प्रबंधक (वाणिज्यिक)
Additional General Manager (Commercial)
एन टी पी लिमिटेड / NTPC LIMITED
EOC, A-8A, Sector-24, NOIDA-201301

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 instruction and the contents of the same are true and correct to the best of my knowledge and belief.
3. That the annexures annexed to the Petition are correct and true copies of the respective originals.
4. 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.

प्रशान्त चतुर्वेदी/PRASHANT CHATURVEDI
 अपर महाप्रबन्धक (वाणिज्यिक)
 Addl. General Manager (Commercial)
 एन टी पी सी लिमिटेड / NTPC LIMITED
 EOC, A-8A, Sector-24, NOIDA-201301

Verification:

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

Verified at Noida (UP) on this day of 2024.

Chaturvedi
 (Deponent)

प्रशान्त चतुर्वेदी/PRASHANT CHATURVEDI
 अपर महाप्रबन्धक (वाणिज्यिक)
 Addl. General Manager (Commercial)
 एन टी पी सी लिमिटेड / NTPC LIMITED
 EOC, A-8A, Sector-24, NOIDA-201301



ATTESTED
 ✓
 YOGENDRA SINGH
 NOTARY NOIDA
 3 B NAGAR (U.P.) INDIA

27 NOV 2024

TARIFF FILING FORMS (THERMAL)

FOR DETERMINATION OF TARIFF

FOR

Farakka Super Thermal power Station Stage-I&II

(From 01.04.2024 to 31.03.2029)

PART-I

APPENDIX-I

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

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

Provided yearwise for the period 2019-24

** Additional Forms

PART-I

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

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

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

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

List of supporting documents for tariff filing for Thermal Stations		
S. No.	Information / Document	Tick
1	Certificate of incorporation, Certificate for Commencement of Business, Memorandum of Association, & Articles of Association (For New Station setup by a company making tariff application for the first time to CERC)	NA
2	A. Station wise and Corporate audited Balance Sheet and Profit & Loss Accounts with all the Schedules & annexures on COD of the Station for the new station & for the relevant years. B. Station wise and Corporate audited Balance Sheet and Profit & Loss Accounts with all the Schedules & annexures for the existing station for relevant years.	*
3	Copies of relevant loan Agreements	NA
4	Copies of the approval of Competent Authority for the Capital Cost and Financial package.	NA
5	Copies of the Equity participation agreements and necessary approval for the foreign equity.	NA
6	Copies of the BPSA/PPA with the beneficiaries, if any	NA
7	Detailed note giving reasons of cost and time over run, if applicable. List of supporting documents to be submitted: a. Detailed Project Report b. CPM Analysis c. PERT Chart and Bar Chart d. Justification for cost and time Overrun	NA
8	Generating Company shall submit copy of Cost Audit Report along with cost accounting records, cost details, statements, schedules etc. for the Generating Unit wise /stage wise/Station wise/ and subsequently consolidated at Company level as submitted to the Govt. of India for first two years i.e. 2019-20 and 2020-21 at the time of mid-term true-up in 2021-22 and for balance period of tariff period 2019-24 at the time of final true-up in 2024-25. In case of initial tariff filing the latest available Cost Audit Report should be furnished.	*
9	Any other relevant information, (Please specify)	
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
*	Information shall be provided at the time of true up	
Note	1: Electronic copy of the petition (in words format) and detailed calculation as per these formats (in excel format) and any other information submitted has to be uploaded in the e-filing website and shall also be furnished in pen drive/flash drive.	

Summary of Tariff

Name of the Petitioner:	NTPC Limited
Name of the Generating Station:	Farakka Super Thermal power Station Stage-I&II
Place (Region/District/State):	Eastern Region/ Murshidabad/ West Bengal

Amount in Rs. Lakhs

S. No.	Particulars	Unit	Existing 2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7	8	9
1.1	Depreciation	Rs Lakh	8,409.15	3,997.24	986.24	4,065.82	9,441.39	4,807.21
1.2	Interest on Loan	Rs Lakh	0.00	-	-	128.76	128.34	-
1.3	Return on Equity	Rs Lakh	19,626.30	19,940.07	20,035.66	20,339.71	20,783.93	21,084.89
1.4	Interest on Working Capital	Rs Lakh	16,009.69	15,748.92	15,893.44	15,851.66	15,692.85	15,827.60
1.5	O&M Expenses	Rs Lakh	1,03,922.23	98791.53	102618.26	100702.63	95815.29	99801.03
1.6	Special Allowance (If applicable)	Rs Lakh	15,200.00	17,200.00	17,200.00	17,200.00	17,200.00	17,200.00
1.7	Compensation Allowance (If applicable – relevant for column 4 only)	Rs. Lakh						
	Total	Rs Lakh	163167.37	155677.77	156733.60	158288.58	159061.80	158720.74
2.1	Landed Fuel Cost (coal/gas/RLNG/ liquid)	Rs/Ton				5,136.71		
	(%) of Fuel Quantity	(%)				100		
2.2	Landed Fuel Cost (coal from Integrated mine) as per FSA, if any, approved by beneficiaries or as per allocation of coal quantity	Rs/Ton						
	(%) of Fuel Quantity	(%)						
2.3	Landed Fuel Cost Imported Coal					NA		
	(%) of Fuel Quantity							
2.4	Landed Fuel Cost (coal/gas /RLNG/liquid) other than FSA	Rs/Ton				NA		
	(%) of Fuel Quantity	(%)						
2.5	Landed Fuel Cost Imported Coal other than FSA.					NA		
	(%) of Fuel Quantity							
3	Secondary Fuel							
	Secondary fuel oil cost	Rs/Unit				0.049		
	Energy Charge Rate ex-bus (Paise/kWh)	Rs/Unit				3.432		

(Petitioner)

PART-I FORM- 1(I)						
Name of the Petitioner:		NTPC Limited				
Name of the Generating Station:		Farakka Super Thermal power Station Stage-I&II				
Amount in Rs. Lakhs						
Statement showing claimed capital cost – (A+B)						
S. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7
1	Opening Capital Cost	3,54,405.61	3,57,535.42	3,57,798.63	3,68,327.66	3,73,566.21
2	Add: Addition during the year/period	3,129.81	263.21	10,529.03	5,238.56	5,444.13
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	3,57,535.42	3,57,798.63	3,68,327.66	3,73,566.21	3,79,010.34
7	Average Capital Cost	3,55,970.51	3,57,667.02	3,63,063.14	3,70,946.94	3,76,288.28
Statement showing claimed capital cost eligible for RoE at normal rate (A)						
S. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7
1	Opening Capital Cost	354405.61	357535.42	357798.63	368327.66	373566.21
2	Add: Addition during the year / period	3129.81	263.21	10529.03	5238.56	5444.13
3	Less: De-capitalisation during the year / period	0.00	0.00	0.00	0.00	0.00
4	Less: Reversal during the year / period	0.00	0.00	0.00	0.00	0.00
5	Add: Discharges during the year / period	0.00	0.00	0.00	0.00	0.00
6	Closing Capital Cost	357535.42	357798.63	368327.66	373566.21	379010.34
7	Average Capital Cost	355970.51	357667.02	363063.14	370946.94	376288.28
Statement showing claimed capital cost eligible for RoE at one year MCLR + 350 bps subject to ceiling of 14.00% (B)						
S. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7
1	Opening Capital Cost	0.00	0.00	0.00	0.00	0.00
2	Add: Addition during the year / period	0.00	0.00	0.00	0.00	0.00
3	Less: De-capitalisation during the year / period	0.00	0.00	0.00	0.00	0.00
4	Less: Reversal during the year / period	0.00	0.00	0.00	0.00	0.00
5	Add: Discharges during the year / period	0.00	0.00	0.00	0.00	0.00
6	Closing Capital Cost	0.00	0.00	0.00	0.00	0.00
7	Average Capital Cost	0.00	0.00	0.00	0.00	0.00

(Petitioner)

Name of the Petitioner:

NTPC Limited

Name of the Generating Station:

Farakka Super Thermal power Station Stage-I&II

Statement showing Return on Equity at Normal Rate

Amount in Rs. Lakhs

S. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7
	Return on Equity					
1	Gross Opening Equity (Normal)	1,05,696.38	1,06,635.32	1,06,714.28	1,09,872.99	111444.5612
2	Less: Adjustment in Opening Equity	-				
3	Adjustment during the year		0.00	0.00	0.00	0.00
4	Net Opening Equity (Normal)	1,05,696.38	1,06,635.32	1,06,714.28	1,09,872.99	1,11,444.56
5	Add: Increase in equity due to addition during the year / period	938.94	78.96	3158.71	1571.57	1633.24
7	Less: Decrease due to De-capitalisation during the year / period	0.00	0.00	0.00	0.00	0.00
8	Less: Decrease due to reversal during the year / period	0.00	0.00	0.00	0.00	0.00
9	Add: Increase due to discharges during the year / period	0.00	0.00	0.00	0.00	0.00
10	Net closing Equity (Normal)	1,06,635.32	1,06,714.28	1,09,872.99	1,11,444.56	1,13,077.80
11	Average Equity (Normal)	1,06,165.85	1,06,674.80	1,08,293.64	1,10,658.78	1,12,261.18
12	Rate of ROE (%)	18.782	18.782	18.782	18.782	18.782
13	Total ROE	19,940.07	20,035.66	20,339.71	20,783.93	21,084.89

(Petitioner)

Name of the Petitioner:	NTPC Limited
Name of the Generating Station:	Farakka Super Thermal power Station Stage-I&II

Statement showing Return on Equity linked to SBI MCLR

Amount in Rs. Lakhs

S. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7
	Return on Equity (beyond the original scope of work including additional capitalization due to Change in Law, ECS, Force Majeure)					
1	Gross Opening Equity (Normal)	0.00	0.00	0.00	0.00	0.00
2	Less: Adjustment in Opening Equity	0.00	0.00	0.00	0.00	0.00
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 / period	0.00	0.00	0.00	0.00	0.00
7	Less: Decrease due to De-capitalisation during the year / period	0.00	0.00	0.00	0.00	0.00
8	Less: Decrease due to reversal during the year / period	0.00	0.00	0.00	0.00	0.00
9	Add: Increase due to discharges during the year / period	0.00	0.00	0.00	0.00	0.00
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	0.00
12	Rate of ROE (%)	-	-	-	-	0.000
13	Total ROE	0.00	0.00	0.00	0.00	0.00

(Petitioner)

Plant Characteristics

Name of the Petitioner		NTPC Ltd.				
Name of the Generating Station		Farakka STPS- I & II (1600 MW)				
Unit(s)/Block(s)/Parameters	Unit-I	Unit-II	Unit-III	Unit -IV	Unit-V	
Installed Capacity (MW)	200	200	200	500	500	
Schedule COD as per Investment Approval						
Actual COD	01.11.86	01.10.87	01.09.88	01.07.96	01.04.95	
Pit Head or Non Pit Head	Pit Head	Pit Head	Pit Head	Pit Head	Pit Head	
Name of the Boiler Manufacture	BHEL	BHEL	BHEL	ANSALDO	ANSALDO	
Name of Turbine Generator Manufacture	KWU	KWU	KWU	BHEL	BHEL	
Main Steams Pressure at Turbine inlet (kg/Cm²) abs.	Not Applicable					
Main Steam Temperature at Turbine inlet (°C)						
Reheat Steam Pressure at Turbine inlet (kg/Cm2)						
Reheat Steam Temperature at Turbine inlet (°C)						
Main Steam flow at Turbine inlet under MCR condition (tons /hr)						
Main Steam flow at Turbine inlet under VWO condition (tons /hr)						
Unit Gross electrical output under MCR /Rated condition (MW)						
Unit Gross electrical output under VWO condition (MW)						
Guaranteed Design Gross Turbine Cycle Heat Rate (kCal/kWh)						
Conditions on which design turbine cycle heat rate guaranteed						
% MCR						
% Makeup Water Consumption						
Design Capacity of Make up Water System						
Design Capacity of Inlet Cooling System						
Design Cooling Water Temperature (°C)						
Back Pressure						
Steam flow at super heater outlet under BMCR condition (tons/hr)						
Steam Pressure at super heater outlet under BMCR condition) (kg/Cm ²						
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	NA	NA	NA	NA	NA	
Type of cooling system	Once Through Cooling					
Type of Boiler Feed Pump	MDBFP	MDBFP	MDBFP	TDBFP	TDBFP	
Fuel Details						
-Primary Fuel	Coal	Coal	Coal	Coal	Coal	
-Secondary Fuel	HFO	HFO	HFO	HFO	HFO	
-Alternate Fuels	NA	NA	NA	NA	NA	
Special Features/Site Specific Features	Merry-Go-Round					
Special Technological Features						
Environmental Regulation related features	FGD under implimentation					
Any other special features						
Petitioner						

Normative parameters considered for tariff computations

Name of the Petitioner:	NTPC Limited
Name of the Generating Station:	Farakka Super Thermal power Station Stage-I&II

(Year Ending March)

Particulars	Unit	Existing 2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7	8
Base Rate of Return on Equity \$\$	%	15.50	15.50	15.50	15.50	15.50	15.50
Base Rate of Return on Equity on Add. Capitalization	%	-	7.7607	7.7662	7.7662	7.7928	7.7358
Effective Tax Rate	%	17.4720	17.4720	17.4720	17.4720	17.4720	17.4720
Target Availability	%	85.00	83.00	83.00	83.00	83.00	83.00
Peak Hours	%	85.00	83.00	83.00	83.00	83.00	83.00
Off Peak Hours	%	85.00	83.00	83.00	83.00	83.00	83.00
β- Average Monthly Frequency Response Performance ##	0-1						
Auxiliary Energy Consumption ***	%	6.78	6.470	6.470	6.470	6.470	6.470
Gross Station Heat Rate	kCal/kWh	2405.00	2390.00	2390.00	2390.00	2390.00	2390.00
Specific Fuel Oil Consumption	ml/kWh	0.50	0.81	0.81	0.81	0.81	0.81
Cost of Coal/Lignite for WC1	in Days	40	40	40	40	40	40
Cost of Main Secondary Fuel Oil for WC1	in Months	2	2	2	2	2	2
Fuel Cost for WC2	in Months						
Liquid Fuel Stock for WC2	in Months						
O&M Expenses	Rs lakh/MW	30.34	32.32625	34.02625	35.81125	37.69125	39.66625
Maintenance Spares for WC	% of O&M	20.00	20.00	20.00	20.00	20.00	20.00
Receivables for WC	in Days	45	45	45	45	45	45
Storage capacity of Primary fuel *	MT	825000	825000	825000	825000	825000	825000
SBI 1 Year MCLR plus 325 basis point	%	12.00	11.90	11.90	11.90	11.90	11.90
Blending ratio of domestic coal/imported coal							
Norms for consumption of reagent							
Specific Limestone consumption for Wet Limestone FGD							
Specific Limestone consumption for Lime Spray Dryer or Semi-dry FGD							
Specific consumption of sodium bicarbonate							
Specific Limestone consumption for CFBC based generating station							
specific urea consumption of the SNCR							
Specific ammonia consumption of the SCR							
Transit and Handling Losses of coal or lignite, as applicable							

** Rate of Return on Add - cap beyond original scope and excluding Change in Law
 \$\$ Additional RoE due to better ramp rate would be claimed at the time of true-up or as per guidelines to be issued
 * storage capacity of Simhadri Stage-I & II Combined
 *** APC has been considered as per para 9 & 14 of the Petition
 ## To be submitted at the time of truing up based on RPC certification

Petitioner

**Part-I
FORM-3A
ADDITIONAL FORM**

Calculation of O&M Expenses

Name of the Company :	NTPC Limited
Name of the Power Station :	Farakka Super Thermal power Station Stage-I&II

Amount in Rs. Lakhs

S.No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7
1	O&M expenses under Reg.36(1)					
1a	Normative	51722.00	54442.00	57298.00	60306.00	63466.00
2	O&M expenses under Reg.36(6)					
2a	Water Charges **	5253.09	5404.72	5900.56	6418.11	6957.38
2b	Security expenses **	4387.23	4634.70	4894.54	5167.37	5453.84
2c	Capital Spares***	0.00	0.00	0.00	0.00	0.00
3	O&M expenses-Ash Transportation**	37429.21	38136.84	32609.52	23923.81	23923.81
	Total O&M Expenses	98791.53	102618.26	100702.63	95815.29	99801.03

** Subject to true up

*** Shall be provided at the truing up

Petitioner

Computation of Special Allowance

Name of the Company : NTPC Limited

Name of the Power Station : Farakka Super Thermal power Station Stage-I&II

Rate of Special allowance @lakh/MW/year **10.75**

(Rs. Lakh)

Unit No.	Capacity (MW)	Date of COD	Year of completion of useful life of 25 yrs.	Special Allowance as per Clause 28					
				Existing 2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
1	200	1-Nov-86	2011-12	1900.00	2150.00	2150.00	2150.00	2150.00	2150.00
2	200	1-Oct-87	2012-13	1900.00	2150.00	2150.00	2150.00	2150.00	2150.00
3	200	1-Sep-88	2013-14	1900.00	2150.00	2150.00	2150.00	2150.00	2150.00
4	500	1-Jul-96	2021-22	4750.00	5375.00	5375.00	5375.00	5375.00	5375.00
5	500	1-Apr-95	2020-21	4750.00	5375.00	5375.00	5375.00	5375.00	5375.00
Year wise Total for the Station				15200.00	17200.00	17200.00	17200.00	17200.00	17200.00

Petitioner

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

BP NO 5050000561		TRANCHE NO T00001	D00010
Unsecured Loan From HDFC Bank Ltd. V			
Source of Loan :	HDFC Bank Ltd. V		
Currency :	INR		
Amount of Loan :	25,00,00,00,000		
Total Drawn amount :	7,30,00,00,000		
Date of drawl	26.09.2018		
Interest Type :	Floating		
Fixed Interest Rate :			
Base Rate, If Floating Interest	8.45%		
Margin, If Floating Interest :	NIL		
Are there any Caps/ Floor :	Y/N		
Frequency of Intt. Payment	MONTHLY		
If Above is yes, specify Caps/ Floor :			
Moratorium Period :	6 Years		
Moratorium effective from :	26.09.2018		
Repayment Period (Inc Moratorium) :	15 Years		
Repayment Frequency :	9 Yearly Instalment		
Repayment Type :	AVG		
First Repayment Date :	25.09.2024		
Base Exchange Rate :	RUPEE		
Date of Base Exchange Rate :	N.A.		
Project Code	Project Name		Amount
	BARH-I		60,00,00,000
	BONGAIGAON		12,00,00,000
	LARA-I		2,35,00,00,000
	SOLAPUR		37,00,00,000
	TAPOVAN VISHNUGARH		25,00,00,000
	TELANGANA		80,00,00,000
	KHARGONE		1,35,00,00,000
	GADARWARA		85,00,00,000
	FARAKKA		61,00,00,000
Total Allocated Amount			7,30,00,00,000

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

BP NO 5050000661		TRANCHE NO T00001	D00004
Unsecured Loan From SBI-XI			
Source of Loan :	SBI-XI		
Currency :	INR		
Amount of Loan :	50,00,00,00,000		
Total Drawn amount :	8,00,00,00,000		
Date of Drawal:	22.11.2018		
Interest Type :	Floating		
Fixed Interest Rate :	-----		
Base Rate, If Floating Interest	8.35%		
Margin, If Floating Interest :	0.00%		
Are there any Caps/ Floor :	Y/N		
Frequency of Intt. Payment	Monthly		
If Above is yes, specify Caps/ Floor :			
Moratorium Period :	3 Years		
Moratorium effective from :	22.11.2018		
Repayment Period (Inc Moratorium) :	12 Years		
Repayment Frequency :	9 Yearly Installments		
Repayment Type :	AVG		
First Repayment Date :	01.10.2022		
Base Exchange Rate :	RUPEE		
Date of Base Exchange Rate :	N.A.		
Project Code	Project Name	Amount	
	BARH-I	40,00,00,000	
	TAPOVAN VISHNUGARH	11,00,00,000	
	BONGAIGAON	11,00,00,000	
	SOLAPUR	20,00,00,000	
	LARA-I	50,00,00,000	
	GADARWARA	55,00,00,000	
	NORTH KARANPURA	36,00,00,000	
	DARLIPALLI	40,00,00,000	
	TANDA-II	10,00,00,000	
	KHARGONE	75,00,00,000	
	TELANGANA	75,00,00,000	
	TALAIPALI COAL MINE	7,00,00,000	
	RAMAGUNDAM I & II R&M	36,00,00,000	
	VINDHYACHAL R&M	14,00,00,000	
	FARAKKA R&M	10,00,00,000	
	KAHALGAON R&M	10,00,00,000	
	KHARGONE	2,00,00,00,000	
	TELANGANA	1,00,00,00,000	
Total Allocated Amount			8,00,00,00,000.00

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

BP NO 5050000442		TRANCHE NO T00001	D0001
Unsecured Loan From SBI-VIII			
Source of Loan :	SBI-VIII		
Currency :	INR		
Amount of Loan :	1,00,00,00,00,000		
Total Drawn amount :	5,00,00,00,000		
Date of Drawal:	21.01.2015		
Interest Type :	Floating		
Fixed Interest Rate :	-----		
Base Rate, If Floating Interest	D0001-3-8.25%		
Margin, If Floating Interest :			
Are there any Caps/ Floor :	Y/N		
Frequency of Intt. Payment	Monthly		
If Above is yes, specify Caps/ Floor :			
Moratorium Period :	6 Years		
Moratorium effective from :	21.01.2015		
Repayment Period (Inc Moratorium) :	15 Years		
Repayment Frequency :	9 Yearly Installments		
Repayment Type :	AVG		
First Repayment Date :	31.01.2022		
Base Exchange Rate :	RUPEE		
Date of Base Exchange Rate :	N.A.		
Project Code	Project Name	Amount	
	BARH-I	1,00,00,00,000	
	FARAKKA R&M	25,00,00,000	
	TSTPP R&M	40,00,00,000	
	SINGRAULI R&M	40,00,00,000	
	RAMAGUNDAM R&M	50,00,00,000	
	KAWAS R&M	60,00,00,000	
	KORBA R&M	60,00,00,000	
	GANDHAR R&M	1,25,00,00,000	
Total Allocated Amount			5,00,00,00,000.00

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

BP NO 5050000531		TRANCHE NO T00001	D0010
Unsecured Loan From SBI-IX			
Source of Loan :	SBI-IX		
Currency :	INR		
Amount of Loan :	30,00,00,00,000		
Total Drawn amount :	13,70,00,00,000		
Date of Drawal:	29.06.2018		
Interest Type :	Floating		
Fixed Interest Rate :	-----		
Base Rate, If Floating Interest	8.25%		
Margin, If Floating Interest :	0.00%		
Are there any Caps/ Floor :	Y/N		
Frequency of Intt. Payment	Monthly		
If Above is yes, specify Caps/ Floor :			
Moratorium Period :	3 Years		
Moratorium effective from :	29.06.2018		
Repayment Period (Inc Moratorium) :	12 Years		
Repayment Frequency :	9 Yearly Installments		
Repayment Type :	AVG		
First Repayment Date :	31.03.2021		
Base Exchange Rate :	RUPEE		
Date of Base Exchange Rate :	N.A.		
Project Code	Project Name	Amount	
	CC F&A	6,85,00,00,000	
	BARH-I	40,00,00,000	
	TAPOVAN VISHNUGARH	15,00,00,000	
	BONGAIGAON	15,00,00,000	
	SOLAPUR	20,00,00,000	
	LARA-I	55,00,00,000	
	GADARWARA	1,00,00,00,000	
	NORTH KARANPURA	60,00,00,000	
	DARLIPALLI	45,00,00,000	
	TANDA II	60,00,00,000	
	RAMMAM	10,00,00,000	
	KHARGONE	75,00,00,000	
	TELANGANA	75,00,00,000	
	TTPS R&M	10,00,00,000	
	VINDHYACHAL R&M	10,00,00,000	
	FARAKKA R&M	50,00,00,000	
	DADRI GAS R&M	45,00,00,000	
Total Allocated Amount			13,70,00,00,000.00

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

BP NO 5050000571		TRANCHE NO T00001	D00003
Unsecured Loan From Punjab National Bank-III			
Source of Loan :	Punjab National Bank-III		
Currency :	INR		
Amount of Loan :	20,00,00,00,000		
Total Drawn amount :	5,00,00,00,000		
Date of Drawl	13.08.2018		
Interest Type :	Floating		
Fixed Interest Rate :			
Base Rate, If Floating Interest	8.30%		
Margin, If Floating Interest :	0.00%		
Are there any Caps/ Floor :	Y/N		
Frequency of Intt. Payment	MONTHLY		
If Above is yes, specify Caps/ Floor :			
Moratorium Period :	3 Years		
Moratorium effective from :	13.08.2018		
Repayment Period (Inc Moratorium) :	12 Years		
Repayment Frequency :	9 Yearly Instalment		
Repayment Type :	AVG		
First Repayment Date :	01.02.2022		
Base Exchange Rate :	RUPEE		
Date of Base Exchange Rate :	N.A.		
Project Code	Project Name		Amount
	BARH-I		30,00,00,000.00
	SOLAPUR		20,00,00,000.00
	TANDA-II		20,00,00,000.00
	TALLAIPALLI		50,00,00,000.00
	SINGRAULI R&M		80,00,00,000.00
	FARAKKA R&M		80,00,00,000.00
	RIHAND R&M		50,00,00,000.00
	DADRI GAS R&M		40,00,00,000.00
	KORBA R&M		40,00,00,000.00
	RAMAGUNDAM R&M		40,00,00,000.00
	VINDHAYACHAL R&M		30,00,00,000.00
	UNCHAHR R&M		20,00,00,000.00
Total Allocated Amount			5,00,00,00,000.00

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

BP NO 5050000791	TRANCHE NO T00001	D00002
Unsecured Loan From HDFC Bank Ltd. VII		
Source of Loan :	HDFC Bank Ltd. VII	
Currency :	INR	
Amount of Loan :	25,00,00,00,000	
Total Drawn amount :	5,00,00,00,000	
Date of drawl	21.06.2019	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	8.40%	
Margin, If Floating Interest :	NIL	
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	MONTHLY	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	6 Years	
Moratorium effective from :	21.06.2019	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	9 Yearly Instalment	
Repayment Type :	AVG	
First Repayment Date :	11.06.2026	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	NCPS-FGD	10,00,00,000
	FSTPS R&M	10,00,00,000
	KORBA-R&M	10,00,00,000
	SOLAPUR	50,00,00,000
	MOUDA-II	50,00,00,000
	TELANGANA	30,00,00,000
	Singrauli-R&M	30,00,00,000
	Simhadri-R&M	15,00,00,000
	Korba-R&M	10,00,00,000
	Ramagundam-R&M	10,00,00,000
	VSTPS R&M	10,00,00,000
	TANDA-II	30,00,00,000
	DARLIPALLI	30,00,00,000
	NORTH KARANPURA	30,00,00,000
	GADARWARA	40,00,00,000
	LARA-I	15,00,00,000
	BARH-I	1,20,00,00,000
Total Allocated Amount		5,00,00,00,000

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

BP NO 5050000791		TRANCHE NO T00001	D00003
Unsecured Loan From HDFC Bank Ltd. VII			
Source of Loan :	HDFC Bank Ltd. VII		
Currency :	INR		
Amount of Loan :	25,00,00,00,000		
Total Drawn amount :	1,70,00,00,000		
Date of drawl	01.01.2020		
Interest Type :	Floating		
Fixed Interest Rate :			
Base Rate, If Floating Interest	7.65%		
Margin, If Floating Interest :	NIL		
Are there any Caps/ Floor :	Y/N		
Frequency of Intt. Payment	MONTHLY		
If Above is yes, specify Caps/ Floor :			
Moratorium Period :	6 Years		
Moratorium effective from :	01.01.2020		
Repayment Period (Inc Moratorium) :	15 Years		
Repayment Frequency :	9 Yearly Instalment		
Repayment Type :	AVG		
First Repayment Date :	11.06.2026		
Base Exchange Rate :	RUPEE		
Date of Base Exchange Rate :	N.A.		
Project Code	Project Name		Amount
	KORBA R&M		20,00,00,000
	RAMAGUNDAM R&M		40,00,00,000
	VINDHYACHAL R&M		40,00,00,000
	FARAKKA R&M		30,00,00,000
	UNCHAHAR R&M		10,00,00,000
	RIHAND R&M		10,00,00,000
	TSTPP R&M		10,00,00,000
	KAHALGAON R&M		10,00,00,000
Total Allocated Amount			1,70,00,00,000

BP NO 5050000981		TRANCHE NO T00001	D00008
Unsecured Loan From HDFC Bank Ltd. IX			
Source of Loan :	HDFC Bank Ltd. IX		
Currency :	INR		
Amount of Loan :	50,00,00,00,000		
Total Drawn amount :	5,00,00,00,000		
Date of drawl	18.11.2020		
Interest Type :	Floating		
Fixed Interest Rate :			
Base Rate, If Floating Interest	5.95%		
Margin, If Floating Interest :	NIL		
Are there any Caps/ Floor :	Y/N		
Frequency of Intt. Payment	MONTHLY		
If Above is yes, specify Caps/ Floor :			
Moratorium Period :	3 Years		
Moratorium effective from :	18.11.2020		
Repayment Period (Inc Moratorium) :	15 Years		
Repayment Frequency :	12 Yearly Instalment		
Repayment Type :	AVG		
First Repayment Date :	30.06.2024		
Base Exchange Rate :	RUPEE		
Date of Base Exchange Rate :	N.A.		
Project Code	Project Name	Amount	
	BARH I	1,75,00,00,000.00	
	BARAUNI-II	25,00,00,000.00	
	SOLAPUR	20,00,00,000.00	
	TTPS R&M	1,00,00,000.00	
	SINGRAULI R&M	15,00,00,000.00	
	KORBA R&M	15,00,00,000.00	
	RAMAGUNDAM I & II R&M	43,50,00,000.00	
	VINDHYACHAL R&M	18,00,00,000.00	
	FARAKKA R&M	12,00,00,000.00	
	UNCHAHAR R&M	16,00,00,000.00	
	RIHAND R&M	16,00,00,000.00	
	FARIDABAD R&M	1,50,00,000.00	
	DADRI GAS R&M	3,00,00,000.00	
	TSTPP R&M	11,50,00,000.00	
	KAHALGAON R&M	16,00,00,000.00	
	SIMHADRI R&M	1,50,00,000.00	
	CHATTI BARIATU CMB	25,00,00,000.00	
	TALAIPALI COAL MINE	75,00,00,000.00	
	KIRENDARI	10,00,00,000.00	
Total Allocated Amount		5,00,00,00,000	

BP NO 5050000981		TRANCHE NO T00001		D00010
Unsecured Loan From HDFC Bank Ltd. IX				
Source of Loan :	HDFC Bank Ltd. IX			
Currency :	INR			
Amount of Loan :	50,00,00,00,000			
Total Drawn amount :	6,83,00,00,000			
Date of drawl	24.12.2020			
Interest Type :	Floating			
Fixed Interest Rate :				
Base Rate, If Floating Interest	5.95%			
Margin, If Floating Interest :	NIL			
Are there any Caps/ Floor :	Y/N			
Frequency of Intt. Payment	MONTHLY			
If Above is yes, specify Caps/ Floor :				
Moratorium Period :	3 Years			
Moratorium effective from :	24.12.2020			
Repayment Period (Inc Moratorium) :	15 Years			
Repayment Frequency :	12 Yearly Instalment			
Repayment Type :	AVG			
First Repayment Date :	30.06.2024			
Base Exchange Rate :	RUPEE			
Date of Base Exchange Rate :	N.A.			
Project Code	Project Name	Amount		
	TANDA-II	7,50,00,000.00		
	BARH I	68,00,00,000.00		
	NORTH KARANPURA	50,00,00,000.00		
	GADARWARA	50,00,00,000.00		
	LARA-I	30,00,00,000.00		
	DARLIPALLI	10,00,00,000.00		
	KHARGONE	84,00,00,000.00		
	TAPOVAN VISHNUGARH	25,00,00,000.00		
	RAMMAM	15,00,00,000.00		
	BARAUNI-II	3,00,00,000.00		
	RAMAGUNDAM FLOATING S	9,00,00,000.00		
	BILHAUR SOLAR 140MW	6,00,00,000.00		
	BILHAUR SOLAR 85MW	13,00,00,000.00		
	AURAIYA SOLAR 20MW	3,20,00,000.00		
	SIMHADRI FLOATING	1,50,00,000.00		
	KAYAMKULAM FS (22 MW)	4,00,00,000.00		
	JETSAR SOLAR	2,00,00,000.00		
	FATEHGARH (296MW)	60,00,00,000.00		
	BONGAIGAON	60,00,00,000.00		
	SOLAPUR	10,00,00,000.00		
	KORBA R&M	10,00,00,000.00		
	VINDHYACHAL R&M	5,30,00,000.00		
	FARAKKA R&M	2,50,00,000.00		
	KIRENDARI	4,00,00,000.00		
	PAKRI BARWADIH CMB	1,50,00,00,000.00		
Total Allocated Amount				6,83,00,00,000

Form 8		
BP NO 5050001151	TRANCHE NO T00001	D00002
Unsecured Loan From HDFC Bank Ltd. X		
Source of Loan :	HDFC Bank Ltd. X	
Currency :	INR	
Amount of Loan :	30,00,00,00,000	
Total Drawn amount :	5,00,00,00,000	
Date of drawl	24.11.2021	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	5.83%	
Margin, If Floating Interest :	NIL	
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	MONTHLY	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	3 Years	
Moratorium effective from :	24.11.2021	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	12 Yearly Instalment	
Repayment Type :	AVG	
First Repayment Date :	24.11.2025	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	NORTH KARANPURA	24,00,00,000.00
	RAMMAM	3,00,00,000.00
	TELANGANA	23,00,00,000.00
	LARA	50,00,00,000.00
	GADARWARA	50,00,00,000.00
	DARLIPALLI	77,00,00,000.00
	TANDA-II	65,00,00,000.00
	BARAUNI-II	20,00,00,000.00
	SINGRAULI R&M	15,00,00,000.00
	KORBA R&M	25,00,00,000.00
	RAMAGUNDAM I & II R&M	40,00,00,000.00
	VINDHYACHAL R&M	7,00,00,000.00
	FARAKKA R&M	10,00,00,000.00
	UNCHAHAR R&M	4,00,00,000.00
	RIHAND R&M	15,00,00,000.00
	KAHALGAON R&M	3,00,00,000.00
	CHATTI BARIATU CMB	5,00,00,000.00
	DULANGA COAL MINE	26,00,00,000.00
	TALAIPALI COAL MINE	26,00,00,000.00
	KIRENDARI	3,00,00,000.00
	BARH-II FGD	2,50,00,000.00
	MOUDA-II FGD	6,50,00,000.00
Total Allocated Amount		5,00,00,00,000

Form 8		
BP NO 5050001151	TRANCHE NO T00001	D00004
Unsecured Loan From HDFC Bank Ltd. X		
Source of Loan :	HDFC Bank Ltd. X	
Currency :	INR	
Amount of Loan :	30,00,00,00,000	
Total Drawn amount :	5,00,00,00,000	
Date of drawl	12.05.2022	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	5.83%	
Margin, If Floating Interest :	NIL	
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	MONTHLY	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	3 Years	
Moratorium effective from :	24.11.2021	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	12 Yearly Instalment	
Repayment Type :	AVG	
First Repayment Date :	24.11.2025	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	NORTH KARANPURA	33,00,00,000.00
	KAYAKULAM FLOATING	40,00,00,000.00
	AURAIYA SOLAR FS 20	5,00,00,000.00
	JETSAR SOLAR	10,00,00,000.00
	DEVIKOT SOLAR	5,00,00,000.00
	DEVIKOT SOLAR-90MW	20,00,00,000.00
	NOKHRA SOLAR	1,00,00,00,000.00
	ETTAYAPURAM SOLAR	5,50,00,000.00
	RIHAND-SOLAR	1,00,00,000.00
	KAWAS SOLAR	5,00,00,000.00
	ANTA SOLAR	8,50,00,000.00
	SOLAPUR SOLAR	5,00,00,000.00
	NOKH SOLAR PLOT-I (245MW)	33,00,00,000.00
	NOKH SOLAR PLOT-III (245M)	39,00,00,000.00
	SINGRAULI-R&M	13,00,00,000.00
	KORBA-R&M	10,00,00,000.00
	RAMAGUNDAM-R&M	37,00,00,000.00
	VSTPS R&M	9,00,00,000.00
	FSTPS R&M	20,00,00,000.00
	RIHAND-R&M	20,00,00,000.00
	FARIDABAD R&M	5,00,00,000.00
	TSTPP R&M	10,00,00,000.00
	KAHALGAON(R&M)	10,00,00,000.00
	NCPS-STAGE-I-DSI	56,00,00,000.00
Total Allocated Amount		5,00,00,00,000

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

BP NO 5050001263	TRANCHE NO T00001	D0001
Unsecured Loan From Indusind Bank		
Source of Loan :	Indusind Bank	
Currency :	INR	
Amount of Loan :	15,00,00,00,000	
Total Drawn amount :	2,16,42,00,000	
Date of Drawal:	15.07.2022	
Interest Type :	FLOATING	
Rate of Interest	6.82%	
Margin, If Floating Interest :	0.00%	
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	MONTHLY	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	3 Years	
Moratorium effective from :	15-Jul-22	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	12 Equal annual Instalments	
Repayment Type :	AVG	
First Repayment Date :	15-Jul-26	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	ETTAYAPURAM SOLAR(230MW)	14,42,00,000.00
	NORTH KARANPURA	52,00,00,000.00
	DEVIKOT SOLAR-90MW	13,00,00,000.00
	SAMBHU KI BHURJ SOLAR 250	9,00,00,000.00
	FATEHGARH (296MW)	10,00,00,000.00
	KAWAS SOLAR 56MW	5,00,00,000.00
	BARAUNI-II (2X250MW)	8,00,00,000.00
	SINGRAULI R&M	20,00,00,000.00
	KORBA R&M	20,00,00,000.00
	RAMAGUNDAM I & II R&M	20,00,00,000.00
	VINDHYACHAL R&M	11,00,00,000.00
	FARAKKA R&M	7,00,00,000.00
	CHATTI BARIATU CMB	10,00,00,000.00
	TALAIPALI COAL MINE	13,00,00,000.00
	KIRENDARI	4,00,00,000.00
Total Allocated Amount		2,16,42,00,000.00

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

BP NO 50500001041 **TRANCHE NO**
T00001 **D00009**

Unsecured Loan From Bank Of India-IV

Source of Loan :	Bank Of India-IV	
Currency :	INR	
Amount of Loan :	22000000000	
Total Drawn amount :	1,94,00,00,000	
Date of Drawal :	30-03-2023	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	8.15%	
Margin, If Floating Interest :	NIL	
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	3 Years	
Moratorium effective from :	05.03.2021	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	Yearly	
Repayment Type :	AVG	
First Repayment Date :	07.12.2024	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :		
Project Code	Project Name	Amount
	NCTPP R&M	50000000
	DADRI GAS R&M	60000000
	SIMHADRI FLOATING	50000000
	RIHAND-R&M	350000000
	KORBA-R&M	320000000
	VSTPS R&M	400000000
	FSTPS R&M	260000000
	RAMAGUNDAM-R&M	450000000
Total Allocated Amount		1,94,00,00,000

Details of Allocation of corporate loans to various projects					
Name of the Petitioner					
Name of the Petitioner					
Form 8- Domestic Bonds- Details of Allocation of corporate loans to					
Particulars	54	69	73	74	75
Source of Loan1	BONDS	INR	INR	INR	INR
Currency2	INR	4,30,000	2,50,000	3,99,600	3,00,000
Amount of Loan sanctioned	10,30,683	4,30,000	2,50,000	3,99,600	3,00,000
Interest Type6	Fixed	Fixed	Fixed	Fixed	Fixed
Fixed Interest Rate, if applicable	8.49%	7.32%	6.43%	6.87%	6.69%
Base Rate, if Floating Interest7	N/A	N/A	N/A	N/A	N/A
Margin, if Floating Interest8	N/A	N/A	N/A	N/A	N/A
Are there any Caps/Floor9	No	No	No	No	No
If above is yes,specify caps/floor	N/A	N/A	N/A	N/A	N/A
Moratorium Period10	8	10	10	15 Years and 1 day	10
Moratorium effective from #	25-03-2015	17-07-2019	27-01-2021	20-04-2021	13-09-2021
Repayment Period11	Installments Due on 25/03/2023, 25/03/2024 & 25/03/2025	Bullet Repayment	Bullet Repayment	Bullet Repayment	Bullet Repayment
Repayment effective from	25-03-2023	17-07-2029	27-01-2031	21-04-2036	13-09-2031
Repayment Frequency12	Installments Due on 25/03/2023, 25/03/2024 & 25/03/2025	Bullet Repayment	Bullet Repayment	Bullet Repayment	Bullet Repayment
Repayment Instalment13,14	Installments 1st - 206,136.61 2nd - 412,273.22 3rd 412,273.22	4,30,000	2,50,000	3,99,600	3,00,000
Base Exchange Rate16	N/A	N/A	N/A	N/A	N/A
Door to Door Maturity	10	10	10	15 Years and 1 day	10
Name of the Projects					
Anantpur Solar	5,600.00				
Anta Solar 90MW		0			650.00
Auraiya R&M			200.00		
Auraiya Solar 20MW			400.00		
Auraiya Solar FS 20MW				150.00	
Badarpur R&M	2,300.00				
Barauni-II				1,500.00	8,400.00
BARH I	74,883.05	84,200.00	51,100.00	32,900.00	42,800.00
BARH II	63,500.00	1,400.00			
BONGAIGAON	54,000.00	17,100.00			
CC	-				
CC - Jhabua Power					
CC - NEEPCO		1,391.30	18,243.00	56,696.00	48,250.00
CC - THDC		2,608.70	34,207.00	1,06,304.00	90,470.00
CHATTI BARIATU CMB	8,100.00	3,000.00	825.00	200.00	1,350.00
DADRI GAS R&M	600.00			100.00	200.00
DARLIPALLI	49,200.00	40,000.00	28,300.00	11,500.00	1,000.00
DULANGA COAL		5,000.00	2,700.00	3,400.00	4,100.00
FARAKKA III	10,900.00				
FARAKKA R&M	2,000.00	1,000.00	1,700.00	1,600.00	1,550.00
Farakka-I , II & III FGD				1,500.00	550.00
Faridabad R&M			100.00		700.00
GADARWARA	81,000.00	47,600.00	19,000.00	7,500.00	
Gandhar 20MW				3,750.00	90.00
Gandhar R &M	4,300.00				
KAHALGAON II	1,800.00				
KAHALGAON R&M			600.00	1,200.00	2,620.00
Kahalgaon-I & II FGD				300.00	
Khstpp R & M	2,000.00				
Kawas Solar				2,800.00	5,250.00
Kawas R & M	1,400.00				
Kayamkulam FS (22 MW)			170.00	2,000.00	2,195.00
Kayamkulam FS (70 MW)			1,830.00	2,850.00	1,925.00
KHARGONE	45,000.00	13,500.00	3,000.00	2,000.00	
Kirenderi Coal Mine			7,350.00		165.00
KOLDAM	25,100.00				
KORBA III	9,200.00				
KORBA R&M	4,400.00		2,300.00	1,350.00	4,050.00
Korba-I, II & III FGD				100.00	
KUDGI	1,23,300.00	21,500.00			
KUDGI-FGD		2,500.00		2,950.00	1,000.00
LARA	53,300.00	10,600.00	1,700.00	14,000.00	
MAUDA I	21,900.00	6,000.00		500.00	

KFW ESP Loan
Name of the Petitioner
Name of the Generating Station

NTPC Ltd.
Farakka-I&II STPS

Particulars					
Source of Loan	KfW ESP VIII	KfW ESP IX	KfW ESP X	KfW ESP XI	KfW ESP XII
Drawal	1,00,00,000.00	1,00,00,000.00	50,00,000.00	50,00,000.00	50,00,000.00
Currency	EUR	EUR	EUR	EUR	EUR
Amount of loan sanctioned					
Amount of Gross Loan drawn upto 31.03.2019					
Interest Type	Fixed	Fixed	Fixed	Fixed	Fixed
Fixed Interest Rate, if applicable	3.19%	3.19%	3.19%	3.19%	3.19%
Base Rate, if floating interest	-	-	-	-	-
Margin, if floating interest rate	-	-	-	-	-
Are there any Caps / Floor	NO	NO	NO	NO	NO
If above is Yes, specify Caps / Floor	-	-	-	-	-
Moratorium Period	4 Years 2½ Months	4 Years 2½ Months	4 Years 2½ Months	4 Years 2½ Months	4 Years 2½ Months
Moratorium effective from					
Repayment period	Repayment in 8 Years (16 semi-annual instalments)	Repayment in 8 Years (16 semi-annual instalments)	Repayment in 8 Years (16 semi-annual instalments)	Repayment in 8 Years (16 semi-annual instalments)	Repayment in 8 Years (16 semi-annual instalments)
Repayment effective from	15.09.2017	15.09.2017	15.09.2017	15.09.2017	15.09.2017
Repayment frequency					
Repayment installment					
Base Exchange Rate (31.03.2019)					
Are foreign currency loan hedged					
If above is Yes, specify details	NO	NO	NO	NO	NO
Drawl Date	20.04.15	17.08.15	10.12.15	09.02.16	04.04.16
Drawl Exchange Rate	67.34541	72.34003	73.07413	76.51337	75.28750
Name of the Projects					
Anantpur Solar					
Farakka ESP	13.94230%	12.19552%	14.49760%	13.31480%	5.42780%
Korba STPS- ESP	5.12210%	10.57396%	14.84190%	21.68810%	34.43650%
Rihand-I ESP	20.30667%	22.65206%	19.64050%	3.55460%	18.58030%
Singrauli I & II ESP	53.02030%	41.60665%	46.91960%	54.37570%	36.01210%
Talcher STPP-I-ESP		2.82990%	0.00000%		
TTPS -II ESP	0.42123%	0.49892%	0.00000%	1.22850%	
Unchahar-I ESP	1.81156%	4.83787%	0.00000%	0.36020%	3.00180%
VSTPP I & II ESP	5.37584%	4.80512%	4.10040%	5.47810%	2.54150%
Total	100.00000%	100.00000%	100.00000%	100.00000%	100.00000%

KFW ESP Loan
Name of the Petitioner
Name of the Generating Station

Particulars						Total
Source of Loan	KFW ESP XIII	KFW ESP XIV	KFW ESP XV	KFW ESP XVI	KFW ESP XVII	KFW ESP Loan #
Drawal	50,00,000.00	50,00,000.00	50,00,000.00	50,00,000.00	30,00,000.00	95000000.00
Currency	EUR	EUR	EUR	EUR	EUR	EUR
Amount of loan sanctioned						
Amount of Gross Loan drawn upto 31.03.2019						95000000.00
Interest Type	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
Fixed Interest Rate, if applicable	3.19%	3.19%	3.19%	3.19%	3.19%	3.19%
Base Rate, if floating interest	-	-	-	-	-	-
Margin, if floating interest rate	-	-	-	-	-	-
Are there any Caps / Floor	NO	NO	NO	NO	NO	NO
If above is Yes, specify Caps / Floor	-	-	-	-	-	-
Moratorium Period	4 Years 2½ Months	4 Years 2½ Months	4 Years 2½ Months	4 Years 2½ Months	4 Years 2½ Months	4 Years 2½ Months
Moratorium effective from						27.06.13
Repayment period	Repayment in 8 Years (16 semi-annual instalments)	Repayment in 8 Years (16 semi-annual instalments)	Repayment in 8 Years (16 semi-annual instalments)	Repayment in 8 Years (16 semi-annual instalments)	Repayment in 8 Years (16 semi-annual instalments)	Repayment in 8 Years (16 semi-annual instalments)
Repayment effective from	15.09.2017	15.09.2017	15.09.2017	15.09.2017	15.09.2017	15.09.2017
Repayment frequency						One time
Repayment installment						59,37,500.00
Base Exchange Rate (31.03.2019)						78.84
Are foreign currency loan hedged						
If above is Yes, specify details	NO	NO	NO	NO	NO	NO
Drawl Date	03.05.16	06.09.16	12.01.17	18.04.17	31.07.17	-
Drawl Exchange Rate	76.90000	74.57940	72.25470	68.80340	75.65640	
Name of the Projects						%
Anantpur Solar						
Farakka ESP	10.90220%	7.79180%	3.37690%	1.24990%	4.80700%	5.88004%
Korba STPS- ESP	15.52040%	18.80300%	25.92530%	12.38020%	8.78240%	21.30503%
Rihand-I ESP	0.12710%	8.85680%	8.04520%	7.79270%		12.01505%
Singrauli I & II ESP	56.41380%	37.15880%	31.38120%	53.65320%	58.49490%	36.07925%
Talcher STPP-I-ESP						2.95483%
TTPS -II ESP		3.48620%	1.76890%	0.00000%		2.12968%
Unchahar-I ESP	2.67880%					1.55082%
VSTPP I & II ESP	14.35770%	23.90340%	29.50250%	24.92400%	27.91570%	18.08529%
Total	100.00000%	100.00000%	100.00000%	100.00000%	100.00000%	100.00000%

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner		NTPC Limited							Amount in Rs Lakh	
Name of the Generating Station		Farakka Super Thermal power Station Stage-I&II								
COD		01-07-1996								
For Financial Year		2024-29 (Summary)								
Sl. No.	Head of Work /Equipment	ACE Claimed (Projected)					Regulations under which claimed	Justification	Admitted Cost by the Commission, if any	
		2024-25	2025-26	2026-27	2027-28	2028-29				
1	2	3	4	5	6	7	8	9		
A. Works beyond Original scope, Change in Law etc. eligible for RoE at Normal Rate										
1	HMI upgradation	3129.81	263.21				25 (2)© & (b)	<p>It is submitted that the Stage-II, HMI system of OEM ABB are based on window server system 2003 / XP7 operating system . As Microsoft has officially ended support for Windows XP on April 8, 2014, Windows server 2003 on July 2015 and Window 7 on January 14,2020, no further maintenance patches, security updates, or antivirus support are available, exposing the existing system to significant security risks. Documentary evidence in this regard is placed as Annexure-B.</p> <p>It is further submitted that the CEA Guidelines (2021) for Cyber Security in the Power Sector (attached as Annexure-A) mandates (i) Phasing out legacy systems, (ii) Hardening existing systems with additional security controls in consultation with the OEM, and (iii) Maintaining system logs for a minimum of six months.</p> <p>In light of these mandates, it has become essential to upgrade the existing systems. It is submitted that the proposed upgradation involves upgradation of existing System and implementing a cybersecurity suite for HMI to strengthen system hardening as mandated in the CEA guideline.</p>		
2	DAETP FOR UNIT# 1, 4 & 5			3,999.89	4,238.56	4,238.56	26(1) (b)	<p>Dry Ash Extraction system, which is a standard fitment for all new power plants, is towards achievement of 100% ash utilization as per MOEF notification dated 25.01.2016.(Attached as Annexure-A). The installation of the same would help increased utilization of dry fly ash. Presently fly ash evacuation system of the units of Stage -I&II are operating on slurry system(Wet). The wet system is required to be modified and converted in to dry ash evacuation system. Further, Hon'ble Commission has allowed the same work in some of the petitioner's stations such as Tanda TPS(Order dated 21.03.2017 in petition no 366/GT/2017) & Talcher STPS-II (Order dated 16.02.2017 in petition no 293/GT/2014) etc. under change in Law. Being a compliance of status, it is prayed that Hon'ble Commission may please allow the same as additional capital expenditure in tariff of the instant station.This Hon'ble Commission has already allowed this work in 429/GT/2020 under 26(1)(b). Accordingly the same may please be allowed under change in law.</p>	8908.05	
3	BOBR Wagons			5,529.14			19(3)(e)&25(2)(b)	<p>The Hon'ble Commission has allowed wagons in it's order dated 17.04.23 in 698/GT/2020. MGR system at FSTPS is a common facility used by Stg-I&II and Stage-III. Since the Farakka station is more than 25 years due to frequent requirement of maintenance and unavailability of spares/parts, the maintenance of existing wagons has become difficult and unviable. Therefore for meeting the coal requirement of the station, the augmentation of railway infrastructure for transportation of coal is required.</p> <p>Further, as per revised codal life of assets dtd 06.06.2022 of Ministry of Railways, GOI, the average life of the BOBRN wagon is 35 years. Indian railway code is attached as Annexure-D. Also the petitioner is trying to bring more coal via MGR to reduce the ECR to supply power at cheap rates to the beneficiaries. It is also submitted that SC in it's order dated:09.11.2017 in CA 5990 of 2014 (ref petition : 316/GT/2014) has remanded back the appeal of the petitioner related to disallowance of wagons to APTEL for fresh consideration.</p> <p>The Hon'ble Commission may be pleased to allow the same under Regulation 19(3)(e) [Railway infrastructure & augmentation] and Regulation 25(2)(b) [Replacement on account of change in law].</p>		

4	Rail line siding lying below Ash silo for Dry Fly ash collection			1,000.00	1,000.00	1,205.57	26(1) b	<p>The works pertain to providing of railway siding for silo loading facility in FSTPS-I&II Dry Ash Silo. As per MOEF Notification dated 31.12.21,(attached as Annexure C)</p> <p>Quote</p> <p>"Responsibilities of thermal power plants to dispose fly ash and bottom ash.—</p> <p>(1) Every coal or lignite based thermal power plant (including captive or co-generating stations or both) shall be primarily responsible to ensure 100 per cent utilisation of ash (fly ash, and bottom ash) generated by it in an eco-friendly manner as given in sub-paragraph (2);</p> <p>(2) The ash generated from coal or lignite based thermal power plants shall be utilised only for the following eco-friendly purposes, namely:-</p> <p>(i) Fly ash based products viz. bricks, blocks, tiles, fibre cement sheets, pipes, boards, panels;</p> <p>Unquote</p> <p>The above proposal is being taken up for 100% utilisation of Dry fly Ash (DFA) in ecofriendly manner from FSTPS-I&II dry ash silo. This Hon'ble Commission may kindly allow the mentioned work under 26(1)b, as per CERC Tariff Regulation 2024.</p>	
	Total (A)	3,129.81	263.21	10,529.03	5,238.56	5,444.13			
	B. Works beyond Original scope including add-cap due to Change in Law eligible for RoE at SBI+MCLR								
	Total (B)	0.00	0.00	0.00	0.00	0.00			
	Total Add. Cap. Claimed (A+B)	3,129.81	263.21	10,529.03	5,238.56	5,444.13			
(Petitioner)									

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTPC Limited
Name of the Generating Station	Farakka Super Thermal power Station Stage-I&II
COD	01-07-1996
For Financial Year	2024-25

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)				Regulations under which claimed	Justification	Amount in Rs Lakh Admitted Cost by the Commission, if any
		Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3			
1	2	3	4	5=(3-4)	6	7	8	9
A. Works beyond Original scope & Change in Law etc. eligible for RoE at Normal Rate								
1	HMI upgradation	3129.81		3129.81		25 (2)© & (b)	<p>It is submitted that the Stage-II, HMI system of OEM ABB are based on window server system 2003 / XP7 operating system . As Microsoft has officially ended support for Windows XP on April 8, 2014, Windows server 2003 on July 2015 and Window 7 on January 14,2020, no further maintenance patches, security updates, or antivirus support are available, exposing the existing system to significant security risks. Documentary evidence in this regard is placed as Annexure-B.</p> <p>It is further submitted that the CEA Guidelines (2021) for Cyber Security in the Power Sector (attached as Annexure-A) mandates (i) Phasing out legacy systems, (ii) Hardening existing systems with additional security controls in consultation with the OEM, and (iii) Maintaining system logs for a minimum of six months.</p> <p>In light of these mandates, it has become essential to upgrade the existing systems. It is submitted that the proposed upgradation involves upgradation of existing System and implementing a cybersecurity suite for HMI to strengthen system hardening as mandated in the CEA guideline.</p> <p>Hon'ble Commission has allowed the similar additional capital expenditure incurred on HMI upgradation in Anta gas power station and Mejja thermal power station vide its order dated 05.09.2023 (in petition no. 432-GT-2020) and order dated 27.04.2023 (in petition no. 568-GT-2020) respectively.</p> <p>Therefore, it is humbly requested that Hon'ble Commission may be pleased to allow the same under Regulation 25(2)(c) and 25(2)(b) of Tariff Regulations 2019</p>	
Total Add. Cap. Claimed (A+B)		3,129.81	-	3,129.81				

(Petitioner)

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner		NTPC Limited						
Name of the Generating Station		Farakka Super Thermal power Station Stage-I&II						
COD		01-07-1996						
For Financial Year		2025-26						
								Amount in Rs Lakh
Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed (Actual / Projected)			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	HMI upgradation	263.21		263.21		25 (2)©	Same as 24-25	
	Total	263.21	-	263.21				
A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate								
Total Add. Cap. Claimed (A)		-	-	-				
								(Petitioner)

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTPC Limited
Name of the Generating Station	Farakka Super Thermal power Station Stage-I&II
COD	01-07-1996
For Financial Year	2026-27

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)				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
A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate								
1	Rail line siding lying below Ash silo for Dry Fly ash collection	1,000.00	-	1,000.00		26(1) b	<p>The works pertains to providing of railway siding for silo loading facility in FSTPS-I&II Dry Ash Silo. As per MOEF Notification dated 31.12.21,(attached as Annexure C) Quote <i>"Responsibilities of thermal power plants to dispose fly ash and bottom ash.—</i> <i>(1) Every coal or lignite based thermal power plant (including captive or co-generating stations or both) shall be primarily responsible to ensure 100 per cent utilisation of ash (fly ash, and bottom ash) generated by it in an eco-friendly manner as given in sub-paragraph (2);</i> <i>(2) The ash generated from coal or lignite based thermal power plants shall be utilised only for the following eco-friendly purposes, namely:-</i> <i>(i) Fly ash based products viz. bricks, blocks, tiles, fibre cement sheets, pipes, boards, panels;</i> <i>....."</i> Unquote The above proposal is being taken up for 100% utilisation of Dry fly Ash (DFA) in ecofriendly manner from FSTPS-I&II dry ash silo. This Hon'ble Commission may kindly allow the mentioned work under 26(1)b, as per CERC Tariff Regulation 2024.</p>	
2	DAETP FOR UNIT# 1, 4 & 5	3,999.89		3999.89		26(1) (b)	<p>Dry Ash Extraction system, which is a standard fitment for all new power plants, is towards achievement of 100% ash utilization as per MOEF notification dated 25.01.2016.(Attached as Annexure-A). The installation of the same would help increased utilization of dry fly ash. Presently fly ash evacuation system of the units of Stage -I&II are operating on slurry system(Wet). The wet system is required to be modified and converted in to dry ash evacuation system. Further, Hon'ble Commission has allowed the same work in some of the petitioner's stations such as Tanda TPS(Order dated 21.03.2017 in petition no 366/GT/2017) & Talcher STPS-II (Order dated 16.02.2017 in petition no 293/GT/2014) etc. under change in Law. Being a compliance of status, it is prayed that Hon'ble Commission may please allow the same as additional capital expenditure in tariff of the instant station.This Hon'ble Commission has already allowed this work in 429/GT/2020 under 26(1)(b). Accordingly the same may please be allowed under change in law.</p>	8908.05

1	BOBR Wagons	5,529.14	-	5,529.14	19(3)(e) & 25(2)(b)	<p>The Hon'ble Commission has allowed wagons in it's order dated 17.04.23 in 698/GT/2020. MGR system at FSTPS is a common facility used by Stg-I&II and Stage-III. Since the Farakka station is more than 25 years due to frequent requirement of maintenance and unavailability of spares/parts, the maintenance of existing wagons has become difficult and unviable. Therefore for meeting the coal requirement of the station, the augmentation of railway infrastructure for transportation of coal is required.</p> <p>Further, as per revised codal life of assets dtd 06.06.2022 of Ministry of Railways, GOI, the average life of the BOBRN wagon is 35 years. Indian railway code is attached as Annexure-D. Also the petitioner is trying to bring more coal via MGR to reduce the ECR to supply power at cheap rates to the beneficiaries. It is also submitted that SC in it's order dated:09.11.2017 in CA 5990 of 2014 (ref petition : 316/GT/2014) has remanded back the appeal of the petitioner related to disallowance of wagons to APTEL for fresh consideration. The Hon'ble Commission may be pleased to allow the same under Regulation 19(3)(e) [Railway infrastructure & augmentation] and Regulation 25(2)(b) [Replacement on account of change in law].</p>
Total (A)		10,529.03	-	10,529.03		
B. Works beyond Original scope exluding add-cap due to Change in Law eligible for RoE at Wtd. Average rate of Interest						
Total Add. Cap. Claimed (A+B)		10,529.03	-	10,529.03		
(Petitioner)						

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner		NTPC Limited						
Name of the Generating Station		Farakka Super Thermal power Station Stage-I&II						
COD		01-07-1996						
For Financial Year		2027-28						
								Amount in Rs Lakh
Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)				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
A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate								
1	Rail line siding lying below Ash silo Stg 1/2 for Dry Fly ash collection	1,000.00	-	1,000.00		26(1) b	Same as 26-27	
2	DAETP FOR UNIT# 1, 4 & 5	4,238.56		4238.56		26(1) (b)	Same as 25-26	
Total (A)		5,238.56	-	5,238.56	-			
B. Works beyond Original scope excluding add-cap due to Change in Law eligible for RoE at Wtd. Average rate of Interest								
Total (B)		-	-	-				
Total Add. Cap. Claimed (A+B)		5,238.56	-	5,238.56				

(Petitioner)

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner		NTPC Limited						
Name of the Generating Station		Farakka Super Thermal power Station Stage-I&II						
COD		01-07-1996						
For Financial Year		2028-29						
								Amount in Rs Lakh
Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed (Actual / Projected)			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
A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate								
1	Rail line siding lying below Ash silo Stg 1/2 for Dry Fly ash collection	1205.57		1205.57		26(1) b	Same as 2026-27	
2	DAETP FOR UNIT# 1, 4 & 5	4,238.56		4238.56		26(1) (b)	Same as 25-26	
Total Add. Cap. Claimed (A)		5,444.13	-	5,444.13				
(Petitioner)								

Name of the Petitioner	NTPC Limited
Name of the Generating Station	Farakka Super Thermal power Station Stage-I&II
Date of Commercial Operation	01-07-1996

Financial Year (Starting from COD)1	Amount in Rs Lakh									
	Actual					Admitted				
	2024-25	2025-26	2026-27	2027-28	2028-29	2024-25	2025-26	2026-27	2027-28	2028-29
1		3	4	5	6	7	8	9	10	11

Amount capitalised in Work/ Equipment

Financing Details	Add cap is proposed to be finance in Debt:Equity ratio of 70:30
Loan-1	
Loan-2	
Loan-3 and so on	
Total Loan2	
Equity	
Internal Resources	
Others (Pl. specify)	
Total	

(Petitioner)

Statement of Depreciation

Name of the Company : NTPC Limited
Name of the Power Station : Farakka Super Thermal power Station Stage-I&II

(Amount in Rs Lakh)

S. No.	Particulars	Existing 2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7	8
1	Opening Capital Cost	346398.02	3,54,405.61	3,54,405.61	3,54,405.61	3,54,405.61	3,54,405.61
2	Closing Capital Cost	354405.61	3,54,405.61	3,54,405.61	3,54,405.61	3,54,405.61	3,54,405.61
3	Average Capital Cost	350401.81	3,54,405.61	3,54,405.61	3,54,405.61	3,54,405.61	3,54,405.61
1a	Cost of IT Equipments & Software included in (1) above ^^	11.75	13.51	13.51	13.51	13.51	13.51
2a	Cost of IT Equipments & Software included in (2) above ^^	13.51	13.51	13.51	13.51	13.51	13.51
3a	Average Cost of IT Equipments & Software	12.63	13.51	13.51	13.51	13.51	13.51
4	Freehold land	802.35	802.35	802.35	802.35	802.35	802.35
5	Rate of depreciation						
6	Depreciable value	3,14,640.78	3,18,244.28	3,18,244.28	3,18,244.28	3,18,244.28	3,18,244.28
7	Balance useful life at the beginning of the period	0.00	0.00	0.00	0.00	0.00	0.00
8	Remaining depreciable value	8,409.15	3,603.50	-	-	-	-
9	Depreciation (for the period)	8,409.15	3,603.50	-	-	-	-
10	Depreciation (annualised)	8,409.15	3,603.50	-	-	-	-
11	Cumulative depreciation at the end of the period	314640.78	3,18,244.28	3,18,244.28	3,18,244.28	3,18,244.28	3,18,244.28
12	Less: Cumulative depreciation adjustment on account of un-discharged liabilities deducted as on 01.04.2009	0.00	-	-	-	-	-
13	Add: Cumulative depreciation adjustment on account of liability Discharge	0.00	-	-	-	-	-
14	Less: Cumulative depreciation adjustment on account of de-capitalisation	0.00	-	-	-	-	-
15	Net Cumulative depreciation at the end of the period after adjustments	3,14,640.78	3,18,244.28	3,18,244.28	3,18,244.28	3,18,244.28	3,18,244.28

^^ Shall be provided at the time of true up

(Petitioner)

	B. For New Assets (proposed in 2024-29 period)		2024-25	2025-26	2026-27	2027-28	2028-29
16	Opening capital cost		-	3,129.81	3,393.02	13,922.05	19,160.61
17	Additional capital expenditure		3,129.81	263.21	10,529.03	5,238.56	5,444.13
18	Closing capital cost		3,129.81	3,393.02	13,922.05	19,160.61	24,604.73
19	Average capital cost		1,564.91	3,261.42	8,657.54	16,541.33	21,882.67
20	Freehold land						
21	Depreciable Value		1,408.41	2,935.27	7,791.78	14,887.20	19,694.40
22	Cumulative depreciation at the beginning of the year		-	393.74	1,379.98	5,445.80	20,333.00
23	Balance depreciable value		1,408.41	2,541.53	6,411.80	9,441.39	4,807.21
24	Balance useful life at the beginning of the year		3.58	2.58	1.58	0.58	-
25	Depreciation Rate						
26	Depreciation for the year		393.74	986.24	4,065.82	14,887.20	19,694.40
27	Cu. depreciation adjustment on account of de-capitalisation						
28	Cu. Depreciation at end of the year		393.74	1,379.98	5,445.80	20,333.00	40,027.40
	C. For total Assets (A+B)						
29	Opening capital cost		3,54,419.11	3,54,419.11	3,54,419.11	3,54,419.11	3,54,419.11
30	Additional capital expenditure		3,129.81	263.21	10,529.03	5,238.56	5,444.13
31	Closing capital cost		3,54,419.11	3,54,419.11	3,54,419.11	3,54,419.11	3,54,419.11
32	Average capital cost		3,54,419.11	3,54,419.11	3,54,419.11	3,54,419.11	3,54,419.11
33	Freehold land		802.35	802.35	802.35	802.35	802.35
34	Depreciable Value		3,19,652.70	3,21,179.55	3,26,036.06	3,33,131.48	3,37,938.68
35	Cumulative depreciation at the beginning of the year		3,14,640.78	3,18,638.02	3,19,624.26	3,23,690.08	3,38,577.28
36	Balance depreciable value		1,408.41	2,541.53	6,411.80	9,441.39	4,807.21
37	Balance operational life at the beginning of the year		3.58	2.58	1.58	0.58	
38	Depreciation Rate						
39	Depreciation for the year		3,997.24	986.24	4,065.82	9,441.39	4,807.21
40	Cu. depreciation adjustment on account of de-capitalisation						
41	Cu. Depreciation at end of the year		3,18,244.28	3,18,244.28	3,18,244.28	3,18,244.28	3,18,244.28

Sl. no.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	KfW ESP VIII					
	Gross loan - Opening	938.95	938.95	938.95	938.95	938.95
	Cumulative repayments of Loans upto previous year	821.58	938.95	938.95	938.95	938.95
	Net loan - Opening	117.37	0.00	0.00	0.00	0.00
	Addition					
	Repayments of Loans during the year	117.37	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	58.68	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	3.1900%	3.1900%	3.1900%	3.1900%	3.1900%
	Interest on loan	1.87	0.00	0.00	0.00	0.00
2	KfW ESP IX					
	Gross loan - Opening	882.22	882.22	882.22	882.22	882.22
	Cumulative repayments of Loans upto previous year	771.95	882.22	882.22	882.22	882.22
	Net loan - Opening	110.28	0.00	0.00	0.00	0.00
	Addition					
	Repayments of Loans during the year	110.28	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	55.14	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	3.1900%	3.1900%	3.1900%	3.1900%	3.1900%
	Interest on loan	1.76	0.00	0.00	0.00	0.00
3	KfW ESP X					
	Gross loan - Opening	529.70	529.70	529.70	529.70	529.70
	Cumulative repayments of Loans upto previous year	463.49	529.70	529.70	529.70	529.70
	Net loan - Opening	66.21	0.00	0.00	0.00	0.00
	Addition					
	Repayments of Loans during the year	66.21	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	33.11	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	3.1900%	3.1900%	3.1900%	3.1900%	3.1900%
	Interest on loan	1.06	0.00	0.00	0.00	0.00
4	KfW ESP XI					
	Gross loan - Opening	509.38	509.38	509.38	509.38	509.38
	Cumulative repayments of Loans upto previous year	445.71	509.38	509.38	509.38	509.38
	Net loan - Opening	63.67	0.00	0.00	0.00	0.00
	Addition					
	Repayments of Loans during the year	63.67	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	31.84	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	3.1900%	3.1900%	3.1900%	3.1900%	3.1900%
	Interest on loan	1.02	0.00	0.00	0.00	0.00
5	KfW ESP XII					
	Gross loan - Opening	204.32	204.32	204.32	204.32	204.32
	Cumulative repayments of Loans upto previous year	178.78	204.32	204.32	204.32	204.32
	Net loan - Opening	25.54	0.00	0.00	0.00	0.00
	Addition					
	Repayments of Loans during the year	25.54	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	12.77	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	3.1900%	3.1900%	3.1900%	3.1900%	3.1900%
	Interest on loan	0.41	0.00	0.00	0.00	0.00

Sl. no.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
6	KfW ESP XIII					
	Gross loan - Opening	419.19	419.19	419.19	419.19	419.19
	Cumulative repayments of Loans upto previous year	366.79	419.19	419.19	419.19	419.19
	Net loan - Opening	52.40	0.00	0.00	0.00	0.00
	Addition					
	Repayments of Loans during the year	52.40	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	26.20	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	3.1900%	3.1900%	3.1900%	3.1900%	3.1900%
	Interest on loan	0.84	0.00	0.00	0.00	0.00
7	KfW ESP XIV					
	Gross loan - Opening	290.55	290.55	290.55	290.55	290.55
	Cumulative repayments of Loans upto previous year	254.23	290.55	290.55	290.55	290.55
	Net loan - Opening	36.32	0.00	0.00	0.00	0.00
	Addition					
	Repayments of Loans during the year	36.32	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	18.16	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	3.1900%	3.1900%	3.1900%	3.1900%	3.1900%
	Interest on loan	0.58	0.00	0.00	0.00	0.00
8	KfW ESP XV					
	Gross loan - Opening	122.00	122.00	122.00	122.00	122.00
	Cumulative repayments of Loans upto previous year	106.75	122.00	122.00	122.00	122.00
	Net loan - Opening	15.25	0.00	0.00	0.00	0.00
	Addition					
	Repayments of Loans during the year	15.25	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	7.62	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	3.1900%	3.1900%	3.1900%	3.1900%	3.1900%
	Interest on loan	0.24	0.00	0.00	0.00	0.00
9	KfW ESP XVI					
	Gross loan - Opening	43.00	43.00	43.00	43.00	43.00
	Cumulative repayments of Loans upto previous year	37.62	43.00	43.00	43.00	43.00
	Net loan - Opening	5.37	0.00	0.00	0.00	0.00
	Addition					
	Repayments of Loans during the year	5.37	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	2.69	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	3.1900%	3.1900%	3.1900%	3.1900%	3.1900%
	Interest on loan	0.09	0.00	0.00	0.00	0.00
10	Bond Series 54					
	Gross loan - Opening	2000.00	2000.00	2000.00	2000.00	2000.00
	Cumulative repayments of Loans upto previous year	1200.00	2000.00			
	Net loan - Opening	800.00	0.00	2000.00	2000.00	2000.00
	Addition					
	Repayments of Loans during the year	800.00	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	2000.00	2000.00	2000.00
	Average Net Loan	400.00	0.00	2000.00	2000.00	2000.00
	Rate of Interest on Loan	8.5200%	8.5200%	8.5200%	8.5200%	8.5200%
	Interest on loan	34.08	0.00	170.40	170.40	170.40

Sl. no.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
11	Bond Series 69					
	Gross loan - Opening	1000.00	1000.00	1000.00	1000.00	1000.00
	Cumulative repayments of Loans upto previous year					
	Net loan - Opening	1000.00	1000.00	1000.00	1000.00	1000.00
	Addition					
	Repayments of Loans during the year	0.00	0.00	0.00	0.00	0.00
	Net loan - Closing	1000.00	1000.00	1000.00	1000.00	1000.00
	Average Net Loan	1000.00	1000.00	1000.00	1000.00	1000.00
	Rate of Interest on Loan	7.3500%	7.3500%	7.3500%	7.3500%	7.3500%
	Interest on loan	73.50	73.50	73.50	73.50	73.50
12	Bond Series 73					
	Gross loan - Opening	1700.00	1700.00	1700.00	1700.00	1700.00
	Cumulative repayments of Loans upto previous year					
	Net loan - Opening	1700.00	1700.00	1700.00	1700.00	1700.00
	Addition					
	Repayments of Loans during the year	0.00	0.00	0.00	0.00	0.00
	Net loan - Closing	1700.00	1700.00	1700.00	1700.00	1700.00
	Average Net Loan	1700.00	1700.00	1700.00	1700.00	1700.00
	Rate of Interest on Loan	6.4600%	6.4600%	6.4600%	6.4600%	6.4600%
	Interest on loan	109.82	109.82	109.82	109.82	109.82
13	Bond Series 74					
	Gross loan - Opening	1600.00	1600.00	1600.00	1600.00	1600.00
	Cumulative repayments of Loans upto previous year					
	Net loan - Opening	1600.00	1600.00	1600.00	1600.00	1600.00
	Addition					
	Repayments of Loans during the year	0.00	0.00	0.00	0.00	0.00
	Net loan - Closing	1600.00	1600.00	1600.00	1600.00	1600.00
	Average Net Loan	1600.00	1600.00	1600.00	1600.00	1600.00
	Rate of Interest on Loan	6.9000%	6.9000%	6.9000%	6.9000%	6.9000%
	Interest on loan	110.40	110.40	110.40	110.40	110.40
14	Bond Series 75					
	Gross loan - Opening	1550.00	1550.00	1550.00	1550.00	1550.00
	Cumulative repayments of Loans upto previous year					
	Net loan - Opening	1550.00	1550.00	1550.00	1550.00	1550.00
	Addition					
	Repayments of Loans during the year	0.00	0.00	0.00	0.00	0.00
	Net loan - Closing	1550.00	1550.00	1550.00	1550.00	1550.00
	Average Net Loan	1550.00	1550.00	1550.00	1550.00	1550.00
	Rate of Interest on Loan	6.7200%	6.7200%	6.7200%	6.7200%	6.7200%
	Interest on loan	104.16	104.16	104.16	104.16	104.16
15	HDFC Bank Ltd. V					
	Gross loan - Opening	6100.00	6100.00	6100.00	6100.00	6100.00
	Cumulative repayments of Loans upto previous year					
	Net loan - Opening	6100.00	6100.00	6100.00	6100.00	6100.00
	Addition	0.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	677.78	677.78	677.78	677.78	677.78
	Net loan - Closing	5422.22	5422.22	5422.22	5422.22	5422.22
	Average Net Loan	5761.11	5761.11	5761.11	5761.11	5761.11
	Rate of Interest on Loan	7.9500%	7.9500%	7.9500%	7.9500%	7.9500%
	Interest on loan	458.01	458.01	458.01	458.01	458.01

Sl. no.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
16	SBI-XI					
	Gross loan - Opening	1000.00	1000.00	1000.00	1000.00	1000.00
	Cumulative repayments of Loans upto previous year	222.22	333.33	444.44	555.55	666.66
	Net loan - Opening	777.78	666.67	555.56	444.45	333.34
	Addition	0.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	111.11	111.11	111.11	111.11	111.11
	Net loan - Closing	666.67	555.56	444.45	333.34	222.23
	Average Net Loan	722.23	611.12	500.01	388.90	277.79
	Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
	Interest on loan	59.22	50.11	41.00	31.89	22.78
17	SBI-VIII					
	Gross loan - Opening	2500.00	2500.00	2500.00	2500.00	2500.00
	Cumulative repayments of Loans upto previous year	833.32	1111.10	1388.88	1666.66	1944.43
	Net loan - Opening	1666.68	1388.90	1111.12	833.34	555.57
	Addition					
	Repayments of Loans during the year	277.78	277.78	277.78	277.78	277.78
	Net loan - Closing	1388.90	1111.12	833.34	555.57	277.79
	Average Net Loan	1527.79	1250.01	972.23	694.45	416.68
	Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
	Interest on loan	125.28	102.50	79.72	56.95	34.17
18	SBI-IX					
	Gross loan - Opening	5000.00	5000.00	5000.00	5000.00	5000.00
	Cumulative repayments of Loans upto previous year	2222.20	2777.75	3333.30	3888.85	4444.40
	Net loan - Opening	2777.80	2222.25	1666.70	1111.15	555.60
	Addition	0.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	555.55	555.55	555.55	555.55	555.55
	Net loan - Closing	2222.25	1666.70	1111.15	555.60	0.05
	Average Net Loan	2500.03	1944.48	1388.93	833.38	277.82
	Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
	Interest on loan	205.00	159.45	113.89	68.34	22.78
19	Punjab National Bank-III					
	Gross loan - Opening	8000.00	8000.00	8000.00	8000.00	8000.00
	Cumulative repayments of Loans upto previous year	2666.67	3555.56	4444.44	5333.33	6222.22
	Net loan - Opening	5333.33	4444.44	3555.56	2666.67	1777.78
	Addition	0.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	888.89	888.89	888.89	888.89	888.89
	Net loan - Closing	4444.44	3555.56	2666.67	1777.78	888.89
	Average Net Loan	4888.89	4000.00	3111.11	2222.22	1333.33
	Rate of Interest on Loan	7.9000%	7.9000%	7.9000%	7.9000%	7.9000%
	Interest on loan	386.22	316.00	245.78	175.56	105.33
20	HDFC Bank Limited-VII-Drawl 2					
	Gross loan - Opening	1000.00	1000.00	1000.00	1000.00	1000.00
	Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	111.11	222.22
	Net loan - Opening	1000.00	1000.00	1000.00	888.89	777.78
	Addition	0.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	0.00	0.00	111.11	111.11	111.11
	Net loan - Closing	1000.00	1000.00	888.89	777.78	666.67
	Average Net Loan	1000.00	1000.00	944.44	833.33	722.22
	Rate of Interest on Loan	7.9500%	7.9500%	7.9500%	7.9500%	7.9500%
	Interest on loan	79.50	79.50	75.08	66.25	57.42

Sl. no.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
21	HDFC Bank Limited-VII-Drawl 3					
	Gross loan - Opening	3000.00	3000.00	3000.00	3000.00	3000.00
	Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	333.33	666.67
	Net loan - Opening	3000.00	3000.00	3000.00	2666.67	2333.33
	Addition	0.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	0.00	0.00	333.33	333.33	333.33
	Net loan - Closing	3000.00	3000.00	2666.67	2333.33	2000.00
	Average Net Loan	3000.00	3000.00	2833.33	2500.00	2166.67
	Rate of Interest on Loan	7.9500%	7.9500%	7.9500%	7.9500%	7.9500%
	Interest on loan	238.50	238.50	225.25	198.75	172.25
22	HDFC Bank Limited-IX - Drawl 8					
	Gross loan - Opening	1200.00	1200.00	1200.00	1200.00	1200.00
	Cumulative repayments of Loans upto previous year	0.00	100.00	200.00	300.00	400.00
	Net loan - Opening	1200.00	1100.00	1000.00	900.00	800.00
	Addition	0.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	100.00	100.00	100.00	100.00	100.00
	Net loan - Closing	1100.00	1000.00	900.00	800.00	700.00
	Average Net Loan	1150.00	1050.00	950.00	850.00	750.00
	Rate of Interest on Loan	7.9500%	7.9500%	7.9500%	7.9500%	7.9500%
	Interest on loan	91.43	83.48	75.53	67.58	59.63
23	HDFC Bank Limited-IX - Drawl 10					
	Gross loan - Opening	250.00	250.00	250.00	250.00	250.00
	Cumulative repayments of Loans upto previous year	0.00	20.83	41.67	62.50	83.33
	Net loan - Opening	250.00	229.17	208.33	187.50	166.67
	Addition	0.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	20.83	20.83	20.83	20.83	20.83
	Net loan - Closing	229.17	208.33	187.50	166.67	145.83
	Average Net Loan	239.58	218.75	197.92	177.08	156.25
	Rate of Interest on Loan	7.9500%	7.9500%	7.9500%	7.9500%	7.9500%
	Interest on loan	19.05	17.39	15.73	14.08	12.42
24	HDFC Bank Limited-X - Drawl 2					
	Gross loan - Opening	1000.00	1000.00	1000.00	1000.00	1000.00
	Cumulative repayments of Loans upto previous year	0.00	0.00	83.33	166.67	250.00
	Net loan - Opening	1000.00	1000.00	916.67	833.33	750.00
	Addition	0.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	0.00	83.33	83.33	83.33	83.33
	Net loan - Closing	1000.00	916.67	833.33	750.00	666.67
	Average Net Loan	1000.00	958.33	875.00	791.67	708.33
	Rate of Interest on Loan	7.9500%	7.9500%	7.9500%	7.9500%	7.9500%
	Interest on loan	79.50	76.19	69.56	62.94	56.31
25	HDFC Bank Limited-X - Drawl 4					
	Gross loan - Opening	2000.00	2000.00	2000.00	2000.00	2000.00
	Cumulative repayments of Loans upto previous year	0.00	0.00	166.67	333.33	500.00
	Net loan - Opening	2000.00	2000.00	1833.33	1666.67	1500.00
	Addition	0.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	0.00	166.67	166.67	166.67	166.67
	Net loan - Closing	2000.00	1833.33	1666.67	1500.00	1333.33
	Average Net Loan	2000.00	1916.67	1750.00	1583.33	1416.67
	Rate of Interest on Loan	7.9500%	7.9500%	7.9500%	7.9500%	7.9500%
	Interest on loan	159.00	152.38	139.13	125.88	112.63

Sl. no.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
26	IndusInd Bank					
	Gross loan - Opening	700.00	700.00	700.00	700.00	700.00
	Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	58.33	116.67
	Net loan - Opening	700.00	700.00	700.00	641.67	583.33
	Addition	0.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	0.00	0.00	58.33	58.33	58.33
	Net loan - Closing	700.00	700.00	641.67	583.33	525.00
	Average Net Loan	700.00	700.00	670.83	612.50	554.17
	Rate of Interest on Loan	8.0500%	8.0500%	8.0500%	8.0500%	8.0500%
	Interest on loan	56.35	56.35	54.00	49.31	44.61
27	Bank Of India-IV (Refinancing of Axis Bank II loan)					
	Gross loan - Opening	2600.00	2600.00	2600.00	2600.00	2600.00
	Cumulative repayments of Loans upto previous year	0.00	216.67	433.33	650.00	866.67
	Net loan - Opening	2600.00	2383.33	2166.67	1950.00	1733.33
	Addition	0.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	216.67	216.67	216.67	216.67	216.67
	Net loan - Closing	2383.33	2166.67	1950.00	1733.33	1516.67
	Average Net Loan	2491.67	2275.00	2058.33	1841.67	1625.00
	Rate of Interest on Loan	8.0750%	8.0750%	8.0750%	8.0750%	8.0750%
	Interest on loan	201.20	183.71	166.21	148.71	131.22
	TOTAL LOAN					
	Gross loan - Opening	46139.32	46139.32	46139.32	46139.32	46139.32
	Cumulative repayments of Loans upto previous year	10591.31	14054.55	14475.38	17398.98	20322.59
	Net loan - Opening	35548.01	32084.76	31663.94	28740.33	25816.73
	Addition	0.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	4141.02	3098.60	3601.38	3601.38	3601.38
	Net loan - Closing	31406.99	28986.16	28062.55	25138.95	22215.35
	Average Net Loan	33477.50	30535.46	29863.25	26939.64	24016.04
	Rate of Interest on Loan	7.7607%	7.7662%	7.7928%	7.7674%	7.7358%
	Interest on loan	2598.07	2371.43	2327.17	2092.50	1857.83

S. No.	Month	Unit	Apr-23			May-23			Jun-23		
			Domestic Coal	NTPC Mine Coal	Imported	Domestic Coal	NTPC Mine Coal	Imported	Domestic Coal	NTPC Mine Coal	Imported
A)	OPENING QUANTITY										
1	Opening Quantity of Coal	(MT)	278530.05	9528.73	5636.18	260764.41	18963.75	1922.30	420416.18	10795.48	19018.39
2	Value of Stock	(Rs.)	1146714004	35603675	83681552	1092829008	69817232	27858353	1800605635	39758755	249284728
B)	QUANTITY										
3	Quantity of Coal supplied by Coal Company	(MT)	706607.62	113457.36	37162.44	769194.94	69040.61	66230.56	623605.63	60960.67	7797.60
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	0.00	-2284.68	0.00	0.00	-1178.56	0.00	0.00	-298.34	0.00
5	Coal supplied by Coal Company (3+4)	(MT)	706607.62	111172.68	37162.44	769194.94	67862.05	66230.56	623605.63	60662.33	7797.60
6	Normative Transit & Handling Losses (For Coal based Projects)	(MT)	4457.26	907.66	74.32	4926.17	552.32	132.46	4011.22	487.69	15.60
7	Net Coal Supplied (5-6)	(MT)	702150.36	110265.02	37088.12	764268.77	67309.73	66098.10	619594.41	60174.64	7782.00
C)	PRICE										
8	Amount charged by the Coal Company	(Rs.)	2542384127	268307047	535488565	2862677640	164393254	863723031	2398693581	165636052	81501545
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	0	0	0	0	0	0	0	0	0
10	Handling, Sampling and such other similar charges	(Rs.)	26202556	4207247	0	24834573	2229076	0	51808802	5064578	0
11	Total amount Charged (8+9+10)	(Rs.)	2568586683	272514294	535488565	2887512213	166622330	863723031	2450502383	170700630	81501545
D)	TRANSPORTATION										
12	Transportation charges by rail/ship/road transport	(Rs.)	372043885	132916510	0	386568334	81297787	0	291614609	44702093	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 MGR system, if applicable	(Rs.)	22544405	0	0	23216276	0	0	18188643	0	0
16	Total Transportation Charges (12+13-14+15)	(Rs.)	394588290	132916510	0	409784610	81297787	0	309803252	44702093	0
17	Total amount Charged for Coal supplied including Transportation (11+16)	(Rs.)	2963174973	405430804	535488565	3297296823	247920117	863723031	2760305635	215402723	81501545
E)	TOTAL COST										
18	Landed cost of Coal (2+17)/(1+7)	Rs./MT	4190.85	3681.62	14492.23	4282.91	3682.91	13107.56	4385.45	3595.34	12342.59
19	Blending Ratio (Domestic/Imported)		82.19%	12.81%	5.01%	81.45%	11.44%	7.11%	87.73%	8.67%	3.60%
20	Weighted average cost of Coal/ Lignite (Including Biomass)	Rs./MT	4641.23			4841.61			4603.75		
20a	Weighted average cost of Coal/ Lignite (Excluding Biomass)		4641.23			4841.61			4603.75		
F)	QUALITY (Stage - I, II, III, & IV)										
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/Kg)	4977	4750	0	5055	4750	0	5228	4750	0
22	GCV of Domestic Coal supplied as per bill of Coal Company	(kCal/Kg)	5086	4750	0	5288	4750	0	5300	4750	0
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/Kg)			5031			5035			4962
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)			5035			4960			4960
25	Weighted average GCV of coal as billed (Including Biomass)	(kCal/Kg)	5016			5155			5215		
25a	Weighted average GCV of coal as billed (Excluding Biomass)	(kCal/Kg)	5016			5155			5215		
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/Kg)	3771	3524	0	3824	3624	0	4004	3296	0
27	GCV of Domestic Coal / Bio Mass supplied as received at Station	(kCal/Kg)	3845	3633	0	4066	3192	0	4137	3476	0
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)			5072			4996			4931
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)			4985			4929			4874
30	Weighted average GCV of coal/ Lignite as received (Including Biomass)	(kCal/Kg)	3857			3989			4058		
30a	Weighted average GCV of coal/ Lignite as received (Excluding Biomass)	(kCal/Kg)	3857			3989			4058		

S. No.	Month	Unit	Jul-23			Aug-23			Sep-23		
			Domestic Coal	NTPC Mine Coal	Imported	Domestic Coal	NTPC Mine Coal	Imported	Domestic Coal	NTPC Mine Coal	Imported
A)	OPENING QUANTITY										
1	Opening Quantity of Coal	(MT)	358109.60	9985.12	1522.40	391291.40	11458.01	22745.19	299426.08	8155.94	29705.42
2	Value of Stock	(Rs.)	1570468530	35899871	18790334	1734217610	42605751	295237024	1358085469	28384739	397927978
B)	QUANTITY										
3	Quantity of Coal supplied by Coal Company	(MT)	644457.18	73932.35	43203.20	509812.96	3889.04	73595.42	477447.16	3731.57	67529.41
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	0.00	0.00	0.00	0.00	0.00	0.00	-1539.78	0.00	0.00
5	Coal supplied by Coal Company (3+4)	(MT)	644457.18	73932.35	43203.20	509812.96	3889.04	73595.42	475907.38	3731.57	67529.41
6	Normative Transit & Handling Losses (For Coal based Projects)	(MT)	4254.38	591.46	86.41	3131.28	31.11	147.19	2935.59	29.85	135.06
7	Net Coal Supplied (5-6)	(MT)	640202.80	73340.89	43116.79	506681.68	3857.93	73448.23	472971.79	3701.72	67394.35
C)	PRICE										
8	Amount charged by the Coal Company	(Rs.)	2506374719	204763606	560635058	2067828625	10433748	993351104	1889438746	18330461	928371042
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	0	0	0	0	0	0	0	0	0
10	Handling, Sampling and such other similar charges	(Rs.)	28955558	3321792	0	34588842	263856	0	64273049	503962	0
11	Total amount Charged (8+9+10)	(Rs.)	2535330277	208085398	560635058	2102417467	10697604	993351104	1953711795	18834423	928371042
D)	TRANSPORTATION										
12	Transportation charges by rail/ship/road transport	(Rs.)	299368526	65856199	0	223971207	0	0	210364637	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 MGR system, if applicable	(Rs.)	19385560	0	0	12260929	0	0	19516276	0	0
16	Total Transportation Charges (12+13-14+15)	(Rs.)	318754086	65856199	0	236232137	0	0	229880912	0	0
17	Total amount Charged for Coal supplied including Transportation (11+16)	(Rs.)	2854084362	273941597	560635058	2338649603	10697604	993351104	2183592707	18834423	928371042
E)	TOTAL COST										
18	Landed cost of Coal (2+17)/(1+7)	Rs./MT	4432.03	3718.42	12980.19	4535.62	3480.25	13395.80	4585.30	3982.17	13659.14
19	Blending Ratio (Domestic/Imported)		84.92%	11.55%	3.53%	87.50%	1.25%	11.25%	86.19%	1.18%	12.64%
20	Weighted average cost of Coal/ Lignite (Including Biomass)	Rs./MT	4651.28			5519.31			5724.93		
20a	Weighted average cost of Coal/ Lignite (Excluding Biomass)		4651.28			5519.31			5724.93		
F)	QUALITY (Stage - I, II, III, & IV)										
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/Kg)	5228	4750	0	5269	4750	0	5204	4750	0
22	GCV of Domestic Coal supplied as per bill of Coal Company	(kCal/Kg)	5300	4750	0	5155	4750	0	5152	4750	0
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/Kg)			4962			5004			5039
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)			4960			5050			5050
25	Weighted average GCV of coal as billed (Including Biomass)	(kCal/Kg)	5214			5180			5151		
25a	Weighted average GCV of coal as billed (Excluding Biomass)	(kCal/Kg)	5214			5180			5151		
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/Kg)	4083	3441	0	3886	3251	0	3780	3276	0
27	GCV of Domestic Coal / Bio Mass supplied as received at Station	(kCal/Kg)	3870	3265	0	3753	3444	0	3902	3622	0
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)			4914			4924			4925
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)			4999			4969			4892
30	Weighted average GCV of coal/ Lignite as received (Including Biomass)	(kCal/Kg)	3934			3934			3981		
30a	Weighted average GCV of coal/ Lignite as received (Excluding Biomass)	(kCal/Kg)	3934			3934			3981		

S. No.	Month	Unit	Oct-23			Nov-23			Dec-23		
			Domestic Coal	NTPC Mine Coal	Imported	Domestic Coal	NTPC Mine Coal	Imported	Domestic Coal	NTPC Mine Coal	Imported
A)	OPENING QUANTITY										
1	Opening Quantity of Coal	(MT)	130175.87	4357.66	21399.77	106433.79	4093.16	671.02	239917.82	4081.79	19692.11
2	Value of Stock	(Rs.)	596897639	17352915	292302425	471148548	15241677	8313282	1076750695	15404322	238226100
B)	QUANTITY										
3	Quantity of Coal supplied by Coal Company	(MT)	664247.18	47818.05	38446.14	762488.62	27053.05	62424.94	828807.41	0.00	49236.93
4	Adjustment (+/-) in quantity supplied made by Coal 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 Company (3+4)	(MT)	664247.18	47818.05	38446.14	762488.62	27053.05	62424.94	828807.41	0.00	49236.93
6	Normative Transit & Handling Losses (For Coal based Projects)	(MT)	4235.26	382.54	76.89	4816.58	216.42	124.85	5460.94	0.00	98.47
7	Net Coal Supplied (5-6)	(MT)	660011.92	47435.51	38369.25	757672.04	26836.63	62300.09	823346.47	0.00	49138.46
C)	PRICE										
8	Amount charged by the Coal Company	(Rs.)	2574353375	123570889	448178225	3040576146	69368366	753482252	3251991260	-2159769	612517044
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	0	0	0	0	0	0	0	0	0
10	Handling, Sampling and such other similar charges	(Rs.)	9937948	715416	0	22061452	782739	0	46063721	0	0
11	Total amount Charged (8+9+10)	(Rs.)	2584291323	124286305	448178225	3062637598	70151105	753482252	3298054981	-2159769	612517044
D)	TRANSPORTATION										
12	Transportation charges by rail/ship/road transport	(Rs.)	293624309	51222554	0	319332792	31333607	0	472227785	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 MGR system, if applicable	(Rs.)	23074921	0	0	24987501	0	0	24085704	0	0
16	Total Transportation Charges (12+13-14+15)	(Rs.)	316699230	51222554	0	344320293	31333607	0	496313489	0	0
17	Total amount Charged for Coal supplied including Transportation (11+16)	(Rs.)	2900990553	175508859	448178225	3406957891	101484712	753482252	3794368470	-2159769	612517044
E)	TOTAL COST										
18	Landed cost of Coal (2+17)/(1+7)	Rs./MT	4426.65	3723.69	12389.04	4488.00	3773.91	12097.54	4581.29	3244.79	12359.96
19	Blending Ratio (Domestic/Imported)		83.18%	6.75%	10.06%	90.54%	1.12%	8.34%	85.52%	0.00%	14.48%
20	Weighted average cost of Coal/ Lignite (Including Biomass)	Rs./MT	5180.42			5114.52			5707.44		
20a	Weighted average cost of Coal/ Lignite (Excluding Biomass)		5180.42			5114.52			5707.44		
F)	QUALITY (Stage - I, II, III, & IV)										
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/Kg)	5172	4750	0	5214	4750	0	5302	4750	0
22	GCV of Domestic Coal supplied as per bill of Coal Company	(kCal/Kg)	5219	4750	0	5314	4750	0	4932	0	0
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/Kg)			5047			5049			5050
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)			5050			5050			5050
25	Weighted average GCV of coal as billed (Including Biomass)	(kCal/Kg)	5166			5274			5020		
25a	Weighted average GCV of coal as billed (Excluding Biomass)	(kCal/Kg)	5166			5274			5020		
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/Kg)	3835	3359	0	3569	3351	0	3774	3278	0
27	GCV of Domestic Coal / Bio Mass supplied as received at Station	(kCal/Kg)	3563	3369	0	3807	3314	0	3872	3267	0
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)			4925			4925			4964
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)			4929			4975			4991
30	Weighted average GCV of coal/ Lignite as received (Including Biomass)	(kCal/Kg)	3711			3871			4014		
30a	Weighted average GCV of coal/ Lignite as received (Excluding Biomass)	(kCal/Kg)	3711			3871			4014		

S. No.	Month	Unit	Jan-24			Feb-24			Mar-24		
			Domestic Coal	NTPC Mine Coal	Imported	Domestic Coal	NTPC Mine Coal	Imported	Domestic Coal	NTPC Mine Coal	Imported
A)	OPENING QUANTITY										
1	Opening Quantity of Coal	(MT)	471094.30	4081.79	0.00	626804.46	4081.79	1207.22	716177.38	7579.18	10822.42
2	Value of Stock	(Rs.)	2158216665	13244553	0	2914286700	13244553	14904160	3324427118	21999185	136805103
B)	QUANTITY										
3	Quantity of Coal supplied by Coal Company	(MT)	820725.45	0.00	30384.99	594022.57	3525.60	92798.80	850772.73	0.00	27172.60
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	0.00	0.00	0.00	0.00	0.00	0.00	-3448.82	0.00	0.00
5	Coal supplied by Coal Company (3+4)	(MT)	820725.45	0.00	30384.99	594022.57	3525.60	92798.80	847323.91	0.00	27172.60
6	Normative Transit & Handling Losses (For Coal based Projects)	(MT)	5481.28	0.00	60.77	3818.65	28.20	185.60	5305.59	0.00	54.35
7	Net Coal Supplied (5-6)	(MT)	815244.17	0.00	30324.22	590203.92	3497.40	92613.20	842018.32	0.00	27118.25
C)	PRICE										
8	Amount charged by the Coal Company	(Rs.)	3383309940	0	374378537	2425800029	8620725	1171070195	3726667101	4002224	296675647
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	0	0	0	0	0	0	0	0	0
10	Handling, Sampling and such other similar charges	(Rs.)	22385661	0	0	22561688	133907	0	65015723	0	0
11	Total amount Charged (8+9+10)	(Rs.)	3405695601	0	374378537	2448361717	8754632	1171070195	3791682824	4002224	296675647
D)	TRANSPORTATION										
12	Transportation charges by rail/ship/road transport	(Rs.)	416831600	0	0	278560342	0	0	345890117	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 MGR system, if applicable	(Rs.)	0	0	0	8025778	0	0	36282382	0	0
16	Total Transportation Charges (12+13-14+15)	(Rs.)	416831600	0	0	286586120	0	0	382172499	0	0
17	Total amount Charged for Coal supplied including Transportation (11+16)	(Rs.)	3822527200	0	374378537	2734947837	8754632	1171070195	4173855323	4002224	296675647
E)	TOTAL COST										
18	Landed cost of Coal (2+17)/(1+7)	Rs./MT	4649.43	3244.79	12345.86	4641.90	2902.58	12640.90	4812.16	3430.63	11425.22
19	Blending Ratio (Domestic/Imported)		95.17%	0.00%	4.83%	85.78%	0.00%	14.22%	98.87%	0.39%	0.74%
20	Weighted average cost of Coal/ Lignite (Including Biomass)	Rs./MT	5021.25			5779.05			4855.74		
20a	Weighted average cost of Coal/ Lignite (Excluding Biomass)		5021.25			5779.05			4855.74		
F)	QUALITY (Stage - I, II, III, & IV)										
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/Kg)	5014	4750	0	4962	4750	0	4962	4750	0
22	GCV of Domestic Coal supplied as per bill of Coal Company	(kCal/Kg)	4932	0	0	6127	4750	0	6169	4750	0
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/Kg)			5050			5081			5081
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)			5082			5060			5024
25	Weighted average GCV of coal as billed (Including Biomass)	(kCal/Kg)	4967			5462			5615		
25a	Weighted average GCV of coal as billed (Excluding Biomass)	(kCal/Kg)	4967			5462			5615		
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/Kg)	3824	3278	0	3964	3278	0	4026	3496	0
27	GCV of Domestic Coal / Bio Mass supplied as received at Station	(kCal/Kg)	4063	0	0	4018	3718	0	3909	3750	0
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)			4980			5079			4990
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)			5037			4993			5025
30	Weighted average GCV of coal/ Lignite as received (Including Biomass)	(kCal/Kg)	4029			4134			3968		
30a	Weighted average GCV of coal/ Lignite as received (Excluding Biomass)	(kCal/Kg)	4029			4134			3968		

S. No.	Month	Unit	Apr-23			May-23			Jun-23		
			HFO	LDO	LSHS	HFO	LDO	LSHS	HFO	LDO	LSHS
A) OPENING QUANTITY											
1	Opening Stock of Oil	(KL)	4125.99	96.94	0.00	3685.99	96.94	0.00	2785.99	96.94	2939.49
2	Value of Opening Stock	(Rs.)	260348625.27	5716011.00	0.00	232584761.84	5716011.00	0.00	175795041.18	5716011.00	171464368.00
B) QUANTITY											
3	Quantity of Secondary Fuel/ supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00	0.00	0.00	2939.49	0.00	0.00	0.00
4	Adjustment (-) in quantity supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Secondary Fuel Supplied by Secondary Fuel / Company (3-4)	(KL)	0.00	0.00	0.00	0.00	0.00	2939.49	0.00	0.00	0.00
6	Normative transit & Handling losses (for Secondary Fuel / based projects)	(KL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Net Secondary Fuel / supplied (5-6)	(KL)	0.00	0.00	0.00	0.00	0.00	2939.49	0.00	0.00	0.00
C) PRICE											
8	Amount Charged by the Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00	0.00	0.00	171464368.00	0.00	0.00	0.00
9	Adjustment (+/-) in amount charged by Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Handling, Sampling & Such other similar charges	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Total Amount Charged (8+9+10)	(Rs.)	0.00	0.00	0.00	0.00	0.00	171464368.00	0.00	0.00	0.00
D) TRANSPORTATION											
12	Transportation charges by Rail/Ship/Road Transport	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Adjustment (+/-) in amount charged by Rail/Ship/Road Company	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Demurrage charges, if any	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Cost of diesel in transporting Secondary Fuel through MGR system if applicable	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	Total Transportation Charges (12-13+14+15)	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Total amount charged for Secondary Fuel/ supplied including transportation	(Rs.)	0.00	0.00	0.00	0.00	0.00	171464368.00	0.00	0.00	0.00
18	Landed cost of Secondary Fuel (2+17) / (1+7)	Rs./KL	63099.690	58964.421	0.000	63099.690	58964.421	58331.253	63099.690	58964.421	58331.253
			Stage I & II			Stage I & II			Stage I & II		
19	Blending Ratio		1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	63099.69			63099.69			58331.25		
E) QUALITY											
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9760			9750			9740		
			Stage III			Stage III			Stage III		
19	Blending Ratio		1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	63099.69			63099.69			58331.25		
E) QUALITY											
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9760			9750			9740		

S. No.	Month	Unit	Jul-23			Aug-23			Sep-23		
			HFO	LDO	LSHS	HFO	LDO	LSHS	HFO	LDO	LSHS
A) OPENING QUANTITY											
1	Opening Stock of Oil	(KL)	2785.99	96.94	2330.49	2785.99	96.94	3868.78	2785.99	96.94	3202.78
2	Value of Opening Stock	(Rs.)	175795041.18	5716011.00	135940634.97	175795041.18	5716011.00	224910748.53	175795041.18	5716011.00	186193012.28
B) QUANTITY											
3	Quantity of Secondary Fuel/ supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	2767.29	0.00	0.00	0.00	0.00	0.00	2676.00
4	Adjustment (-) in quantity supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Secondary Fuel Supplied by Secondary Fuel / Company (3-4)	(KL)	0.00	0.00	2767.29	0.00	0.00	0.00	0.00	0.00	2676.00
6	Normative transit & Handling losses (for Secondary Fuel / based projects)	(KL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Net Secondary Fuel / supplied (5-6)	(KL)	0.00	0.00	2767.29	0.00	0.00	0.00	0.00	0.00	2676.00
C) PRICE											
8	Amount Charged by the Secondary Fuel/ Company	(Rs.)	0.00	0.00	160417707.94	0.00	0.00	0.00	0.00	0.00	182196884.39
9	Adjustment (+/-) in amount charged by Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Handling, Sampling & Such other similar charges	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Total Amount Charged (8+9+10)	(Rs.)	0.00	0.00	160417707.94	0.00	0.00	0.00	0.00	0.00	182196884.39
D) TRANSPORTATION											
12	Transportation charges by Rail/Ship/Road Transport	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Adjustment (+/-) in amount charged by Rail/Ship/Road Company	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Demurrage charges, if any	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Cost of diesel in transporting Secondary Fuel through MGR system if applicable	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	Total Transportation Charges (12-13+14+15)	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Total amount charged for Secondary Fuel/ supplied including transportation	(Rs.)	0.00	0.00	160417707.94	0.00	0.00	0.00	0.00	0.00	182196884.39
18	Landed cost of Secondary Fuel (2+17) / (1+7)	Rs./KL	63099.690	58964.421	58134.739	63099.690	58964.421	58134.739	63099.690	58964.421	62664.334
			Stage I & II			Stage I & II			Stage I & II		
19	Blending Ratio		0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	58134.74			58134.74			62664.33		
E) QUALITY											
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9780			9820			9740		
			Stage III			Stage III			Stage III		
19	Blending Ratio		0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	58134.74			58134.74			62664.33		
E) QUALITY											
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9780			9820			9740		

S. No.	Month	Unit	Oct-23			Nov-23			Dec-23		
			HFO	LDO	LSHS	HFO	LDO	LSHS	HFO	LDO	LSHS
A) OPENING QUANTITY											
1	Opening Stock of Oil	(KL)	2785.99	96.94	4100.78	2785.99	96.94	1963.78	2785.99	96.94	1021.78
2	Value of Opening Stock	(Rs.)	175795041.18	5716011.00	256972710.65	175795041.18	5716011.00	123059028.68	175795041.18	5716011.00	64029225.96
B) QUANTITY											
3	Quantity of Secondary Fuel/ supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Adjustment (-) in quantity supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Secondary Fuel Supplied by Secondary Fuel / Company (3-4)	(KL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Normative transit & Handling losses (for Secondary Fuel / based projects)	(KL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Net Secondary Fuel / supplied (5-6)	(KL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C) PRICE											
8	Amount Charged by the Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Adjustment (+/-) in amount charged by Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Handling, Sampling & Such other similar charges	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Total Amount Charged (8+9+10)	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D) TRANSPORTATION											
12	Transportation charges by Rail/Ship/Road Transport	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Adjustment (+/-) in amount charged by Rail/Ship/Road Company	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Demurrage charges, if any	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Cost of diesel in transporting Secondary Fuel through MGR system if applicable	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	Total Transportation Charges (12-13+14+15)	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Total amount charged for Secondary Fuel/ supplied including transportation	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	Landed cost of Secondary Fuel (2+17) / (1+7)	Rs./KL	63099.690	58964.421	62664.334	63099.690	58964.421	62664.334	63099.690	58964.421	62664.334
			Stage I & II			Stage I & II			Stage I & II		
19	Blending Ratio		0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	62664.33			62664.33			62664.33		
E) QUALITY											
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9740			9740			9790		
			Stage III			Stage III			Stage III		
19	Blending Ratio		0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	62664.33			62664.33			62664.33		
E) QUALITY											
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9740			9740			9790		

S. No.	Month	Unit	Jan-24			Feb-24			Mar-24		
			HFO	LDO	LSHS	HFO	LDO	LSHS	HFO	LDO	LSHS
A) OPENING QUANTITY											
1	Opening Stock of Oil	(KL)	2785.99	96.94	560.20	2785.99	96.94	2909.65	2785.99	96.94	2451.69
2	Value of Opening Stock	(Rs.)	175795041.18	5716011.00	35104371.97	175795041.18	5716011.00	172545343.06	175795041.18	5716011.00	145387864.78
B) QUANTITY											
3	Quantity of Secondary Fuel/ supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	2768.90	0.00	0.00	0.00	0.00	0.00	0.00
4	Adjustment (-) in quantity supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Secondary Fuel Supplied by Secondary Fuel / Company (3-4)	(KL)	0.00	0.00	2768.90	0.00	0.00	0.00	0.00	0.00	0.00
6	Normative transit & Handling losses (for Secondary Fuel / based projects)	(KL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Net Secondary Fuel / supplied (5-6)	(KL)	0.00	0.00	2768.90	0.00	0.00	0.00	0.00	0.00	0.00
C) PRICE											
8	Amount Charged by the Secondary Fuel/ Company	(Rs.)	0.00	0.00	162314175.50	0.00	0.00	0.00	30476019.00	0.00	0.00
9	Adjustment (+/-) in amount charged by Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Handling, Sampling & Such other similar charges	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Total Amount Charged (8+9+10)	(Rs.)	0.00	0.00	162314175.50	0.00	0.00	0.00	30476019.00	0.00	0.00
D) TRANSPORTATION											
12	Transportation charges by Rail/Ship/Road Transport	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Adjustment (+/-) in amount charged by Rail/Ship/Road Company	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Demurrage charges, if any	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Cost of diesel in transporting Secondary Fuel through MGR system if applicable	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	Total Transportation Charges (12-13+14+15)	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Total amount charged for Secondary Fuel/ supplied including transportation	(Rs.)	0.00	0.00	162314175.50	0.00	0.00	0.00	30476019.00	0.00	0.00
18	Landed cost of Secondary Fuel (2+17) / (1+7)	Rs./KL	63099.690	58964.421	59300.983	63099.690	58964.421	59300.983	74038.720	58964.421	59300.983
			Stage I & II			Stage I & II			Stage I & II		
19	Blending Ratio		0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	59300.98			59300.98			59300.98		
E) QUALITY											
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9770			9770			9770		
			Stage III			Stage III			Stage III		
19	Blending Ratio		0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	59300.98			59300.98			59300.98		
E) QUALITY											
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9770			9770			9770		

Name of the Petitioner
Name of the Generating Station

NTPC Ltd
Farakka Super Thermal power Station Stage-I&II

Statement of Capital cost

(To be given for relevant dates and year wise)

(Amount in Rs. Lakh)

S. No.	Particulars	As on 31.03.2024		
		Accrual Basis	Un-discharged Liabilities	Cash Basis
A	a) Opening Gross Block Amount as per books	449176.37	13240.52	435935.85
	b) Amount of IDC in A(a) above	8113.96		8113.96
	c) Amount of FC in A(a) above	0.00		
	d) Amount of FERV in A(a) above	519.16		519.16
	e) Amount of Hedging Cost in A(a) above	0.00		
	f) Amount of IEDC in A(a) above	0.00		
B	a) Addition in Gross Block Amount during the period (Direct purchases)			
	b) Amount of IDC in B(a) above			
	c) Amount of FC in B(a) above			
	d) Amount of FERV in B(a) above			
	e) Amount of Hedging Cost in B(a) above			
	f) Amount of IEDC in B(a) above			
C	a) Addition in Gross Block Amount during the period (Transferred from CWIP)			
	b) Amount of IDC in C(a) above			
	c) Amount of FC in C(a) above			
	d) Amount of FERV in C(a) above			
	e) Amount of Hedging Cost in C(a) above			
	f) Amount of IEDC in C(a) above			
D	a) Deletion in Gross Block Amount during the period			
	b) Amount of IDC in D(a) above			
	c) Amount of FC in D(a) above			
	d) Amount of FERV in D(a) above			
	e) Amount of Hedging Cost in D(a) above			
	f) Amount of IEDC in D(a) above			
E	a) Closing Gross Block Amount as per books			
	b) Amount of IDC in E(a) above			
	c) Amount of FC in E(a) above			
	d) Amount of FERV in E(a) above			
	e) Amount of Hedging Cost in E(a) above			
	f) Amount of IEDC in E(a) above			

(Petitioner)

Name of the Petitioner
Name of the Generating StationNTPC Ltd
Farakka Super Thermal power Station Stage-I&IIStatement of Capital Works in Progress

(Amount in Rs. Lakh)

S. No.	Particulars	As on 31.03.24		
		Accrual Basis	Un-discharged Liabilities	Cash Basis
A	a) Opening CWIP as per books	15,139	3742	11397
	b) Amount of IDC in A(a) above	278		278
	c) Amount of FC in A(a) above	0		0
	d) Amount of FERV in A(a) above	-16		-16
	e) Amount of Hedging Cost in A(a) above	0		0
	f) Amount of IEDC in A(a) above	0		0
B	a) Addition in CWIP during the period			
	b) Amount of IDC in B(a) above			
	c) Amount of FC in B(a) above			
	d) Amount of FERV in B(a) above			
	e) Amount of Hedging Cost in B(a) above			
	f) Amount of IEDC in B(a) above			
C	a) Transferred to Gross Block Amount during the period			
	b) Amount of IDC in C(a) above			
	c) Amount of FC in C(a) above			
	d) Amount of FERV in C(a) above			
	e) Amount of Hedging Cost in C(a) above			
	f) Amount of IEDC in C(a) above			
D	a) Deletion in CWIP during the period			
	b) Amount of IDC in D(a) above			
	c) Amount of FC in D(a) above			
	d) Amount of FERV in D(a) above			
	e) Amount of Hedging Cost in D(a) above			
	f) Amount of IEDC in D(a) above			
E	a) Closing CWIP as per books			
	b) Amount of IDC in E(a) above			
	c) Amount of FC in E(a) above			
	d) Amount of FERV in E(a) above			
	e) Amount of Hedging Cost in E(a) above			
	f) Amount of IEDC in E(a) above			

(Petitioner)

Calculation of Interest on Normative Loan

Name of the Company :		NTPC Limited					
Name of the Power Station :		Farakka Super Thermal power Station Stage-I&II					
(Amount in Rs Lakh)							
S. No.	Particulars	Existing 2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7	8
1	Gross Normative loan – Opening	1,83,600.37	1,89,205.68	1,91,396.55	1,91,580.80	1,98,951.12	2,02,618.11
2	Cumulative repayment of Normative loan up to previous year	1,83,600.37	1,89,205.68	1,91,396.55	1,91,580.80	1,95,646.62	2,02,618.11
3	Net Normative loan – Opening	-	-	-	-	3,304.50	-
4	Add: Increase due to addition during the year / period	5161.89	2,190.87	184.25	7,370.32	3,666.99	3,810.89
5	Less: Decrease due to de-capitalisation during the year / period	0.00	0.00	0.00	0.00	0.00	0.00
6	Less: Decrease due to reversal during the year / period						
7	Add: Increase due to discharges during the year / period	443.42	0.00	0.00	0.00	0.00	0.00
8	Net addition in loan during the period (4+5+6+7)	5605.31	2190.87	184.25	7370.32	3666.99	3810.89
9	Less: Repayment of Loan	5605.31	2,190.87	184.25	4,065.82	6,971.49	3,810.89
10	Repayment adjustment on account of de capitalisation	0.00					
11	Repayment adjustment on account of discharges/reversals corresponding to un discharged liabilities deducted as on 1.4.2009	-					
12	Net Normative loan - Closing	-	-	-	3,304.50	-	-
13	Average Normative loan	-	-	-	1,652.25	1,652.25	-
14	Weighted average rate of interest	7.7269	7.7607	7.7662	7.7928	7.7674	7.7358
15	Interest on Loan	0.00	0.00	0.00	128.76	128.34	0.00

(Petitioner)

Summary of issue involved in the petition

Name of the Company :		NTPC Limited
Name of the Power Station :		Farakka Super Thermal power Station Stage-I&II
1	Petitioner:	NTPC Limited
2	Subject	Petition Under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-I&II of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 and Chapter-3, Regulation-9 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 for approval of tariff of Farakka Super Thermal Power Station Stage-I & II (1600 MW) for the period from 01.04.2024 to 31.03.2029
3	Prayer:	<ul style="list-style-type: none"> i) Approve tariff of Farakka Super Thermal Power Station Stage-I&II (1600 MW) for the tariff period 01.04.2024 to 31.03.2029. ii) Allow the recovery of filing fees as & when paid to the Hon'ble Commission and publication expense from the beneficiaries. iii) Allow reimbursement of Ash Transportation Charges directly from the beneficiaries on monthly basis, subject to true up. iv) Allow the recovery of pay/ wage revision as additional O&M over and above the normative O&M. v) Consider station heat rate based on design heat rate with applicable operating margin. vi) Pass any other order as it may deem fit in the circumstances mentioned above
4	Respondents:	As per Petition
Name of Respondents		
	a.	
	b.	
	c.	
5	Project Scope	
	Cost	
	Commissioning	
	Claim	
	AFC	
	Capital cost	
	Initial spare	
	NAPAF (Gen)	85%
	Any Specific	

(Petitioner)

Computation of Energy Charges

Form-Oi

ADDITIONAL FORM

Name of the Company	NTPC Limited
Name of the Power Station	Farakka Super Thermal power Station Stage-I&II

		2024-25	2025-26	2026-27	2027-28	2028-29
Computation of Energy Charges						
No of Days in the year	Days	365	365	365	366	365
Sp. Oil consumption	ml/kwh	0.81	0.81	0.81	0.81	0.81
Auxiliary consumption	%	6.470	6.470	6.470	6.470	6.470
Heat Rate	Kcal/Kwh	2,390.00	2,390.00	2,390.00	2,390.00	2390
1 Rate of Energy Charge from Sec. Fuel Oil/ Alternate Fuel (p/kwh) (REC)_s		= (Q_s)_n X P_s				4.923
2 Heat Contribution from SFO / Alternate Fuel (H_s)		= (Q_s)_n X (GCV)_s				7.909
3 Heat Contribution from coal (H_p)_s		= GHR- H_s				2382.09
4 Specific Primary Fuel Consumption (Q_p)_n		= H_p/ (GCV)_p				0.615
5 Rate of Energy charge from Primary Fuel (p/kwh) (REC)_p						316.043
6 Rate of Energy charge ex-bus (p/kWh) (REC)		= ((REC)_s + (REC)_p / (1-(AUX)))				343.169
						for 2023-24
Computation of Variable Charges						
Variable Charge (Coal)	p/kwh	337.905	337.905	337.905	337.905	337.905
Variable Charge (Oil)	p/kwh	5.264	5.264	5.264	5.264	5.264
Total	p/kwh	343.169	343.169	343.169	343.169	343.169
Price of fuel from Form-15/15A						
Coal Cost	(Rs./MT)	5136.71	5136.71	5136.71	5136.71	5136.71
Oil Cost	(Rs./KL)	60780.03	60780.03	60780.03	60780.03	60780.03
Computation of Fuel Expenses for Calculation of IWC:						
ESO in a year	(MUs)	10880.61	10880.61	10880.61	10910.42	10880.607
ESO for 40 days	(MUs)	1192.395	1192.395	1192.40	1192.40	1192.395
Cost of coal for 50 Days	(Rs. Lakh)	40291.63	40291.63	40291.63	40291.63	40291.63
Cost of oil for 2 months	(Rs. Lakh)	954.55	954.55	954.55	957.16	954.55
Energy Expenses for 45 days	(Rs. Lakh)	46034.18	46034.18	46034.18	46034.18	46034.18
Coal						
Wtd. Avg. Price of Coal				Rs./MT	5136.71	
Wtd. Avg. GCV of Coal as received				kCal/Kg	3956.67	
Wtd. Avg. GCV of Coal as received after adjustement of 85 kcal/kg				3871.67		
Sec. Oil						
Wtd. Avg. Price of Secondary Fuel				Rs/KL	60780.03	
Wtd. Avg. GCV of Secondary Fuel				kCal/L	9764.17	

PETITIONER

Summary of issue involved in the petition

Name of the Company :		NTPC Limited
Name of the Power Station :		Farakka Super Thermal power Station Stage-I&II
1	Petitioner:	NTPC Limited
2	Subject	Petition Under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-V of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Chapter-3, Regulation-9 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for approval of tariff of Simhadri Super Thermal Power Station Stage-I (1000 MW) for the period from 01.04.2019 to 31.03.2024
3	Prayer:	i) Approve tariff of Simhadri Super Thermal Power Station Stage-I (1000 MW) for the tariff period 01.04.2019 to 31.03.2024. ii) Allow the recovery of filing fees as & when paid to the Hon'ble Commission and publication expenses from the beneficiaries. iii) Allow reimbursement of Ash Transportation Charges directly from the beneficiaries quarterly on net basis. iv) Allow the relaxation in norms for Auxilliary Power Consumption v) Pass any other order as it may deem fit in the circumstances mentioned above.
4	Respondents:	As per Petition
	Name of Respondents	
	a.	
	b.	
	c.	
5	Project Scope	
	Cost	
	Commissioning	
	Claim	
	AFC	
	Capital cost	
	Initial spare	
	NAPAF (Gen)	85%
	Any Specific	

Name of the Company : NTPC Limited Name of the Power Station : Farakka Super Thermal power Station Stage-I&II										
Sr. No.	Bank	ROI on refinancing date	Date of refinancing	Refinanced with Bank	Refinanced Amount (Rs. In crore)	New Loan Amount (Rs. In crore)	ROI of relplaced Loan	savings	saving to be retained (Percent)	Remarks
1	Axis Bank-II	8.30%	29.03.2023	Bank of India-IV	26.00	26.00	8.15%	0.15%	0.0750%	Loan outstanding as on 29.03.2023 from Axis Bank II and Axis Bank III have been foreclosed by way of refinancing from Bank of India IV at a concessional rate. One-half of the savings in the interest rate is added to the weighted average rate of loan.

Weighted Average Rate Of Interest

Name of the Company : NTPC Limited
 Name of the Power Station : Farakka Super Thermal power Station Stage-I&II

BANK	RATE OF INTEREST	From	To
HDFC Bank Limited-V	7.95%	01-Jun-23	31-Mar-24
State Bank of India - XI	8.20%	11-Jan-24	31-Mar-24
State Bank of India - VIII	8.20%	14-Feb-24	31-Mar-24
State Bank of India - IX	8.20%	14-Feb-24	31-Mar-24
Punjab National Bank III	7.90%	01-Apr-23	31-Mar-24
HDFC Bank Limited-VII-D1	7.95%	01-Jun-23	31-Mar-24
HDFC Bank Limited-VII-D2	7.95%	01-Jun-23	31-Mar-24
HDFC Bank Limited-IX-D1	7.95%	01-Jun-23	31-Mar-24
HDFC Bank Limited-IX-D2	7.95%	01-Jun-23	31-Mar-24
HDFC X-D1	7.95%	01-Jun-23	31-Mar-24
HDFC X-D2	7.95%	01-Jun-23	31-Mar-24
IndusInd Bank	8.05%	20-Dec-23	31-Mar-24
Bank Of India-IV	8.00%	01-Apr-23	31-Mar-24

Annexure-A



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


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(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 Edition 1.0 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. 8th 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^{§, #} obtained by OEM from a certification body accredited to assess devices and process for conformances 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 8th 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.

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).

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.

Annexure-B



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भारत हेवी इलेक्ट्रिकल्स लिमिटेड

Bharat Heavy Electricals Limited

(A Government of India Undertaking)

ELECTRONICS DIVISION

P.B.No 2606, Mysore Road, Bangalore - 560 026

PHONE : 080-26998281

MOBILE : 9845696568

E-MAIL : prakashdevadas@bhel.in

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	Workstation: Intel Core 2 Duo processor, 1GB RAM, 146 GB SAS disk, 10 Mbps Ethernet port. Server: 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
Bharat Heavy Electricals Limited

(A Government of India Undertaking)
ELECTRONICS DIVISION

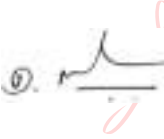
P.B.No 2606, Mysore Road, Bangalore - 560 026

PHONE : 080-26998281

MOBILE : 9845696568

E-MAIL : prakashdevadas@bhel.in

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.


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ou=EDN,
email=prakashdevadas@bhel.in, c=IN
Date: 2022.09.21 17:12:12 +05'30'

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


सत्यमेव जयते

भारत का राजपत्र The Gazette of India

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असाधारण
EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii)
PART II—Section 3—Sub-section (ii)

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पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 31 दिसम्बर, 2021

का.आ. 5481(अ).—केन्द्रीय सरकार ने भारत सरकार के तत्कालीन पर्यावरण और वन मंत्रालय की अधिसूचना सं. का.आ. 763 (अ) तारीख 14 सितम्बर, 1999 द्वारा कोयला या लिग्नाइट आधारित ताप विद्युत संयंत्रों से तीन सौ किलोमीटर के विनिर्दिष्ट व्यास के भीतर ईंटों के विनिर्माण के लिए उपजाऊ मिट्टी के उत्खनन को प्रतिबंधित करने के लिए और भवन निर्माण सामग्री के विनिर्माण में और संनिर्माण क्रियाकलाप में फ्लाई-राख के उपयोग को बढ़ावा देने के लिए निदेश जारी किए हैं;

और, प्रदूषणकर्ता भुगतान सिद्धांत (पीपीपी) के आधार पर, ऐसा करके कोयला या लिग्नाइट आधारित ताप विद्युत संयंत्रों द्वारा फ्लाई-राख का 100 प्रतिशत उपयोग सुनिश्चित करते हुए और फ्लाई-राख प्रबंधन प्रणाली की संधारणीयता के लिए पूर्वोक्त अधिसूचना को और अधिक प्रभावकारी ढंग से कार्यान्वित करने हेतु, केन्द्रीय सरकार ने मौजूदा अधिसूचना की समीक्षा की;

और प्रदूषणकर्ता भुगतान सिद्धांत के आधार पर पर्यावरणीय प्रतिकर निर्धारित किए जाने की आवश्यकता है;

और, विनिर्माण को बढ़ावा देकर तथा निर्माण कार्य के क्षेत्र में राख आधारित उत्पादों तथा भवन निर्माण सामग्रियों के प्रयोग को अनिवार्य करके उपजाऊ मिट्टी को संरक्षित करने की आवश्यकता है;

और, सड़क बनाने, सड़क एवं फ्लाई ओवर के रेलिंग बनाने, तटरेखा की सुरक्षा का उपाय करने, अनुमोदित परियोजनाओं के निचले क्षेत्रों को भरने, खनित स्थलों को फिर से भरने में मिट्टी की सामग्रियों से भरने के विकल्प के रूप में राख उपयोग को बढ़ावा देकर उपजाऊ मिट्टी और प्राकृतिक संसाधनों को संरक्षित करने की आवश्यकता है;

और, पर्यावरण को सुरक्षित करना तथा कोयला अथवा लिग्नाइट आधारित ताप विद्युत संयंत्रों से सृजित फ्लाई राख के निक्षेपण तथा निपटान की रोकथाम करना आवश्यक है;

और, उक्त अधिसूचना में जो 'राख' शब्द का प्रयोग किया गया है उसमें कोयला या लिग्नाइट आधारित ताप विद्युत संयंत्रों से सृजित फ्लाई-राख और बॉटम-राख दोनों शामिल हैं;

और, केंद्रीय सरकार प्रदूषणकर्ता भुगतान सिद्धांत के आधार पर, पर्यावरणीय प्रतिकर की प्रणाली सहित राख के उपयोग के लिए एक व्यापक ढांचा लाना चाहती है;

अतः पर्यावरण (संरक्षण) नियम, 1986 के नियम (5) के उप-नियम (3) के खंड (घ) के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3 की उप-धारा (1) और उप-धारा (2) के खंड (v) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, भारत सरकार के पर्यावरण एवं वन मंत्रालय की अधिसूचना जो का.आ. 763 (अ) तारीख 14 सितम्बर, 1999 द्वारा भारत के राजपत्र, असाधारण भाग II, खंड 3, उप खंड (i) में प्रकाशित का अधिक्रमण करते हुए, कोयला या लिग्नाइट आधारित ताप विद्युत संयंत्रों द्वारा राख के उपयोग के संबंध में प्रारूप अधिसूचना जो सा.का.नि. 285 (अ) तारीख 22 अप्रैल, 2021 द्वारा भारत के राजपत्र, असाधारण, भाग-2, धारा 3, उप धारा (i) में प्रकाशित की गई थी जिसमें उन सभी व्यक्तियों से जिनका इससे प्रभावित होना सामान्य है उस तारीख से, जिसको उक्त प्रारूप उपबंधों की शासकीय राजपत्र में अंतर्विष्ट प्रतियां जनता को उपलब्ध करा दी गई थी, साठ दिनों के अवसान से पूर्व आक्षेप और सुझाव आमंत्रित किए गए थे।

और उक्त प्रारूप अधिसूचना के संबंध में उससे संभावित तौर पर प्रभावित होने वाले सभी व्यक्तियों से प्राप्त आक्षेपों और सुझावों पर केंद्रीय सरकार द्वारा सम्यक रूप से विचार कर लिया गया है;

अतः पर्यावरण (संरक्षण) नियम, 1986 के नियम (5) के उप-नियम (3) के खंड (घ) के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3 की उप-धारा (1) और उप-धारा (2) के खंड (v) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए और अधिसूचना का.आ. 763 (अ) तारीख 14 सितम्बर, 1999 का उन बातों के सिवाय अधिकांत करते हुए जिन्हें ऐसे अधिक्रमण से पूर्व किया गया है या करने का लोप किया गया है, केन्द्रीय सरकार कोयलों या लिग्नाइट आधारित ताप विद्युत संयंत्रों से राख के उपयोग के संबंध में निम्नलिखित अधिसूचना जारी करती है, जो इस अधिसूचना के प्रकाशन की तिथि से प्रवृत्त होगी, अर्थात्

क. फ्लाई-राख और बॉटम-राख का निपटान करने हेतु ताप विद्युत संयंत्रों (टीपीपी) के उत्तरदायित्व.-

(1) प्रत्येक कोयला या लिग्नाइट आधारित ताप विद्युत संयंत्र (जिनमें कैप्टिव और/या सह-उत्पादन केंद्र शामिल हैं या दोनों) की यह प्राथमिक जिम्मेदारी होगी कि वह अपने द्वारा सृजित राख (फ्लाई-राख और बॉटम-राख) का उप पैरा (2) में दिए गए पारि-अनुकूल तरीके से 100 प्रतिशत उपयोग सुनिश्चित करे;

(2) कोयला या लिग्नाइट आधारित ताप विद्युत संयंत्रों से सृजित राख का उपयोग केवल निम्नलिखित पारि-अनुकूल प्रयोजनों के लिए किया जाएगा, अर्थात्:-

- (i) फ्लाई राख पर आधारित उत्पाद अर्थात्: ईट ब्लॉक टाइल, फाइबर सीमेंट शीट, पाइप, बोर्ड, पैनल का विनिर्माण;
- (ii) सीमेंट विनिर्माण, रेडी-मिक्स कंक्रीट;

- (iii) सड़क निर्माण और फ्लाई-ओवर के रेलिंग का निर्माण, राख और जिओ-पॉलीमर आधारित निर्माण सामग्री;
- (iv) बांध का निर्माण;
- (v) निचले क्षेत्र को भरना;
- (vi) खनन कार्य से रिक्त हुए स्थान को भरना;
- (vii) सिंटेड या शीत-बद्ध राख संचय का विनिर्माण;
- (viii) मृदा परीक्षण के आधार पर नियंत्रित तरीके से कृषि;
- (ix) तटीय जिलों में तटरेखा संरक्षण संरचनाओं का निर्माण;
- (x) अन्य देशों को राख का निर्यात;
- (xi) समय-समय पर यथाधिसूचित किसी अन्य पारि-अनुकूल प्रयोजन के लिए।
- (3) अध्यक्ष, केंद्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) की अध्यक्षता में एक समिति गठित की जाएगी जिसमें पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय (एमओईएफसीसी), विद्युत मंत्रालय, खान मंत्रालय, कोयला मंत्रालय, सड़क परिवहन और राजमार्ग मंत्रालय, कृषि अनुसंधान एवं शिक्षा विभाग, सड़क कांग्रेस संस्थान तथा राष्ट्रीय सीमेंट एवं भवन सामग्री परिषद के प्रतिनिधियों को सदस्यों के रूप में शामिल किया जाएगा, जिसका प्रयोजन राख के उपयोग के पारि-अनुकूल तौर-तरीकों की जांच करना, उनकी समीक्षा एवं अनुशंसा करना तथा प्रौद्योगिकीय विकासों तथा पणधारी से प्राप्त अनुरोधों के आधार पर उप-पैरा (2) में यथोल्लिखित ऐसे तौर-तरीकों की सूची में समिति द्वारा सुझाए गए तौर-तरीकों को शामिल करना या किसी तौर-तरीके को सूची से हटाना या उसमें संशोधन करना है। जब भी इस प्रयोजन के लिए अपेक्षित हो, यह समिति राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति, ताप विद्युत संयंत्र और खानों के प्रचालकों को आमंत्रित कर सकती है। इस समिति सिफारिश के आधार पर, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय ऐसे पारि-अनुकूल प्रयोजन प्रकाशित करेगा।
- (4) प्रत्येक कोयला या लिग्नाइट आधारित ताप विद्युत संयंत्र उस वर्ष के दौरान सृजित राख (फ्लाई-राख और बॉटम-राख) का 100 प्रतिशत उपयोग करने हेतु उत्तरदायी होगा; तथापि, किसी भी स्थिति में, किसी वर्ष में राख का उपयोग 80 प्रतिशत से नीचे नहीं होगा और साथ ही, उस ताप विद्युत संयंत्र को तीन वर्ष की अवधि में 100 प्रतिशत औसत राख के उपयोग का लक्ष्य प्राप्त करना होगा :

परंतु, यह और कि पहली बार के लिए लागू तीन वर्ष के चक्र को ऐसे ताप विद्युत संयंत्रों, जहां राख का उपयोग 60-80 प्रतिशत के बीच होता है, एक वर्ष के लिए और ऐसे संयंत्रों, जहां राख का उपयोग 60 प्रतिशत से कम है, दो वर्ष के लिए बढ़ाया जा सकता है, और राख के उपयोग की प्रतिशतता की गणना के प्रयोजन के लिए वर्ष 2021-2022 में उपयोग की प्रतिशत प्रमात्रा को नीचे दी गई तालिका के अनुसार ध्यान में रखा जाएगा:

तापीय विद्युत संयंत्रों के उपयोग की प्रतिशतता	100 प्रतिशत उपयोगिता प्राप्त करने के लिए प्रथम अनुपालन चक्र	100 प्रतिशत उपयोगिता प्राप्त करने के लिए द्वितीय अनुपालन चक्र
>80 प्रतिशत	3 वर्ष	3 वर्ष
60-80 प्रतिशत	4 वर्ष	3 वर्ष
<60 प्रतिशत	5 वर्ष	3 वर्ष

परन्तु, ताप विद्युत संयंत्रों के लिए 80 प्रतिशत न्यूनतम उपयोग प्रतिशतता, क्रमशः 60-80 प्रतिशत और <60 प्रतिशत की उपयोगिता की श्रेणी के तहत आने वाले ताप विद्युत संयंत्रों के लिए प्रथम अनुपालन चक्र के पहले वर्ष और पहले दो वर्षों पर लागू नहीं होगी।

परन्तु, अनुपालन चक्र के अंतिम वर्ष में सृजित 20 प्रतिशत राख को अगले चक्र में भी ले जाया जाएगा जिसका उपयोग उस अनुपालन चक्र के दौरान सृजित राख के साथ अगले तीन वर्षों में किया जाएगा।

- (5) अप्रयुक्त संचित राख अर्थात् लीगेसी राख, जिसका इस अधिसूचना के प्रकाशन से पहले भंडारण किया गया है, को ताप विद्युत संयंत्र (टीपीपी) द्वारा इस रीति से क्रमिक रूप से उपयोग में लाया जाएगा, कि लीगेसी राख को इस अधिसूचना के प्रकाशन की तिथि से दस वर्षों के भीतर पूरी तरह उपयोग कर लिया जाएगा और यह उस विशिष्ट वर्ष के चालू संचालनों के माध्यम से राख उत्सर्जन के लिए निर्धारित उपयोग लक्ष्यों से अतिरिक्त होगा।

परन्तु, निम्नलिखित प्रतिशतताओं में यथा उल्लिखित लीगेसी राख की न्यूनतम मात्रा का उपयोग तास्थानी वर्ष के दौरान कर लिया जाएगा और लीगेसी राख की न्यूनतम मात्रा की ताप विद्युत संयंत्र की संस्थापित क्षमता के अनुसार वार्षिक राख उत्सर्जन के आधार पर की जानी है।

प्रकाशन की तिथि से वर्ष	पहला	दूसरा	तीसरा-दसवां
लीगेसी राख का उपयोग (वार्षिक राख की प्रतिशतता)	कम से कम 20 प्रतिशत	कम से कम 35 प्रतिशत	कम से कम 50 प्रतिशत

परन्तु, यह और कि लीगेसी राख का उपयोग वहां अपेक्षित नहीं है, जहां राख के तालाब या डाइक स्थिर हो गए हैं और हरित पट्टी के निर्माण या पौध रोपण से पुनरुद्धार किया गया है और संबंधित राज्य प्रदूषण नियंत्रण बोर्ड इस संबंध में प्रमाणित करेगा। किसी राख तालाब या डाइक के स्थिरीकरण और भूमि-उद्धार का कार्य, जिसमें केन्द्रीय प्रदूषण नियंत्रण बोर्ड या राज्य प्रदूषण नियंत्रण बोर्ड द्वारा प्रमाणन शामिल है, इस अधिसूचना के प्रकाशन की तारीख से एक वर्ष के भीतर किया जाएगा। अन्य सभी राख के कुंड या डाइक में शेष बचे राख का उपयोग ऊपर उल्लिखित समय-सीमाओं के अनुसार क्रमिक रूप से किया जाएगा।

टिप्पण: राख के उपयोग के लक्ष्यों को हासिल करने के लिए उप पैरा (4) और (5) के अधीन दायित्व 01 अप्रैल, 2022 की तारीख से लागू होंगे।

- (6) किसी भी नए तापीय विद्युत संयंत्र (टीपीपी) में 0.1 हेक्टेयर प्रति मेगावाट (एमडब्ल्यू) क्षेत्रफल के साथ आपातकालीन या अस्थायी राख कुंड की अनुमति दी जा सकती है। राख के तालाब या डाइकों का तकनीकी विनिर्देश, केन्द्रीय विद्युत प्राधिकरण (सीईए) के परामर्श से केन्द्रीय प्रदूषण नियंत्रण बोर्ड द्वारा बनाए गए दिशानिर्देशों के अनुसार होगा और ये दिशानिर्देश राख के कुंड या डाइक के संबंध में इसकी सुरक्षा, पर्यावरणीय प्रदूषण, उपलब्ध प्रमात्रा, निपटान का तरीका, निपटान में जल की खपत या संरक्षण, राख जल पुनर्चक्रण और ग्रीन बेल्ट आदि के वार्षिक प्रमाणन के लिए कार्यविधि भी निर्धारित करेंगे और इस अधिसूचना के प्रकाशन की तारीख से तीन महीनों के भीतर प्रस्तुत किए जाएंगे।
- (7) प्रत्येक कोयला या लिग्नाइट आधारित ताप विद्युत संयंत्र यह सुनिश्चित करेगा कि राख की लदाई, उतराई, ढुलाई, भंडारण और निपटान पर्यावरणीय दृष्टि से अनुकूल रीति से किया गया है और वायु और जल प्रदूषण की रोकथाम के लिए सभी ऐहियता किए गए हैं और इस संबंध में स्थिति की सूचना इस अधिसूचना में संलग्न अनुबंध में संबंधित राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) को दी जाएगी।
- (8) प्रत्येक कोयला या लिग्नाइट आधारित तापीय विद्युत संयंत्र, संस्थापित क्षमता पर आधारित राख के कम से कम 16 घंटों के भंडारण के लिए समर्पित शुष्क फ्लाई राख साइलोस प्रतिष्ठापित करेगा, जिनके पास पृथक पहुंच मार्ग होंगे, जिससे कि राख पहुंचाने के कार्य को सुगम बनाया जा सके। इसकी सूचना संबंधित राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) को उपाबंध में दी जाएगी और केन्द्रीय प्रदूषण नियंत्रण

बोर्ड (सीपीसीबी) या राज्य केन्द्रीय प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति द्वारा समय-समय पर निरीक्षण किया जाएगा।

- (9) प्रत्येक कोयला या लिग्नाईट आधारित तापीय विद्युत संयंत्र (जिसके अंतर्गत कैप्टिव या सह उत्पादन केन्द्र भी है या दोनों), वास्तविक उपयोगकर्ता (उपयोगकर्ताओं) के हित के लिए केन्द्रीय प्रदूषण नियंत्रण बोर्ड के वेब पोर्टल या मोबाईल फोन एप्प का लिंक उपलब्ध कराकर ताप विद्युत संयंत्र के पास राख की उपलब्धता के वास्तविक आंकड़े प्रदान करेगा।
- (10) राख के 100 प्रतिशत उपयोग का वैधानिक दायित्व, जहां भी लागू हो, विधि में बदलाव के रूप में माना जाएगा।

ख. राख के उपयोग के प्रयोजनार्थ, उत्तरवर्ती उप पैराग्राफ लागू होंगे :-

- (1) ऐसे सभी अभिकरण (सरकारी, अर्द्धसरकारी और निजी), जो सड़क बिछाने, सड़क और फ्लाई ओवर के किनारों, तटीय जिलों में तटरेखा की सुरक्षा संरचनाओं और लिग्नाईट या कोयला आधारित ताप विद्युत संयंत्र से 300 किमी के भीतर बांधों जैसे निर्माण संबंधी कार्यकलापों में लगे हुए हैं, इन कार्यकलापों में अनिवार्य रूप से राख का उपयोग करेंगे :

परंतु इसको परियोजना स्थल पर निशुल्क पहुंचाया जाए और परिवहन लागत, ऐसे कोयला या लिग्नाईट आधारित ताप विद्युत संयंत्रों द्वारा वहन की जाए।

परंतु यह और कि ताप विद्युत संयंत्र पारस्परिक सहमत हुई शर्तों के अनुसार राख की लागत और परिवहन के लिए शुल्क ले सकता है उस मामले में जहां ताप विद्युत संयंत्र अन्य माध्यम से राख का निपटान करने में समर्थ है और ये अभिकरण इसके लिए प्रार्थना कर सकते हैं और बिना लागत और बिना परिवहन शुल्क के राख उपलब्ध कराने के प्रावधान तभी लागू होंगे यदि उसके लिए ताप विद्युत संयंत्र उस निर्माण अभिकरण को नोटिस जारी करता है।

- (2) उक्त कार्यकलापों में राख का उपयोग भारतीय मानक ब्यूरो, भारतीय रोड कांग्रेस, केन्द्रीय भवन अनुसंधान संस्थान, रूडकी, केन्द्रीय सड़क अनुसंधान संस्थान, दिल्ली, केन्द्रीय लोक निर्माण विभाग, राज्य लोक निर्माण विभागों और अन्य केन्द्रीय और राज्य सरकार के अभिकरणों द्वारा निर्धारित किए गए विनिर्देशों और दिशानिर्देशों के अनुसार किया जाएगा।

- (3) तापीय विद्युत संयंत्र की 300 किलोमीटर की परिधि के भीतर अवस्थित सभी खानों के लिए विस्तारित उत्पादक उत्तरदायित्व (ईपीआर) के तहत खुली आवर्त खानों में राख का पृष्ठ भंडारण करना या अधिक भार के ढेरों के साथ राख का मिश्रण करना बाध्यकारी होगा। सभी खान के स्वामी या प्रचालक (चाहे सरकारी, सार्वजनिक और निजी क्षेत्र के हो) कोयला या लिग्नाईट आधारित तापीय विद्युत संयंत्रों से तीन सौ किलोमीटर (सड़क द्वारा) के भीतर, महानिदेशक, खान सुरक्षा (डीजीएमएस) के दिशानिर्देशों के अनुसार ओवर बर्डन के बाह्य निक्षेप खान की बैकफिलिंग अथवा स्टोविंग (प्रचालित या छोड़ी गई खानों, जैसा भी मामला हो) के लिए उपयोग की गई सामग्रियों के भार-दर-भार के आधार पर कम से कम 25 प्रतिशत राख को मिश्रित करने के लिए उपाय करेंगे :

परंतु ऐसे तापीय विद्युत केन्द्र निःशुल्क राख प्रदान करके और परिवहन की लागत को वहन करके या पारस्परिक सहमत हुई शर्तों पर लिए गए निर्णय के अनुसार लागत या परिवहन व्यवस्था करके राख की अपेक्षित मात्रा की उपलब्धता को सुकर बनायेंगे और खानों के खाली स्थानों और ढेरों में अधिकभार के साथ राख को मिश्रित करना, सृजित अधिभार के लिए इस अधिसूचना के प्रकाशन की तिथि से लागू होगा और उक्त कार्यकलापों में राख का उपयोग, केन्द्रीय प्रदूषण नियंत्रण बोर्ड, महानिदेशक खान सुरक्षा और भारतीय खदान ब्यूरो द्वारा निर्धारित दिशानिर्देशों के अनुसार किया जाएगा।

स्पष्टीकरण :- इस उप-पैरा के प्रयोजन के लिए यह भी स्पष्ट किया जाता है कि लागत मुक्त राख और निःशुल्क परिवहन के उपबंध केवल तभी लागू होंगे यदि ताप विद्युत संयंत्र इसके लिए खान मालिक को नोटिस देते हैं और अधिभार वाले ढेर के साथ मिश्रित करने और खान में खाली स्थान को भरने के लिए राख के 25 प्रतिशत हिस्से के उपयोग का अधिदेश तब तक लागू नहीं होगा जब तक कि ताप विद्युत संयंत्र द्वारा खान मालिक को नोटिस न दिया गया हो।

- (5) (i) सभी खान मालिकों को खान में खाली स्थानों में राख को समायोजित करने के लिए खान बंद योजना (प्रगामी और अंतिम) तैयार करनी होगी और खान में खाली स्थानों में राख के निपटान और अधिभार वाले ढेर के साथ राख को मिश्रित करने के लिए खान योजनाओं को संबंधित प्राधिकारी अनुमोदित करेगा। पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय द्वारा ताप विद्युत संयंत्रों और कोयला खदानों की पर्यावरणीय मंजूरी की अपेक्षा से छूट देने के साथ-साथ ऐसे निपटान के लिए अपनाए जाने वाले दिशानिर्देशों के संबंध में तारीख 28 अगस्त, 2019 को दिशानिर्देश जारी किए गए।
- (ii) मंत्रालय, केन्द्रीय प्रदूषण नियंत्रण बोर्ड, महानिदेशक, खान सुरक्षा (डीजीएमएस) और भारतीय खान ब्यूरो (आईबीएम) के साथ परामर्श करके, खानों में खाली स्थानों में राख के निपटान करने तथा अधिभार वाले ढेरों में इसे मिश्रित करना सुगम बनाने के लिए समय-समय पर आगे भी दिशानिर्देश जारी कर सकता है और यह खान मालिकों की जिम्मेदारी होगी कि वे ऐसी खानों को अभिज्ञात करने की तिथि से एक वर्ष के भीतर विभिन्न विनियामक प्राधिकरणों द्वारा जारी की गई अनुमतियों में आवश्यक संशोधन या परिवर्तन प्राप्त करेंगे।
- (6) (i) पर्यावरणीय प्रदूषण के संदर्भ में सुरक्षा, व्यवहार्यता (आर्थिक व्यवहार्यता नहीं) और पहलुओं की जांच सहित राख से खान में खाली स्थान को वापस भरने/अधिभार वाले ढेर के साथ राख को मिश्रित करने के लिए खानों की पहचान करने के लिए पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, विद्युत मंत्रालय, खान मंत्रालय, कोयला मंत्रालय, महानिदेशक खान सुरक्षा और भारतीय खान ब्यूरो से प्रतिनिधियों को शामिल करते हुए अध्यक्ष, केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) की अध्यक्षता में एक समिति का गठन किया जाएगा और यह समिति पणधारी मंत्रालयों या विभागों के लिए अभिज्ञात खानों (भूमिगत और खुली, दोनों) के संबंध में तैयार की गई तिमाही रिपोर्टों को अद्यतन करेगी और यह समिति, इस अधिसूचना के प्रकाशन के तुरंत पश्चात उपयुक्त खानों की पहचान करना आरंभ करेगी।
- (ii) ताप विद्युत संयंत्र या खानें, उपरोक्त अनुसार अधिदेशित उपयोग लक्ष्यों को पूरा करने के लिए उपर्युक्त समिति द्वारा पहचान किए जाने तक राख के निपटान हेतु प्रतीक्षा नहीं करेंगी।
- (7) राख से निचले क्षेत्र को भरने का कार्य, अनुमोदित परियोजनाओं के लिए राज्य प्रदूषण नियंत्रण बोर्ड की पूर्व अनुमति से और केन्द्रीय प्रदूषण नियंत्रण बोर्ड द्वारा निर्धारित दिशा-निर्देशों के अनुसार किया जाएगा और राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति द्वारा अनुमोदित स्थलों, अवस्थान, क्षेत्र और अनुमत मात्रा को अपनी वेबसाइट पर प्रतिवर्ष प्रकाशित किया जाएगा।
- (8) केन्द्रीय प्रदूषण नियंत्रण बोर्ड, संगत पणधारी के साथ मिलकर, राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) द्वारा अनुमति प्रदान करने के लिए समयबद्ध ऑनलाइन आवेदन प्रक्रिया प्रस्तुत करने के साथ-साथ इस अधिसूचना के अधीन परिकल्पित सभी प्रकार के कार्यकलापों के लिए एक वर्ष के भीतर दिशानिर्देश प्रस्तुत करेगा।
- (9) कोयला या लिग्नाइट आधारित तापीय ऊर्जा संयंत्र से तीन सौ किलोमीटर के दायरे में स्थित सभी भवन निर्माण परियोजनाएं (केंद्रीय, राज्य और स्थानीय प्राधिकरणों सरकारी उपक्रमों, अन्य सरकारी अभिकरणों तथा सभी निजी अभिकरणों) राख की ईटों, टाइल्स, धातुमल राख अथवा अन्य राख आधारित उत्पादों का उपयोग करेंगी बशर्ते कि वे वैकल्पिक उत्पादों की कीमत से अधिक कीमत पर उपलब्ध न हों।
- (10) राख आधारित उत्पादों के विनिर्माण और ऐसे उत्पादों में राख के उपयोग में भारतीय मानक ब्यूरो, भारतीय सड़क कांग्रेस और केंद्रीय प्रदूषण नियंत्रण बोर्ड द्वारा निर्धारित विनिर्देशों और दिशानिर्देशों की अनुपालना होगी।

ग. गैर-अनुपालन के लिए पर्यावरणीय प्रतिकर .-

- (1) तीन वर्ष के चक्र के प्रथम दो वर्षों में, यदि कोयला या लिग्नाइट आधारित तापीय ऊर्जा संयंत्र (कैप्टिव और/ या सह-उत्पादक स्टेशनों या दोनों सहित) ने कम-से-कम 80 प्रतिशत राख (फ्लाइ-राख और बॉटम-राख) उपयोग नहीं की है तो ऐसे गैर-अनुपालन ताप विद्युत संयंत्रों पर प्रस्तुत की गई वार्षिक रिपोर्टों के आधार पर वित्तीय वर्ष के

अंत में अप्रयुक्त राख पर 1000 रुपए प्रति टन की दर से पर्यावरणीय प्रतिकर लगाया जाएगा और यदि यह तीन वर्ष के चक्र के तीसरे वर्ष में 100 प्रतिशत राख का उपयोग करने में असमर्थ रहता है, तो वह अप्रयुक्त मात्रा पर 1000 रुपए प्रति टन की दर से पर्यावरणीय प्रतिकर के भुगतान का पात्र होगा, जिस पर पहले पर्यावरणीय प्रतिकर नहीं लगायी गयी है।

परंतु पर्यावरणीय प्रतिकर को पैरा क के उप-पैरा (4) में उल्लिखित विभिन्न उपयोगी श्रेणियों के अनुसार प्रथम अनुपालन चक्र के अंतिम वर्ष के अंत में अनुमान लगाया जाएगा और अधिरोपित किया जाएगा।

- (2) अधिकारियों द्वारा एकत्रित पर्यावरणीय प्रतिकर को केन्द्रीय प्रदूषण नियंत्रण बोर्ड के निर्दिष्ट खाते में जमा किया जाएगा।
- (3) लैगोसी राख के मामले में, यदि कोयला या लिग्नाइट आधारित तापीय ऊर्जा संयंत्र (कैप्टिव या सह-उत्पादक स्टेशनों या दोनों सहित) ने स्थापित क्षमता पर आधारित उत्पन्न राख का कम-से-कम 20 प्रतिशत (प्रथम वर्ष के लिए), 35 प्रतिशत (द्वितीय वर्ष के लिए), 50 प्रतिशत (तीसरे से दसवें वर्ष तक) उपयोग के बराबर लक्ष्य प्राप्त नहीं किया है तो उस वित्तीय वर्ष के दौरान अप्रयुक्त लैगोसी राख पर 1000 रुपए प्रति टन की दर से पर्यावरणीय प्रतिकर लगाया जाएगा और यदि 10 वर्ष के अंत में लैगोसी राख का उपयोग नहीं किया जाता है तो 1000 रुपए प्रति टन की दर से शेष अप्रयुक्त मात्रा पर पर्यावरणीय प्रतिकर लगाया जाएगा जिस पर पहले पर्यावरणीय प्रतिकर नहीं लगाया गया है।
- (4) अधिकृत खरीददारों या उपभोक्ता अभिकरणों तक राख भेजने की जिम्मेदारी परिवाहकों या वाहन मालिक की जिम्मेदारी है और यदि इसका अनुपालन नहीं किया जाता है, तो अनधिकृत उपयोगकर्ताओं अथवा गैर-अधिकृत उपयोगकर्ताओं को ऐसी मात्रा गलत तरीके से वितरित करने पर 1500 रुपए प्रति टन की दर से पर्यावरणीय प्रतिकर लगायी, इसके अतिरिक्त राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) द्वारा गैर अनुपालनकर्ता परिवाहकों पर अभियोजन लागू होगा।
- (5) इस अधिसूचना के पैरा ख में विहित पर्यावरण अनुकूल तरीके में राख के उपयोग की जिम्मेदारी खरीददार या उपभोगकर्ता एजेंसियों की है और ऐसा नहीं करने पर केन्द्रीय प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) द्वारा 1500 रुपए प्रति टन की दर से पर्यावरणीय प्रतिकर लगाया जाएगा।
- (6) यदि उपयोगकर्ता अधिकरण पैरा ख के अधीन निर्धारित सीमा तक अथवा पैरा घ के उप-पैरा (1) के अधीन, दिए गए नोटिस के माध्यम से सूचित की गई सीमा, इनमें से जो भी कम हो, तक राख का उपयोग नहीं करती है, वे अतिरिक्त राख की मात्रा का 1500 रुपए प्रति टन की दर से भुगतान करने के लिए उत्तरदायी होंगी।
परंतु भवन निर्माण के संबंध में पर्यावरणीय प्रतिकर निर्मित क्षेत्र के 75 रुपये प्रति वर्ग फीट की दर से वसूल किया जाएगा।
- (7) (i) ताप विद्युत संयंत्रों अन्य बकायादारों से केन्द्रीय प्रदूषण नियंत्रण बोर्ड द्वारा लगायी गई का पर्यावरणीय प्रतिकर उपयोग अप्रयुक्त राख के सुरक्षित निपटान हेतु किया जाएगा और राख आधारित उत्पादों सहित राख के उपयोग के संबंध में और अधिक अनुसंधान करने के लिए भी निधि का उपयोग किया जा सकता है।
(ii) अप्रयुक्त मात्रा पर लगाए गए पर्यावरणीय प्रतिकर के पश्चात भी राख के उपयोग का उत्तरदायित्व ताप विद्युत संयंत्रों की होगी और यदि पश्चातवती चक्रों में पर्यावरणीय प्रतिकर लगाने के पश्चात ताप विद्युत संयंत्र, किसी विशेष चक्र की राख के उपयोग के लक्ष्य को प्राप्त करता है तो अगले चक्र के दौरान अप्रयुक्त मात्रा पर एकत्र की गई पर्यावरणीय प्रतिकर में 10 प्रतिशत कटौती के पश्चात उक्त रकम ताप विद्युत संयंत्र को वापस कर दी जाएगी और पश्चातवती चक्रों में राख के उपयोग के मामले में एकत्र की गई पर्यावरणीय प्रतिकर की 20 प्रतिशत, 30 प्रतिशत और उसी क्रम में कटौती की जानी है।

घ. राख या राख आधारित उत्पादों की आपूर्ति हेतु प्रक्रिया .-

- (1) ताप विद्युत संयंत्रों के स्वामी अथवा राख की ईंटों या टाईल्स या धातुमल आधारित राख के विनिर्माता उन व्यक्तियों या अभिकरणों को लिखित सूचना देंगे जो विक्री या परिवहन या दोनों के लिए प्रस्तुत राख या राख आधारित उत्पादों के उपयोग के लिए उत्तरदायी हैं।
- (2) ऐसे व्यक्ति या उपयोगकर्ता अभिकरणों जिन्हें ताप विद्युत संयंत्रों के स्वामी द्वारा या राख की ईंटों या टाईल्स या धातुमल आधारित राख के उत्पादकों द्वारा सूचना दी गई है, यदि वे पहले ही राख या राख उत्पादों के उपयोग के प्रयोजन से अन्य अभिकरणों के साथ जुड़े हुए हैं, यदि वे किसी भी राख/राख उत्पादों का उपयोग नहीं कर सकते हैं अथवा कम मात्रा का उपयोग कर सकते हैं, तदनुसार ताप विद्युत संयंत्र को सूचित करेंगे।

ड. प्रवर्तन, निगरानी, लेखा परीक्षा और प्रतिवेदन करना

- (1) केंद्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) और संबंधित राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी), उपबंधों के अनुपालना सुनिश्चित करने के लिए प्रवर्तन और निगरानी प्राधिकरण होंगे। सीपीसीबी या एसपीसीबी या पीसीसी तिमाही आधार पर राख के उपयोग की निगरानी करेंगे और सीपीसीबी इस प्रयोजन के लिए अधिसूचना की प्रकाशन की तारीख से छः माह के भीतर एक पोर्टल विकसित करेगा। संबंधित जिला अधिकारी के पास इस अधिसूचना के उपबंधों को लागू करने और निगरानी करने के लिए समवर्ती अधिकारिता होगी।
- (2) (i) ताप विद्युत संयंत्र, राख उत्सर्जन और उपयोग से संबंधित मासिक सूचना वेब पोर्टल पर अगले महीने की 5 तारीख तक अपलोड करेगा। कोयला या लिग्नाइट आधारित ताप ऊर्जा संयंत्रों द्वारा केंद्रीय प्रदूषण नियंत्रण बोर्ड, संबंधित राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति (पीसीसी), केंद्रीय विद्युत प्राधिकरण (सीईए) और पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय के संबंधित एकीकृत क्षेत्रीय कार्यालयों को इस अधिसूचना के उपबंधों के अनुपालन संबंधी सूचना उपलब्ध कराते हुए वार्षिक कार्यान्वयन रिपोर्ट प्रत्येक वर्ष (1 अप्रैल से 31 मार्च तक की अवधि के लिए) अप्रैल माह के 30वें दिन तक प्रस्तुत की जाएगी। सीपीसीबी और सीईए द्वारा सभी ताप विद्युत संयंत्रों द्वारा प्रस्तुत वार्षिक रिपोर्टों का समेकन किया जाएगा और उसे पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय को 31 मई तक प्रस्तुत किया जाएगा।
- (ii) सभी अन्य उपयोगकर्ता अधिकरण पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय या राज्य स्तरीय पर्यावरण प्रभाव आकलन प्राधिकरण (एसईआईएए) द्वारा जारी पर्यावरणीय मंजूरी (ईसी) अथवा राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) द्वारा जारी संचालन की सहमति (सीटीओ), जो भी लागू हो, की अनुपालना रिपोर्ट में इस अधिसूचना में आज्ञापकता के अनुसार राख के उपभोग या उपयोग या निस्तारण तथा राख आधारित उत्पादों के उपयोग संबंधी सूचना प्रस्तुत करेंगे। केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) या राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) अधिसूचना के उपबंधों के प्रभावी कार्यान्वयन की समीक्षा करने हेतु ताप विद्युत संयंत्रों के अतिरिक्त अन्य सभी अधिकरणों की राख उपयोग की वार्षिक रिपोर्ट प्रकाशित करेंगे।
- (3) इस अधिसूचना के उपबंधों की निगरानी और कार्यान्वयन के प्रयोजन के लिए केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) की अध्यक्षता में एक समिति का गठन किया जाएगा जिसके सदस्य विद्युत मंत्रालय, कोयला मंत्रालय, खनन मंत्रालय, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, सड़क परिवहन और राजमार्ग मंत्रालय और भारी उद्यम विभाग से होने के साथ-साथ समिति के अध्यक्ष द्वारा नामित किए जाने वाले कोई संबंधित पणधारी होंगे। यह समिति संगत पणधारी को आमंत्रित कर सकती है। यह समिति इस अधिसूचना के उपबंधों के प्रभावी और दक्ष कार्यान्वयन के लिए सिफारिशें कर सकती है। यह समिति छः माह में कम से कम एक बार एक बैठक करेगी और वार्षिक कार्यान्वयन रिपोर्टों की समीक्षा करेगी और यह समिति, इस अधिसूचना द्वारा आज्ञापक किए गए अनुसार छः महीनों में कम से कम एक बार संगत पणधारी (को) को आमंत्रित करके राख के उपयोग की निगरानी करने के लिए पणधारी से साथ परामर्शदात्री बैठकें आयोजित करेगी। यह समिति पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय (एमओईएफसीसी) को छः मासिक रिपोर्ट प्रस्तुत करेगी।

- (4) ताप विद्युत संयंत्रों और राख के उपयोगकर्ताओं या राख आधारित उत्पादों के विनिर्माताओं के बीच के विवाद का समाधान करने के प्रयोजन से राज्य सरकारें या संघ राज्यक्षेत्र की सरकारें इस अधिसूचना के प्रकाशन की तारीख से तीन माह के भीतर राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) की अध्यक्षता में एक समिति का गठन करेंगी जिसमें विद्युत विभाग के प्रतिनिधि और एक प्रतिनिधि उस विभाग का होगा, जो विवाद वाले संबंधित अभिकरण का कार्य देख रहे हैं।
- (5) केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) द्वारा प्राधिकृत लेखा परीक्षकों द्वारा ताप विद्युत संयंत्रों और उपयोगकर्ता अभिकरणों द्वारा किए गए राख के निपटान की अनुपालन लेखा परीक्षा संचालित की जाएगी और लेखा परीक्षा की रिपोर्ट प्रत्येक वर्ष 30 नवम्बर तक केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) और संबंधित राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) को प्रस्तुत की जाएगी। केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) और संबंधित राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) लेखा परीक्षा की रिपोर्ट प्राप्त होने के पंद्रह दिनों के भीतर अनुपालन न करने वाले ताप विद्युत संयंत्रों के विरुद्ध कार्रवाई प्रारंभ करेंगे।

[फा. सं. एचएसएम-9/1/2019-एचएसएम]

नरेश पाल गंगवार, संयुक्त सचिव

उपाबंध

31 मई तक अथवा उससे पहले प्रस्तुत की जाने वाली राख संबंधी उपबंधों की अनुपालन रिपोर्ट (01 अप्रैल से 31 मार्च की अवधि के लिए)।

क्र.सं.	ब्यौरा	
1.	विद्युत संयंत्र का नाम	
2.	कंपनी का नाम	
3.	जिला	
4.	राज्य	
5.	पत्राचार के लिए डाक का पता :	
6.	ई-मेल :	
7.	विद्युत संयंत्र की संस्थापित क्षमता (मेगा वॉट) :	
8.	संयंत्र लोड फैक्टर (पीएलएफ) :	
9.	उत्पादित यूनिटों की संख्या (एमडब्ल्यूएच) :	
10.	विद्युत संयंत्र के अंतर्गत कुल क्षेत्र (हेक्टेयर) (राख कुंडों के अधीन क्षेत्र सहित) :	
11.	रिपोर्टिंग की अवधि के दौरान कोयला खपत की मात्रा (प्रति वर्ष मीट्रिक टन) :	
12.	औसत राख सामग्री प्रतिशतता में (%) :	
13.	रिपोर्टिंग की अवधि के दौरान वर्तमान में उत्पादित राख की मात्रा (प्रति वर्ष मीट्रिक टन) : फ्लाई राख (प्रति वर्ष मीट्रिक टन) : बॉटम राख (प्रति वर्ष मीट्रिक टन) :	
14.	ड्राई फ्लाई राख भंडारण गड्ढा (गड्ढों) की क्षमता (मीट्रिक टन) :	
15.	रिपोर्टिंग की अवधि के दौरान वर्तमान में उत्पादित राख के उपयोग का ब्यौरा: (क) रिपोर्टिंग की अवधि के दौरान वर्तमान में उपयोग की गई राख की	

	<p>कुल मात्रा (एमटीपीए) :</p> <p>(ख) उपयोग की गई फ्लाइं राख की मात्रा (एमटीपीए) :</p> <p>i. फ्लाइ-एश आधारित उत्पाद (ईट या ब्लॉक या टाइल्स या फाइबर सीमेंट शीट या पाइप या बोर्ड/पैनल) :</p> <p>ii. सीमेंट विनिर्माण :</p> <p>iii. रेडी मिक्स कंक्रीट :</p> <p>iv. राख और जीओ-पॉलिमर आधारित निर्माण सामग्री :</p> <p>v. सिंटेड या कोल्ड बॉन्डेड राख एग्रीगेट का निर्माण :</p> <p>vi. सड़कों, सड़क और फ्लाइ ओवर के पुशतों का निर्माण :</p> <p>vii. बांधों का निर्माण :</p> <p>viii. निम्न भू-क्षेत्र का भराव :</p> <p>ix. खनिज क्षेत्रों का भराव :</p> <p>x. अधिभार वाले डम्पों में उपयोग :</p> <p>xi. कृषि :</p> <p>xii. तटीय जिलों में तटरेखा सुरक्षा संरचनाओं का निर्माण :</p> <p>xiii. अन्य देशों को राख का निर्यात :</p> <p>xiv. अन्य (कृपया विनिर्दिष्ट करें) :</p> <p>(ग) उपयोग किए गए तल के राख की मात्रा (एमटीपीए) :</p> <p>i. फ्लाइ-एश आधारित उत्पाद (ईट या ब्लॉक या टाइल्स या फाइबर सीमेंट शीट या पाइप या बोर्ड या पैनल) :</p> <p>ii. सीमेंट विनिर्माण :</p> <p>iii. रेडी मिक्स कंक्रीट :</p> <p>iv. राख और जीओ-पॉलिमर आधारित निर्माण सामग्री :</p> <p>v. सिंटेड या कोल्ड बॉन्डेड राख एग्रीगेट का निर्माण :</p> <p>vi. सड़कों, सड़क और फ्लाइओवर के पुशतों का निर्माण :</p> <p>vii. बांधों का निर्माण :</p> <p>viii. निम्न भू-क्षेत्र का भराव :</p> <p>ix. खनिज क्षेत्रों का भराव :</p> <p>x. अधिभार वाले डम्पों में उपयोग :</p> <p>xi. कृषि :</p> <p>xii. तटीय जिलों में तटरेखा सुरक्षा संरचनाओं का निर्माण :</p> <p>xiii. अन्य देशों को राख का निर्यात :</p> <p>xiv. अन्य (कृपया विनिर्दिष्ट करें) :</p> <p>रिपोर्टिंग की अवधि के दौरान वर्तमान में अप्रयुक्त राख की कुल मात्रा (एमटीपीए) :</p>	
16.	रिपोर्टिंग की अवधि के दौरान वर्तमान में उत्पादित राख का प्रतिशतता उपयोग (%) :	
17.	<p>राख कुंडों में राख के निपटान का ब्यौरा</p> <p>क) तारीख 31 मार्च तक (रिपोर्टिंग की अवधि को छोड़कर) राख कुण्ड (कुण्डों) में निपटान किए गए राख की कुल मात्रा (मीट्रिक टन):</p>	

	<p>ख) रिपोर्टिंग की अवधि के दौरान राख कुण्ड (कुण्डों) में निपटान किए गए राख की मात्रा (मीट्रिक टन):</p> <p>ग) रिपोर्टिंग की अवधि के दौरान राख कुण्डों में गारा निस्सरण हेतु खपत हुए जल की कुल मात्रा (मी³):</p> <p>घ) राख कुण्डों की कुल संख्या:</p> <p>(i) सक्रिय:</p> <p>(ii) खाली किए गए (पुनः भरा जाना है)</p> <p>(iii) पुनः भरे गए:</p> <p>ड.) राख कुण्डों के अधीन कुल क्षेत्र (हेक्टेयर):</p>	
18.	<p>अलग-अलग राख कुण्ड का ब्यौरा</p> <p><i>राख कुण्ड 1,2 आदि (यदि राख कुण्डों की संख्या एक से अधिक हो, तो कृपया निम्नलिखित ब्यौरा अलग से उपलब्ध कराएं)</i></p> <p>क) स्थिति: निर्माणाधीन या सक्रिय या खाली किया गया या पुनः भरा गया</p> <p>ख) राख कुण्ड में राख का निपटान शुरू करने की तारीख/महीना/वर्ष या महीना/वर्ष):</p> <p>ग) राख कुण्ड की क्षमता पूर्ण किए जाने के पश्चात् उसमें राख निपटान रोकने की तारीख</p> <p>(तारीख/महीना/वर्ष या महीना/वर्ष):</p> <p>(सक्रिय राख कुण्डों के लिए लागू नहीं)</p> <p>ग) क्षेत्र (हेक्टेयर):</p> <p>घ) डाइक की ऊंचाई (मी.):</p> <p>घ) आयतन (मी³):</p> <p>ड.) तारीख 31 मार्च तक निपटान किए गए राख की मात्रा (मीट्रिक टन):</p> <p>च) उपलब्ध आयतन का प्रतिशत (%) और आगे निपटान किए जा सकने वाले राख की मात्रा (मीट्रिक टन):</p> <p>छ) राख कुण्ड के भरे जाने की अनुमानित अवधि (वर्षों और महीनों की संख्या):</p> <p>ड.) निर्देशांक (अक्षांश और देशान्तर):</p> <p>(कृपया न्यूनतम 4 निर्देशांकों को विनिर्दिष्ट करें)</p> <p>ज) राख कुण्ड में की गई लाइनिंग का प्रकार: एचडीपीई लाइनिंग या एलडीपीई लाइनिंग या क्ले लाइनिंग या कोई लाइनिंग नहीं</p> <p>छ) निपटान की विधि: शुष्क निपटान या नम गारा (नम गारा के मामले में कृपया विनिर्दिष्ट करें कि क्या एचसीएसडी या एमसीएसडी या एलसीएसडी है)</p> <p>ज) राख का अनुपात: गारा मिश्रण में जल (1:___):</p> <p>झ) संस्थापित और कार्यशील राख जल पुनर्चक्रण प्रणाली (एडब्ल्यूआरएस): हां या नहीं</p> <p>ञ) जमीन के अंदर या जल निकाय में राख कुण्ड से निस्सरित अपशिष्ट जल की मात्रा (मी³):</p> <p>ट) डाइक की स्थिरता का अध्ययन कराए जाने की पिछली तारीख और उस संगठन का नाम जिसने अध्ययन किया:</p> <p>ठ) लेखा-परीक्षा किए जाने की पिछली तारीख और उस संगठन का नाम जिसने लेखा-परीक्षा की:</p>	
19.	<p>उपयोग किए गए पुराने राख की मात्रा (एमटीपीए):</p> <p>i. फ्लाइ-एश आधारित उत्पाद (ईट या ब्लॉक या टाइल्स या फाइबर</p>	

	सीमेंट शीट या पाइप या बोर्ड या पैनल): ii. सीमेंट विनिर्माण: iii. रेडी मिक्स कंक्रीट: iv. राख और जीओ-पॉलिमर आधारित निर्माण सामग्री: v. सिंटर्ड या कोल्ड बॉन्डेड राख एग्रीगेट का निर्माण: vi. सड़कों, सड़क और फ्लाई ओवर के पुश्तों का निर्माण: vii. बांधों का निर्माण: viii. निम्न भू-क्षेत्र का भराव: ix. खनिज क्षेत्रों का भराव: x. अधिभार वाले डम्पों में उपयोग: xi. कृषि: xii. तटीय जिलों में तटरेखा सुरक्षा संरचनाओं का निर्माण: xiii. अन्य देशों को राख का निर्यात xiv. अन्य (कृपया विनिर्दिष्ट करें):			
20.	सार :			
	ब्यौरा	सृजित मात्रा (एमटीपी)	उपयोग की गई मात्रा (एमटीपी) और (%)	शेष मात्रा (एमटीपी)
	रिपोर्टिंग की अवधि के दौरान राख			
	पुरानी राख			
	कुल			
21.	कोई अन्य सूचना : वार्षिक अनुपालन रिपोर्ट, और विद्युत संयंत्रों और राख कुण्डों की शेष फाइलों की सॉफ्ट कॉपी ई-मेल:- moefcc- coalash@gov.in पर भेजी जाए।			
22.	प्राधिकृत हस्ताक्षरकर्ता के हस्ताक्षर			

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 31st December, 2021

S.O. 5481(E).—Whereas by notification of the Government of India in the erstwhile Ministry of Environment and Forests *vide* S.O.763 (E), dated the 14th September, 1999, as amended from time to time, the Central Government, issued directions for restricting the excavation of top soil for manufacturing of bricks and promoting the utilisation of fly ash in the manufacturing of building materials and in construction activity within a specified radius of three hundred kilometres from the coal or lignite based thermal power plants;

And whereas, to implement the aforesaid notification more effectively based on the polluter pays principle (PPP) thereby ensuring 100 per cent utilisation of fly ash by the coal or lignite based thermal power plants and for the sustainability of the fly ash management system, the Central Government reviewed the existing notification; and whereas environmental compensation needs to be introduced based on the polluter pays principle;

And whereas, there is a need to conserve top soil by promoting manufacture and mandating use of ash based products and building materials in the construction sector;

And whereas, there is a need to conserve top soil and natural resources by promoting utilisation of ash in road laying, road and flyover embankments, shoreline protection measures, low lying areas of approved projects, backfilling of mines, as an alternative for filling of earthen materials;

And whereas, it is necessary to protect the environment and prevent the dumping and disposal of fly ash discharged from coal or lignite based thermal power plants on land;

And whereas, in the said notification the phrase 'ash', has been used which includes both fly ash as well as bottom ash generated from the Coal or Lignite based thermal power plants;

And whereas, the Central Government intends to bring out a comprehensive framework for ash utilisation including system of environmental compensation based on polluter pays principle;

And whereas, a draft notification on ash utilisation by coal or lignite thermal power plants in supersession of the notification of the Government of India, Ministry of Environment and Forests published in the Gazette of India, Extra Ordinary part II, section 3, sub-section (i) *vide* S.O.763 (E), dated the 14th September, 1999, by notification in exercise of the powers conferred 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 (i), *vide* G.S.R. 285(E), dated the 22nd April, 2021 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 provisions were made available to the public;

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, and in supersession of the Notification S.O.763 (E), dated the 14th September, 1999 except as respect things done or omitted to be done before such supersession, the Central Government hereby issues the following notification on ash utilisation from coal or lignite thermal power plants which shall come into force on the date of the publication of this notification, namely:-

A. Responsibilities of thermal power plants to dispose fly ash and bottom ash.—

- (1) Every coal or lignite based thermal power plant (including captive or co-generating stations or both) shall be primarily responsible to ensure 100 per cent utilisation of ash (fly ash, and bottom ash) generated by it in an eco-friendly manner as given in sub-paragraph (2);
- (2) The ash generated from coal or lignite based thermal power plants shall be utilised only for the following eco-friendly purposes, namely:-
 - (i) Fly ash based products viz. bricks, blocks, tiles, fibre cement sheets, pipes, boards, panels;
 - (ii) Cement manufacturing, ready mix concrete;
 - (iii) Construction of road and fly over embankment, Ash and Geo-polymer based construction material;
 - (iv) Construction of dam;
 - (v) Filling up of low lying area;
 - (vi) Filling of mine voids;
 - (vii) Manufacturing of sintered or cold bonded ash aggregate;
 - (viii) Agriculture in a controlled manner based on soil testing;
 - (ix) Construction of shoreline protection structures in coastal districts;

- (x) Export of ash to other countries;
- (xi) Any other eco-friendly purpose as notified from time to time.
- (3) A committee shall be constituted under the chairmanship of Chairman, Central Pollution Control Board (CPCB) and having representatives from Ministry of Environment, Forest and Climate Change (MoEFCC), Ministry of Power, Ministry of Mines, Ministry of Coal, Ministry of Road Transport and Highways, Department of Agricultural Research and Education, Institute of Road Congress, National Council for Cement and Building Materials, to examine and review and recommend the eco-friendly ways of utilisation of ash and make inclusion or exclusion or modification in the list of such ways as mentioned in Sub-paragraph (2) based on technological developments and requests received from stakeholders. The committee may invite State Pollution Control Board or Pollution Control Committee, operators of thermal power plants and mines, cement plants and other stakeholders as and when required for this purpose. Based on the recommendations of the Committee, Ministry of Environment, Forest and Climate Change (MoEFCC) may publish such eco-friendly purpose.
- (4) Every coal or lignite based thermal power plant shall be responsible to utilise 100 per cent ash (fly ash and bottom ash) generated during that year, however, in no case shall utilisation fall below 80 per cent in any year, and the thermal power plant shall achieve average ash utilisation of 100 per cent in a three years cycle:

Provided that the three years cycle applicable for the first time is extendable by one year for the thermal power plants where ash utilisation is in the range of 60-80 per cent, and two years where ash utilisation is below 60 per cent and for the purpose of calculation of percentage of ash utilisation, the percentage quantity of utilisation in the year 2021- 2022 shall be taken into account as per the table below:

Utilisation percentages of thermal power plants	First compliance Cycle to meet 100 per cent utilisation	Second compliance cycle onwards, to meet 100 per cent utilisation
>80 per cent	3 years	3 years
60-80 per cent	4 years	3 years
<60 per cent	5 years	3 years

Provided further that the minimum utilisation percentage of 80 per cent shall not be applicable to the first year and first two years of the first compliance cycle for the thermal power plants under the utilisation category of 60-80 per cent and <60 per cent, respectively.

Provided also that 20per cent of ash generated in the final year of compliance cycle may be carried forward to the next cycle which shall be utilised in the next three years cycle along with the ash generated during that cycle.

- (5) The unutilised accumulated ash i.e. legacy ash, which is stored before the publication of this notification, shall be utilised progressively by the thermal power plants in such a manner that the utilization of legacy ash shall be completed fully within ten years from the date of publication of this notification and this will be over and above the utilisation targets prescribed for ash generation through current operations of that particular year:

Provided that the minimum quantity of legacy ash in percentages as mentioned below shall be utilised during the corresponding year and the minimum quantity of legacy ash is to be calculated based on the annual ash generation as per installed capacity of thermal power plant.

Year from date of publication	1 st	2 nd	3 rd -10 th
Utilisation of legacy ash (in percentage of Annual ash)	At least 20 per cent	At least 35 per cent	At least 50 per cent

Provided further that the legacy ash utilisation shall not be required where ash pond or dyke has stabilised and the reclamation has taken place with greenbelt or plantation and the concerned State Pollution Control Board shall certify in this regard. Stabilisation and reclamation of an ash pond or dyke including certification by the Central Pollution Control Board (CPCB) or State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) shall be carried out within a year from the date of publication of this notification. The ash remaining in all other ash ponds or dykes shall be utilised in progressive manner as per the above mentioned timelines.

Note: The obligations under sub-paragraph (4) and (5) above for achieving the ash utilisation targets shall be applicable from 1st April, 2022.

- (6) Any new as well as operational thermal power plant may be permitted an emergency or temporary ash pond with an area of 0.1 hectare per Mega Watt (MW). Technical specifications of ash ponds or dykes shall be as per the guidelines of Central Pollution Control Board (CPCB) made in consultation with Central Electricity Authority (CEA) and these guidelines shall also lay down a procedure for annual certification of the ash pond or dyke on its safety, environmental pollution, available volume, mode of disposal, water consumption or conservation in disposal, ash water recycling and greenbelt, etc., and shall be put in place within three months from the date of publication of this notification.
- (7) Every coal or lignite based thermal power plant shall ensure that loading, unloading, transport, storage and disposal of ash is done in an environmentally sound manner and that all precautions to prevent air and water pollution are taken and status in this regard shall be reported to the concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) in Annexure attached to this notification.
- (8) Every coal or lignite based thermal power plant shall install dedicated silos for storage of dry fly ash silos for at least sixteen hours of ash based on installed capacity and it shall be reported upon to the concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) in the Annexure and shall be inspected by Central Pollution Control Board (CPCB) or State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) from time to time.
- (9) Every coal or lignite based thermal power plant (including captive or co-generating stations or both) shall provide real time data on daily basis of availability of ash with Thermal Power Plant (TPP), by providing link to Central Pollution Control Board's web portal or mobile phone App for the benefit of actual user(s).
- (10) Statutory obligation of 100 per cent utilisation of ash shall be treated as a change in law, wherever applicable.

B. For the purpose of utilisation of ash, the subsequent sub-paras shall apply.—

- (1) All agencies (Government, Semi-government and Private) engaged in construction activities such as road laying, road and flyover embankments, shoreline protection structures in coastal districts and dams within 300 kms from the lignite or coal based thermal power plants shall mandatorily utilise ash in these activities:

Provided that it is delivered at the project site free of cost and transportation cost is borne by such coal or lignite based thermal power plants.

Provided further that thermal power plant may charge for ash cost and transportation as per mutually agreed terms, in case thermal power plant is able to dispose the ash through other means and those agencies makes a request for it and the provisions of ash free of cost and free transportation shall be applicable, if thermal power plant serves a notice on the construction agency for the same.

- (2) The utilisation of ash in the said activities shall be carried out in accordance with specifications and guidelines laid down by the Bureau of Indian Standards, Indian Road Congress, Central Building Research Institute, Roorkee, Central Road Research Institute, Delhi, Central Public Works Department, State Public Works Departments and other Central and State Government Agencies.

- (3) It shall be obligatory on all mines located within 300 kilometres radius of thermal power plant, to undertake backfilling of ash in mine voids or mixing of ash with external Overburden dumps, under Extended Producer Responsibility (EPR). All mine owners or operators (Government, Public and Private Sector) within three hundred kilometres (by road) from coal or lignite based thermal power plants, shall undertake measures to mix at least 25 per cent of ash on weight to weight basis of the materials used for external dump of overburden, backfilling or stowing of mine (running or abandoned as the case may be) as per the guidelines of the Director General of Mines Safety (DGMS):

Provided that such thermal power stations shall facilitate the availability of required quantity of ash by delivering ash free of cost and bearing the cost of transportation or cost of transportation arrangement decided on mutually agreed terms and mixing of ash with overburden in mine voids and dumps shall be applicable for the overburden generated from the date of publication of this notification and the utilisation of ash in the said activities shall be carried out in accordance with guidelines laid down by the Central Pollution Control Board, Director General of Mines Safety and Indian Bureau of Mines.

Explanation.- For the purpose of this sub-paragraph, it is also clarified that the provisions of ash free of cost and free transportation shall be applicable, if thermal power plants serve a notice on the mine owner for the same and the mandate of using 25 per cent of ash for mixing with overburden dump and filling up of mine voids shall not be applicable unless a notice is served on the mine owner by thermal power plant.

- (4) (i) All mine owners shall get mine closure plans (progressive and final) to accommodate ash in the mine voids and the concerned authority shall approve mine plans for disposal of ash in mine voids and mixing of ash with overburden dumps. The Ministry of Environment, Forest and Climate Change (MoEFCC) has issued guidelines on 28th August, 2019 regarding exemption of requirement of Environmental Clearance of thermal power plants and coal mines along with the guidelines to be followed for such disposal.

(ii) The Ministry in consultation with Central Pollution Control Board (CPCB), Director General of Mine Safety (DGMS) and Indian Bureau of Mines (IBM) may issue further guidelines time to time to facilitate ash disposal in mine voids and mixing with overburden dumps and it shall be the responsibility of mine owners to get the necessary amendments or modifications in the permissions issued by various regulatory authorities within one year from the date of identification of such mines.

- (5) (i) There shall be a committee headed by Chairperson, Central Pollution Control Board (CPCB) with representatives from Ministry of Environment, Forest and Climate Change, Ministry of Power, Ministry of Mines, Ministry of Coal, Director General of Mine Safety and Indian Bureau of Mines for identification of mines for backfilling of mine voids with ash or mixing of ash with overburden dump including examination of safety, feasibility (not economic feasibility) and aspects of environmental contamination and the committee shall get updated quarterly reports prepared regarding identified mines (both underground and opencast) for the stakeholder Ministries or Departments and the committee shall start identifying the suitable mines immediately after the publication of this notification.

(ii) Thermal power plants or mines shall not wait for disposal of ash till the identification is done by the above mentioned committee, to meet the utilisation targets mandated as above.

- (6) Filling of low lying areas with ash shall be carried out with prior permission of the State Pollution Control Board or Pollution Control Committee for approved projects, and in accordance with guidelines laid down by Central Pollution Control Board (CPCB) and the State Pollution Control Board or Pollution Control Committee (PCC) shall publish approved sites, location, area and permitted quantity annually on its website.
- (7) Central Pollution Control Board after engaging relevant stakeholders, shall put in place the guidelines within one year for all types of activities envisaged under this notification including putting in place time bound online application process for the grant permission by State Pollution Control Boards (SPCBs) or Pollution Control Committees (PCCs).

- (8) All building construction projects (Central, State and Local authorities, Govt. undertakings, other Govt. agencies and all private agencies) located within a radius of three hundred kilometres from a coal or lignite based thermal power plant shall use ash bricks, tiles, sintered ash aggregate or other ash based products, provided these are made available at prices not higher than the price of alternative products.
- (9) Manufacturing of ash based products and use of ash in such products shall be in accordance with specifications and guidelines laid down by the Bureau of Indian Standards, Indian Road Congress, and Central Pollution Control Board.

C. Environmental compensation for non-compliance.—

- (1) In the first two years of a three years cycle, if the coal or lignite based thermal power plant (including captive or co-generating stations or both) has not achieved at least 80 per cent ash (fly ash and bottom ash) utilisation, then such non-compliant thermal power plants shall be imposed with an environmental compensation of Rs. 1000 per ton on unutilised ash during the end of financial year based on the annual reports submitted and if it is unable to utilise 100 per cent of ash in the third year of the three years cycle, it shall be liable to pay an environmental compensation of Rs. 1000 per ton on the unutilised quantity on which environmental compensation has not been imposed earlier:

Provided that the environmental compensation shall be estimated and imposed at the end of last year of the first compliance cycle as per the various utilisation categories as mentioned in sub-paragraph (4) of Para A.

- (2) Environmental compensation collected by the authorities shall be deposited in the designated account of Central Pollution Control Board.
- (3) In case of legacy ash, if the coal or lignite based thermal power plant (including captive or co-generating stations or both) has not achieved utilisation equivalent to at least 20 per cent (for the first year), 35 per cent (for the second year), 50 per cent (for third to tenth year) of ash generated based on installed capacity, an environmental compensation of Rs. 1000 per ton of unutilised legacy ash during that financial year shall be imposed and if the utilization of legacy ash is not completed at the end of 10 years, an environmental compensation of Rs.1000 per ton shall be imposed on the remaining unutilised quantity which has not been imposed earlier.
- (4) It shall be the responsibility of the transporters or vehicle owner to deliver ash to authorised purchaser or user agency and if it is not complied, then an environmental compensation of Rs. 1500 per ton on such quantity as mis-delivered to unauthorised users or non- delivered to authorised users will be imposed besides prosecution of such non-compliant transporters by State Pollution Control Board (SPCB) or Pollution Control Committee (PCC).
- (5) It is the responsibility of the purchasers or user agencies to utilise ash in an eco-friendly manner as laid down at para B of this notification and if it is not complied, then an environmental compensation of Rs. 1500 or per ton shall be imposed by State Pollution Control Board (SPCB) or Pollution Control Committee (PCC).
- (6) If the user agencies do not utilise ash to the extent obligated under para B or the extent to which they have been intimated through Notice(s) served under sub-paragraph (1) of para D, whichever is lower, they shall be liable to pay Rs. 1500 per ton of ash for the quantity they fall short off:

Provided that the environmental compensation on building constructions shall be levied at Rs.75/- per square feet of built up area of construction.

- (7) (i) The environmental compensation collected by Central Pollution Control Board from the thermal power plants and other defaulters shall be used towards the safe disposal of the unutilised ash and the fund may also be utilised for advancing research on use of ash including ash based products.

(ii) The liability of ash utilisation shall be with thermal power plants even after imposition of environmental compensation on unutilised quantities and in case thermal power plant achieves the ash utilisation of any

particular cycle after imposition of environmental compensation in subsequent cycles, the said amount shall be returned to thermal power plant after deducting 10 per cent of the environmental compensation collected on the unutilised quantity during the next cycle and deduction of 20 per cent, 30 per cent, and so on, of the environmental compensation collected is to be made in case of utilisation of ash in subsequent cycles.

D. Procedure for supply of ash or ash based products.—

- (1) The owner of thermal power plants or manufacturers of ash bricks or tiles or sintered ash aggregate shall serve written notice to persons or agencies who are liable to utilise ash or ash based products, offering for sale, or transport or both.
- (2) Persons or user agencies who have been served notices by owner of thermal power plants or manufacturers of ash bricks or tiles or sintered ash aggregate, if they have already tied up with other agencies for the purpose of utilisation of ash or ash products, shall inform the thermal power plant accordingly, if they cannot use any ash or ash products or use reduced quantity.

E. Enforcement, Monitoring, Audit and Reporting.—

- (1) The Central Pollution Control Board (CPCB) and the concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) shall be the enforcing and monitoring authority for ensuring compliance of the provisions and shall monitor the utilisation of ash on quarterly basis. Central Pollution Control Board shall develop a portal for the purpose within six months of date of publication of the notification. The concerned District Magistrate shall have concurrent jurisdiction for enforcement and monitoring of the provisions of this notification.
- (2) (i) Thermal power plants shall upload monthly information regarding ash generation and utilisation by 5th of the next month on the web portal. Annual implementation report (for the period 1st April to 31st March) providing information about the compliance of provisions in this notification shall be submitted by the 30th day of April, every year to the Central Pollution Control Board, concerned State Pollution Control Board or Pollution Control Committee (PCC), Central Electricity Authority (CEA), and concerned Integrated Regional Office of Ministry of Environment, Forest and Climate Change by the coal or lignite based thermal power plants. Central Pollution Control Board and Central Electricity Authority shall compile the annual reports submitted by all the thermal power plants and submit to Ministry of Environment, Forest and Climate Change by 31st May.

(ii) All other user agencies shall submit consumption or utilisation or disposal of ash and use of ash based products as mandated in this notification in the compliance report of Environmental Clearance (EC) issued by Ministry of Environment, Forest and Climate Change or State Level Environment Impact Assessment Authority (SEIAA) or Consent to Operate (CTO) issued by State Pollution Control Board (SPCB) or Pollution Control Committee (PCC), whichever is applicable. The Central Pollution Control Board (CPCB) or State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) shall publish annual report of ash utilisation of all other agencies except thermal power plants to review the effective implementation of the provisions of the notification.
- (3) For the purpose of monitoring the implementation of the provisions of this notification, a committee shall be constituted under the Chairperson, Central Pollution Control Board (CPCB), with members from Ministry of Power, Ministry of Coal, Ministry of Mines, Ministry of Environment, Forest and Climate Change, Ministry Road Transportation and Highways, Department of Heavy Industry as well as any concerned stakeholder(s), to be nominated by the Chairman of the committee. The committee may make recommendations for effective and efficient implementation of the provisions of the notification. The committee shall meet at least once in six months and review annual implementation reports and the committee shall also hold stakeholder consultations for monitoring of ash utilisation as mandated by this notification by inviting relevant stakeholder(s) at least once in six months. The committee shall submit the six monthly report to Ministry of Environment, Forest and Climate Change (MoEFCC).

- (4) For the purpose of resolving disputes between thermal power plants and users of ash or manufacturer of ash based products, the State Governments or Union territory administration constitute a Committee within three months from the date of publication of this notification under the Chairman, State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) with representatives from Department of Power, and one representative from the Department which deals with the subject of concerned agency with which dispute is made.
- (5) The compliance audit for ash disposal by the thermal power plants and the user agency shall be conducted by auditors, authorised by Central Pollution Control Board (CPCB) and audit report shall be submitted to Central Pollution Control Board (CPCB) and concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) by 30th November every year. Central Pollution Control Board (CPCB) and concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) shall initiate action against non-compliant thermal power plants within fifteen days of receipt of audit report.

[F. No. HSM-9/1/2019-HSM]

NARESH PAL GANGWAR, Jt. Secy.

AnnexureAsh Compliance Report (for the period 1st April-31st March) to be submitted on or before 31st May.

Sl. No.	Details	
1.	Name of Power Plant	
2.	Name of the company	
3.	District	
4.	State	
5.	Postal address for communication:	
6.	E-mail:	
7.	Power Plant installed capacity (MW):	
8.	Plant Load Factor (PLF):	
9.	No. of units generated (MWh):	
10.	Total area under power plant (ha): (including area under ash ponds)	
11.	Quantity of coal consumption during reporting period (Metric Tons per Annum):	
12.	Average ash content in percentage (per cent):	
13.	Quantity of current ash generation during reporting period (Metric Tons per Annum): Fly ash (Metric Tons per Annum): Bottom ash (Metric Tons per Annum):	
14.	Capacity of dry fly ash storage silo(s) (Metric Tons) :	
15.	Details of utilisation of current ash generated during reporting period (a) Total quantity of current ash utilised (MTPA) during reporting period: (b) Quantity of fly ash utilised (MTPA): (i) Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels) (ii) Cement manufacturing:	

	<ul style="list-style-type: none"> (iii) Ready mix concrete: (iv) Ash and Geo-polymer based construction material: (v) Manufacturing of sintered or cold bonded ash aggregate: (vi) Construction of roads, road and fly over embankment: (vii) Construction of dams: (viii) Filling up of low lying area: (ix) Filling of mine voids: (x) Use in overburden dumps: (xi) Agriculture: (xii) Construction of shoreline protection structures in coastal districts; (xiii) Export of ash to other countries: (xiv) Others (please specify): <p>(c) Quantity of bottom ash utilised (MTPA):</p> <ul style="list-style-type: none"> (i) Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels): (ii) Cement manufacturing: (iii) Ready mix concrete: (iv) Ash and Geo-polymer based construction material: (v) Manufacturing of sintered or cold bonded ash aggregate: (vi) Construction of roads, road and flyover embankment: (vii) Construction of dams: (viii) Filling up of low lying area: (ix) Filling of mine voids: (x) Use in overburden dumps: (xi) Agriculture: (xii) Construction of shoreline protection structures in coastal districts: (xiii) Export of ash to other countries: (xiv) Others (please specify): <p>Total quantity of current ash unutilised (MTPA) during reporting period:</p>	
16.	Percentage utilisation of current ash generated during reporting period (per cent):	
17.	<p>Details of disposal of ash in ash ponds</p> <ul style="list-style-type: none"> (a) Total quantity of ash disposed in ash pond(s) (Metric Tons) as on 31st March (excluding reporting period): (b) Quantity of ash disposed in ash pond(s) during reporting period (Metric Tons): (c) Total quantity of water consumption for slurry discharge into ash ponds during reporting period (m³): (d) Total number of ash ponds: <ul style="list-style-type: none"> (i) Active: (ii) Exhausted (yet to be reclaimed): (iii) Reclaimed: (e) total area under ash ponds (ha): 	
18.	<p>Individual ash pond details</p> <p><i>Ash pond-1,2, etc (please provide below mentioned details separately, if number of ash ponds is more than one)</i></p> <ul style="list-style-type: none"> (a) Status: Under construction or Active or Exhausted or 	

	<p>Reclaimed</p> <p>(b) Date of start of ash disposal in ash pond (DD/MM/YYYY or MMYYYY):</p> <p>(c) Date of stoppage of ash disposal in ash pond after completing its capacity (DD/MM/YYYY or MM/YYYY): (Not applicable for active ash ponds)</p> <p>(c) area (hectares):</p> <p>(d) dyke height (m):</p> <p>(d) volume (m³):</p> <p>(e) quantity of ash disposed as on 31st March (Metric Tons):</p> <p>(f) available volume in percentage (per cent) and quantity of ash can be further disposed (Metric Tons):</p> <p>(g) expected life of ash pond (number of years and months):</p> <p>(e) co-ordinates (Lat and Long): (please specify minimum 4 co-ordinates)</p> <p>(f) type of lining carried in ash pond: HDPE lining or LDPE lining or clay lining or No lining</p> <p>g) mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD)</p> <p>(h) Ratio of ash: water in slurry mix (1: ___):</p> <p>(i) Ash water recycling system (AWRS) installed and functioning: Yes or No</p> <p>(j) Quantity of wastewater from ash pond discharged into land or water body (m3):</p> <p>(k) Last date when the dyke stability study was conducted and name of the organisation who conducted the study:</p> <p>(l) Last date when the audit was conducted and name of the organisation who conducted the audit:</p>									
19.	<p>Quantity of legacy ash utilised (MTPA):</p> <ol style="list-style-type: none"> i. Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels): ii. Cement manufacturing: iii. Ready mix concrete: iv. Ash and Geo-polymer based construction material: v. Manufacturing of sintered or cold bonded ash aggregate: vi. Construction of roads, road and flyover embankment: vii. Construction of dams: viii. Filling up of low lying area: ix. Filling of mine voids: x. Use in overburden dumps: xi. Agriculture: xii. Construction of shoreline protection structures in coastal districts; xiii. Export of ash to other countries: xiv. Others (please specify): 									
20.	<p>Summary:</p> <table border="1"> <thead> <tr> <th>Details</th> <th>Quantity generated (MTP)</th> <th>Quantity utilised (MTP) and (per cent)</th> <th>Balance quantity (MTP)</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Details	Quantity generated (MTP)	Quantity utilised (MTP) and (per cent)	Balance quantity (MTP)					
Details	Quantity generated (MTP)	Quantity utilised (MTP) and (per cent)	Balance quantity (MTP)							

	Current ash during reporting period			
	Legacy ash			
	Total			
21.	Any other information: Soft copy of the annual compliance report, and shape files of power plant and ash ponds may be e-mailed to:- moefcc-coalash@gov.in			
22.	Signature of Authorised Signatory			

Annexure-D



Government of India
Ministry of Railways
(Railway Board)



RBA.No 92/2022

No. 2022/ACII/2/1

New Delhi, Dated

6. 6.2022.

1. General Managers/ PFA etc (As per Standard list I).
2. All Attached Offices/ Subordinate Offices (As per standard list II)

Sub: Revised Codal life of Assets.

Kindly refer to para 219 of Indian Railway Finance Code, Vol-1, detailing the normal life of various assets. In this regard Electrical, Mechanical and Signalling Directorates have proposed revision of codal life of certain assets. The same have been examined by the multidisciplinary Executive Directors' Committee set up in Railway Board. Their recommendations have been accepted by Board. Accordingly, Advance Correction Slip No. 92 amending Para 219, Indian Railway Finance Code Vol-I is enclosed for information and necessary action.

Encl: As above.


(Sanjeev Sharma)
OSD/Accounts
Railway Board

Copy to :

1. DyC&AG of India (Railways), Room No. 224, Rail Bhawan, New Delhi (with 45 spare copies).
2. GM/ Const/NFR, CAO/CE (Const)/All Indian Railways.
3. PED/A, PED/CE/Planning, PED/EE (Development), EDME/Freight and ED/Signal
4. ACI(Comp), ACIII (6 copies), ACI V, Code revision, Accounts Inspection, Accounts Appropriation, Finance (Budget).
5. Advisor/MR, OSD/MR, OSD/Co-ord/MR, Additional PS/MR

Room No. 419 A, Rail Bhawan, Raisina Road, New Delhi- 110001

Advance Correction slip No.92
Indian Railway Finance Code —Volume -I (1998) Para 219:

1. *Replace the existing class of assets and their average life in the table given under Para 219 Indian Railway Finance Code —Volume -I (1998) as under.*
2. *Codal life of other items not covered in the ACS will remain as per extant instructions for those items*

(iii) ELECTRICAL ASSETS

S.No	Class of Assets	Average life	Remarks	
14	Water Cooler, Refrigeration, Air Conditioner, hospital and domestic appliance	10	Actual replacement shall be based on condition of the asset	
15	Internal wiring of building	a) Coastal area	15	Actual replacement shall be based on condition of the asset
		b) Non-coastal area	20	Actual replacement shall be based on condition of the asset
18	Electric Pumps	20	Actual replacement shall be based on condition of the asset	

B) Equipments required for replacement through DRF/ Sinking Fund.

11) TRD Equipments					
iii)	Lightning Arrestor (Gapless Type)				
	(a) (42kV)	15	Actual replacement shall be based on condition of the asset		
	(b) (96kV/120kV/ 198kV)	20	Actual replacement shall be based on condition of the asset		
vi)	Battery Charger	20	Actual replacement shall be based on condition of the asset		
xii)	OHE conductors & components – For Normal Zone				
	b) Other than fixed structures				
	i)	a) Cantilevers assembly	45	Actual replacement shall be based on condition of the asset	
	i)	b) All type of insulators	(a) Porcelain	40	Actual replacement shall be based on condition of the asset
			(b) Composite	25	Actual replacement shall be based on condition of the asset

Group 2

ii)	Isolators/ATD	(a) Isolators	30	Actual replacement shall be based on condition of the asset
		(b) ATD	32	Actual replacement shall be based on condition of the asset
c)	Wires			
ii)	Contact Wire		45	Actual replacement shall be based on condition of the asset
xiii)	OHE conductors & components – For Polluted Zone**			
	<i>** Definition of Polluted Zone for item xiii under OHE Conductors & components (for polluted zone)- Zones having ESDD (Equivalent Salt Deposit Density) >0.3 should be considered as polluted zone.</i>			
i	Cantilever assembly and All type of insulators	Cantilever assembly	45	Actual replacement shall be based on condition of the asset
		Insulators: Composite	25	Actual replacement shall be based on condition of the asset
ii	ATD		24	Actual replacement shall be based on condition of the asset
iii	Contact Wire	(a) Silver brazed / ERBW	40 years / on the basis of condemning dia. whichever is earlier	Actual replacement shall be based on condition of the asset
		(b) Continuous Cast (CC) type	45years/on the basis of condemning dia. whichever is earlier	
xiv)	PSI Equipments			
(a)	Substation's Equipments			
iii)	Fixed capacitor bank		20	Actual replacement shall be based on condition of the asset

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(IV) MECHANICAL ASSET

S.No.	Class of Assets	Average life in years	Remarks
1	Machine tools like lathes, Planners, Drilling, Boring and Milling machines etc.	20	Actual replacement shall be based on condition of the asset
2	High Precision and special purpose machines like Wheels lathes	20	Actual replacement shall be based on condition of the asset
3	Tool room and testing Laboratory equipment	15	Actual replacement shall be based on condition of the asset
4	Foundry and Forge Equipment	20	Actual replacement shall be based on condition of the asset
5	Heat Treatment equipment	20	Actual replacement shall be based on condition of the asset
6	EOT Cranes	36	Actual replacement shall be based on condition of the asset
7	Power Generation Machinery & Switches	Deleted	
8	General purpose light machinery e.g. band saw, floor grinder etc.	15	Actual replacement shall be based on condition of the asset
9	Air compressors	20	Actual replacement shall be based on condition of the asset
10	Other miscellaneous machines e.g. light cleaning machines, test equipment in loco sheds, workshops, depot & sick lines	Deleted	
11	(i) Construction Machinery equipment	Deleted	
	(ii) Track maintenance Equipment		
	(a) Tamping, Ballast cleaning & handling, DTS and relaying machines	20	Actual replacement shall be based on condition of the asset
	(b) Material handling machines	25	Actual replacement shall be based on condition of the asset
	(c) Rail Grinding Machines	15	Actual replacement shall be based on condition of the asset

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S.No.	Class of Assets	Average life in years	Remarks
13	Miscellaneous machinery and equipment for hospital, offices etc.	10	Actual replacement shall be based on condition of the asset
14	Mechanical Weigh Bridges	Deleted	
15	Electronic in motion weigh Bridges	12	Actual replacement shall be based on condition of the asset
16	Wheel impact Load detector(WILD)	12	Actual replacement shall be based on condition of the asset
17	Diesel pumps	15	Actual replacement shall be based on condition of the asset
18	Welding equipments	10	Actual replacement shall be based on condition of the asset
19	Diesel Refrigeration equipment	Deleted	
20	Material Handling equipment like FLT, Lister trucks etc.	10	Actual replacement shall be based on condition of the asset
21	Traversers	25	Actual replacement shall be based on condition of the asset
22	Fuel Station Dispensation Equipment	10	Actual replacement shall be based on condition of the asset
23	(i) Bulldozers and	20	Actual replacement shall be based on condition of the asset
	(ii) other earth moving equipment	Deleted.	
24	Motor Boats	15	Actual replacement shall be based on condition of the asset
25	Hydraulic Re-railing Equipment	16	Actual replacement shall be based on condition of the asset
ROAD VEHICLES			
26	Staff cars including Jeeps	7	Actual replacement shall be based on condition of the asset



S.No.	Class of Assets	Average life in years	Remarks
27	Light motor vehicles	10 years for Diesel	Actual replacement shall be based on condition of the asset
28	Heavy Motor vehicles	and 15 years for Petrol as per norms.	Actual replacement shall be based on condition of the asset
29	Tractors		Actual replacement shall be based on condition of the asset

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(IV) MECHANICAL ASSET

ROLLING STOCK

S.No	Class of Assets	Average life in years	Remarks
40	Open Bogie wagons with air brakes and casnub bogies		
a)	BOXN, BOY, BOBRN, BOBSN	35 years (subject to outcome of structural and financial justification to be conducted for extension beyond 30 years) .	Actual replacement shall be based on condition of the asset
b)	BOBYN	38.	Actual replacement shall be based on condition of the asset
c)	Other open wagons	30	Actual replacement shall be based on condition of the asset
41	Bogie tank wagons with air brakes and Casnub bogies		
a)	BTPN	45 years (subject to outcome of structural audit to be conducted for extension beyond 40 years).	Actual replacement shall be based on condition of the asset
b)	Other tank wagons	40	Actual replacement shall be based on condition of the asset
42	All other types of Bogie wagons with air brakes and Casnub bogies		
a)	BCN	40 years (subject to outcome of structural audit and financial justification to be conducted for extension beyond 35 years).	Actual replacement shall be based on condition of the asset
b)	All other wagons	35	Actual replacement shall be based on condition of the asset
43	Open Wagons with vacuum brakes and UIC bogies	Deleted	
44	Other Wagons with vacuum brakes and UIC bogies	Deleted	
45	4-wheeler wagons (open and covered)	Deleted	
46	4-wheeler tank Wagons (with plain bearings)	Deleted	
47	4-wheeler tank wagons (with roller bearings)	Deleted	

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(V) SIGNAL & TELECOMMUNICATION ASSETS

(A) SIGNALLING SYSTEM

S.No.	Class of Assets	Average life in years	Remarks
3	(i) Electronic Signalling system like Axle Counter, AFTC, IPS etc	20 years/based on obsolescence	Actual replacement shall be based on condition of the asset
	(ii) Kavach (Automatic Train Protection-ATP)	15	Actual replacement shall be based on condition of the asset

(Authority Board's letter no. 2022/AC II/2/1 dated 6.6.2022)



Annexure-E-Audited Form 15

FORM- 15 : Details of Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS Stage-I&II

S. No.	Month	Unit	Apr-23		
			Domestic Coal	NTPC Mine Coal	Imported
			M1149100657	M1149100620	M1149100666
A)	OPENING QUANTITY				
1	Opening Quantity of Coal	(MT)	278530.05	9528.73	5636.18
2	Value of Stock	(Rs.)	1146714004	35603675	83681552
B)	QUANTITY				
3	Quantity of Coal supplied by Coal Company	(MT)	706607.62	113457.36	37162.44
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	0.00	-2284.68	0.00
5	Coal supplied by Coal Company (3+4)	(MT)	706607.62	111172.68	37162.44
6	Normative Transit & Handling Losses (For Coal based Projects)	(MT)	4457.26	907.66	74.32
7	Net Coal Supplied (5-6)	(MT)	702150.36	110265.02	37088.12
C)	PRICE				
8	Amount charged by the Coal Company	(Rs.)	2542384127	268307047	535488565
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	0	0	0
10	Handling, Sampling and such other similar charges	(Rs.)	26202556	4207247	0
11	Total amount Charged (8+9+10)	(Rs.)	2568586683	272514294	535488565
D)	TRANSPORTATION				
12	Transportation charges by rail/ship/road transport	(Rs.)	372043885	132916510	0
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs.)	0	0	0
14	Demurrage Charges, if any	(Rs.)	0	0	0
15	Cost of diesel in transporting Coal through MGR system, if applicable	(Rs.)	22544405	0	0
16	Total Transportation Charges (12+13-14+15)	(Rs.)	394588290	132916510	0
17	Total amount Charged for Coal supplied including Transportation (11+16)	(Rs.)	2963174973	405430804	535488565
E)	TOTAL COST				
18	Landed cost of Coal (2+17)/(1+7)	Rs./MT	4190.85	3681.62	14492.23
19	Blending Ratio (Domestic/Imported)		82.19%	12.81%	5.01%
20	Weighted average cost of Coal/ Lignite (Including Biomass)	Rs./MT	4641.23		
20a	Weighted average cost of Coal/ Lignite (Excluding Biomass)		4641.23		
F)	QUALITY (Stage - I, II, III, & IV)				
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/Kg)	4977	4750	0
22	GCV of Domestic Coal supplied as per bill of Coal Company	(kCal/Kg)	5086	4750	0
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/Kg)			5031
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)			5035
25	Weighted average GCV of coal as billed (Including Biomass)	(kCal/Kg)	5016		
25a	Weighted average GCV of coal as billed (Excluding Biomass)	(kCal/Kg)	5016		
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/Kg)	3771	3524	0
27	GCV of Domestic Coal / Bio Mass supplied as received at Station	(kCal/Kg)	3845	3633	0
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)			5072
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)			4985
30	Weighted average GCV of coal/ Lignite as received (Including Biomass)	(kCal/Kg)	3857		
30a	Weighted average GCV of coal/ Lignite as received (Excluding Biomass)	(kCal/Kg)	3857		

Sr Mgr (Fin) UFCG-Fuel Group

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For M.C Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS Stage-I&II

S. No.	Month	Unit	May-23		
			Domestic Coal	NTPC Mine Coal	Imported
			M1149100657	M1149100620	M1149100666
A)	OPENING QUANTITY				
1	Opening Quantity of Coal	(MT)	260764.41	18963.75	1922.30
2	Value of Stock	(Rs.)	1092829008	69817232	27858353
B)	QUANTITY				
3	Quantity of Coal supplied by Coal Company	(MT)	769194.94	69040.61	66230.56
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	0.00	-1178.56	0.00
5	Coal supplied by Coal Company (3+4)	(MT)	769194.94	67862.05	66230.56
6	Normative Transit & Handling Losses (For Coal based Projects)	(MT)	4926.17	552.32	132.46
7	Net Coal Supplied (5-6)	(MT)	764268.77	67309.73	66098.10
C)	PRICE				
8	Amount charged by the Coal Company	(Rs.)	2862677640	164393254	863723031
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	0	0	0
10	Handling, Sampling and such other similar charges	(Rs.)	24834573	2229076	0
11	Total amount Charged (8+9+10)	(Rs.)	2887512213	166622330	863723031
D)	TRANSPORATION				
12	Transportation charges by rail/ship/road transport	(Rs.)	386568334	81297787	0
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs.)	0	0	0
14	Demurrage Charges, if any	(Rs.)	0	0	0
15	Cost of diesel in transporting Coal through MGR system, if applicable	(Rs.)	23216276	0	0
16	Total Transportation Charges (12+13-14+15)	(Rs.)	409784610	81297787	0
17	Total amount Charged for Coal supplied including Transportation (11+16)	(Rs.)	3297296823	247920117	863723031
E)	TOTAL COST				
18	Landed cost of Coal (2+17)/(1+7)	Rs./MT	4282.91	3682.91	13107.56
19	Blending Ratio (Domestic/Imported)		81.45%	11.44%	7.11%
20	Weighted average cost of Coal/ Lignite (Including Biomass)	Rs./MT	4841.61		
20a	Weighted average cost of Coal/ Lignite (Excluding Biomass)		4841.61		
F)	QUALITY (Stage - I, II, III, & IV)				
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/Kg)	5055	4750	0
22	GCV of Domestic Coal supplied as per bill of Coal Company	(kCal/Kg)	5288	4750	0
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/Kg)			5035
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)			4960
25	Weighted average GCV of coal as billed (Including Biomass)	(kCal/Kg)	5155		
25a	Weighted average GCV of coal as billed (Excluding Biomass)	(kCal/Kg)	5155		
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/Kg)	3824	3624	0
27	GCV of Domestic Coal / Bio Mass supplied as received at Station	(kCal/Kg)	4066	3192	0
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)			4996
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)			4929
30	Weighted average GCV of coal/ Lignite as received (Including Biomass)	(kCal/Kg)	3989		
30a	Weighted average GCV of coal/ Lignite as received (Excluding Biomass)	(kCal/Kg)	3989		

Sr Mgr (Fin) UFCG-Fuel Group

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Sanjay Sinha Digitally signed by Sanjay Sinha
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For M.C Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS Stage-I&II

S. No.	Month	Unit	Jun-23		
			Domestic Coal	NTPC Mine Coal	Imported
			M1149100657	M1149100620	M1149100666
A)	OPENING QUANTITY				
1	Opening Quantity of Coal	(MT)	420416.18	10795.48	19018.39
2	Value of Stock	(Rs.)	1800605635	39758755	249284728
B)	QUANTITY				
3	Quantity of Coal supplied by Coal Company	(MT)	623605.63	60960.67	7797.60
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	0.00	-298.34	0.00
5	Coal supplied by Coal Company (3+4)	(MT)	623605.63	60662.33	7797.60
6	Normative Transit & Handling Losses (For Coal based Projects)	(MT)	4011.22	487.69	15.60
7	Net Coal Supplied (5-6)	(MT)	619594.41	60174.64	7782.00
C)	PRICE				
8	Amount charged by the Coal Company	(Rs.)	2398693581	165636052	81501545
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	0	0	0
10	Handling, Sampling and such other similar charges	(Rs.)	51808802	5064578	0
11	Total amount Charged (8+9+10)	(Rs.)	2450502383	170700630	81501545
D)	TRANSPORTATION				
12	Transportation charges by rail/ship/road transport	(Rs.)	291614609	44702093	0
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs.)	0	0	0
14	Demurrage Charges, if any	(Rs.)	0	0	0
15	Cost of diesel in transporting Coal through MGR system, if applicable	(Rs.)	18188643	0	0
16	Total Transportation Charges (12+13-14+15)	(Rs.)	309803252	44702093	0
17	Total amount Charged for Coal supplied including Transportation (11+16)	(Rs.)	2760305635	215402723	81501545
E)	TOTAL COST				
18	Landed cost of Coal (2+17)/(1+7)	Rs./MT	4385.45	3595.34	12342.59
19	Blending Ratio (Domestic/Imported)		87.73%	8.67%	3.60%
20	Weighted average cost of Coal/ Lignite (Including Biomass)	Rs./MT	4603.75		
20a	Weighted average cost of Coal/ Lignite (Excluding Biomass)		4603.75		
F)	QUALITY (Stage - I, II, III, & IV)				
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/Kg)	5228	4750	0
22	GCV of Domestic Coal supplied as per bill of Coal Company	(kCal/Kg)	5300	4750	0
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/Kg)			4962
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)			4960
25	Weighted average GCV of coal as billed (Including Biomass)	(kCal/Kg)	5215		
25a	Weighted average GCV of coal as billed (Excluding Biomass)	(kCal/Kg)	5215		
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/Kg)	4004	3296	0
27	GCV of Domestic Coal / Bio Mass supplied as received at Station	(kCal/Kg)	4137	3476	0
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)			4931
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)			4874
30	Weighted average GCV of coal/ Lignite as received (Including Biomass)	(kCal/Kg)	4058		
30a	Weighted average GCV of coal/ Lignite as received (Excluding Biomass)	(kCal/Kg)	4058		

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For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS Stage-I&II

S. No.	Month	Unit	Jul-23		
			Domestic Coal	NTPC Mine Coal	Imported
			M1149100657	M1149100620	M1149100666
A)	OPENING QUANTITY				
1	Opening Quantity of Coal	(MT)	358109.60	9985.12	1522.40
2	Value of Stock	(Rs.)	1570468530	35899871	18790334
B)	QUANTITY				
3	Quantity of Coal supplied by Coal Company	(MT)	644457.18	73932.35	43203.20
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	0.00	0.00	0.00
5	Coal supplied by Coal Company (3+4)	(MT)	644457.18	73932.35	43203.20
6	Normative Transit & Handling Losses (For Coal based Projects)	(MT)	4254.38	591.46	86.41
7	Net Coal Supplied (5-6)	(MT)	640202.80	73340.89	43116.79
C)	PRICE				
8	Amount charged by the Coal Company	(Rs.)	2506374719	204763606	560635058
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	0	0	0
10	Handling, Sampling and such other similar charges	(Rs.)	28955558	3321792	0
11	Total amount Charged (8+9+10)	(Rs.)	2535330277	208085398	560635058
D)	TRANSPORATION				
12	Transportation charges by rail/ship/road transport	(Rs.)	299368526	65856199	0
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs.)	0	0	0
14	Demurrage Charges, if any	(Rs.)	0	0	0
15	Cost of diesel in transporting Coal through MGR system, if applicable	(Rs.)	19385560	0	0
16	Total Transportation Charges (12+13-14+15)	(Rs.)	318754086	65856199	0
17	Total amount Charged for Coal supplied including Transportation (11+16)	(Rs.)	2854084362	273941597	560635058
E)	TOTAL COST				
18	Landed cost of Coal (2+17)/(1+7)	Rs./MT	4432.03	3718.42	12980.19
19	Blending Ratio (Domestic/Imported)		84.92%	11.55%	3.53%
20	Weighted average cost of Coal/ Lignite (Including Biomass)	Rs./MT	4651.28		
20a	Weighted average cost of Coal/ Lignite (Excluding Biomass)		4651.28		
F)	QUALITY (Stage - I, II, III, & IV)				
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/Kg)	5228	4750	0
22	GCV of Domestic Coal supplied as per bill of Coal Company	(kCal/Kg)	5300	4750	0
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/Kg)			4962
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)			4960
25	Weighted average GCV of coal as billed (Including Biomass)	(kCal/Kg)	5214		
25a	Weighted average GCV of coal as billed (Excluding Biomass)	(kCal/Kg)	5214		
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/Kg)	4083	3441	0
27	GCV of Domestic Coal / Bio Mass supplied as received at Station	(kCal/Kg)	3870	3265	0
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)			4914
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)			4999
30	Weighted average GCV of coal/ Lignite as received (Including Biomass)	(kCal/Kg)	3934		
30a	Weighted average GCV of coal/ Lignite as received (Excluding Biomass)	(kCal/Kg)	3934		

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For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS Stage-I&II

S. No.	Month	Unit	Aug-23		
			Domestic Coal	NTPC Mine Coal	Imported
			M1149100657	M1149100620	M1149100666
A)	OPENING QUANTITY				
1	Opening Quantity of Coal	(MT)	391291.40	11458.01	22745.19
2	Value of Stock	(Rs.)	1734217610	42605751	295237024
B)	QUANTITY				
3	Quantity of Coal supplied by Coal Company	(MT)	509812.96	3889.04	73595.42
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	0.00	0.00	0.00
5	Coal supplied by Coal Company (3+4)	(MT)	509812.96	3889.04	73595.42
6	Normative Transit & Handling Losses (For Coal based Projects)	(MT)	3131.28	31.11	147.19
7	Net Coal Supplied (5-6)	(MT)	506681.68	3857.93	73448.23
C)	PRICE				
8	Amount charged by the Coal Company	(Rs.)	2067828625	10433748	993351104
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	0	0	0
10	Handling, Sampling and such other similar charges	(Rs.)	34588842	263856	0
11	Total amount Charged (8+9+10)	(Rs.)	2102417467	10697604	993351104
D)	TRANSPORTATION				
12	Transportation charges by rail/ship/road transport	(Rs.)	223971207	0	0
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs.)	0	0	0
14	Demurrage Charges, if any	(Rs.)	0	0	0
15	Cost of diesel in transporting Coal through MGR system, if applicable	(Rs.)	12260929	0	0
16	Total Transportation Charges (12+13-14+15)	(Rs.)	236232137	0	0
17	Total amount Charged for Coal supplied including Transportation (11+16)	(Rs.)	2338649603	10697604	993351104
E)	TOTAL COST				
18	Landed cost of Coal (2+17)/(1+7)	Rs./MT	4535.62	3480.25	13395.80
19	Blending Ratio (Domestic/Imported)		87.50%	1.25%	11.25%
20	Weighted average cost of Coal/ Lignite (Including Biomass)	Rs./MT	5519.31		
20a	Weighted average cost of Coal/ Lignite (Excluding Biomass)		5519.31		
F)	QUALITY (Stage - I, II, III, & IV)				
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/Kg)	5269	4750	0
22	GCV of Domestic Coal supplied as per bill of Coal Company	(kCal/Kg)	5155	4750	0
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/Kg)			5004
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)			5050
25	Weighted average GCV of coal as billed (Including Biomass)	(kCal/Kg)	5180		
25a	Weighted average GCV of coal as billed (Excluding Biomass)	(kCal/Kg)	5180		
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/Kg)	3886	3251	0
27	GCV of Domestic Coal / Bio Mass supplied as received at Station	(kCal/Kg)	3753	3444	0
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)			4924
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)			4969
30	Weighted average GCV of coal/ Lignite as received (Including Biomass)	(kCal/Kg)	3934		
30a	Weighted average GCV of coal/ Lignite as received (Excluding Biomass)	(kCal/Kg)	3934		

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For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS Stage-I&II

S. No.	Month	Unit	Sep-23		
			Domestic Coal	NTPC Mine Coal	Imported
			M1149100657	M1149100620	M1149100666
A)	OPENING QUANTITY				
1	Opening Quantity of Coal	(MT)	299426.08	8155.94	29705.42
2	Value of Stock	(Rs.)	1358085469	28384739	397927978
B)	QUANTITY				
3	Quantity of Coal supplied by Coal Company	(MT)	477447.16	3731.57	67529.41
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	-1539.78	0.00	0.00
5	Coal supplied by Coal Company (3+4)	(MT)	475907.38	3731.57	67529.41
6	Normative Transit & Handling Losses (For Coal based Projects)	(MT)	2935.59	29.85	135.06
7	Net Coal Supplied (5-6)	(MT)	472971.79	3701.72	67394.35
C)	PRICE				
8	Amount charged by the Coal Company	(Rs.)	1889438746	18330461	928371042
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	0	0	0
10	Handling, Sampling and such other similar charges	(Rs.)	64273049	503962	0
11	Total amount Charged (8+9+10)	(Rs.)	1953711795	18834423	928371042
D)	TRANSPORTATION				
12	Transportation charges by rail/ship/road transport	(Rs.)	210364637	0	0
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs.)	0	0	0
14	Demurrage Charges, if any	(Rs.)	0	0	0
15	Cost of diesel in transporting Coal through MGR system, if applicable	(Rs.)	19516276	0	0
16	Total Transportation Charges (12+13-14+15)	(Rs.)	229880912	0	0
17	Total amount Charged for Coal supplied including Transportation (11+16)	(Rs.)	2183592707	18834423	928371042
E)	TOTAL COST				
18	Landed cost of Coal (2+17)/(1+7)	Rs./MT	4585.30	3982.17	13659.14
19	Blending Ratio (Domestic/Imported)		86.19%	1.18%	12.64%
20	Weighted average cost of Coal/ Lignite (Including Biomass)	Rs./MT	5724.93		
20a	Weighted average cost of Coal/ Lignite (Excluding Biomass)		5724.93		
F)	QUALITY (Stage - I, II, III, & IV)				
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/Kg)	5204	4750	0
22	GCV of Domestic Coal supplied as per bill of Coal Company	(kCal/Kg)	5152	4750	0
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/Kg)			5039
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)			5050
25	Weighted average GCV of coal as billed (Including Biomass)	(kCal/Kg)	5151		
25a	Weighted average GCV of coal as billed (Excluding Biomass)	(kCal/Kg)	5151		
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/Kg)	3780	3276	0
27	GCV of Domestic Coal / Bio Mass supplied as received at Station	(kCal/Kg)	3902	3622	0
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)			4925
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)			4892
30	Weighted average GCV of coal/ Lignite as received (Including Biomass)	(kCal/Kg)	3981		
30a	Weighted average GCV of coal/ Lignite as received (Excluding Biomass)	(kCal/Kg)	3981		

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For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS Stage-I&II

S. No.	Month	Unit	Oct-23		
			Domestic Coal	NTPC Mine Coal	Imported
			M1149100657	M1149100620	M1149100666
A)	OPENING QUANTITY				
1	Opening Quantity of Coal	(MT)	130175.87	4357.66	21399.77
2	Value of Stock	(Rs.)	596897639	17352915	292302425
B)	QUANTITY				
3	Quantity of Coal supplied by Coal Company	(MT)	664247.18	47818.05	38446.14
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	0.00	0.00	0.00
5	Coal supplied by Coal Company (3+4)	(MT)	664247.18	47818.05	38446.14
6	Normative Transit & Handling Losses (For Coal based Projects)	(MT)	4235.26	382.54	76.89
7	Net Coal Supplied (5-6)	(MT)	660011.92	47435.51	38369.25
C)	PRICE				
8	Amount charged by the Coal Company	(Rs.)	2574353375	123570889	448178225
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	0	0	0
10	Handling, Sampling and such other similar charges	(Rs.)	9937948	715416	0
11	Total amount Charged (8+9+10)	(Rs.)	2584291323	124286305	448178225
D)	TRANSPORATION				
12	Transportation charges by rail/ship/road transport	(Rs.)	293624309	51222554	0
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs.)	0	0	0
14	Demurrage Charges, if any	(Rs.)	0	0	0
15	Cost of diesel in transporting Coal through MGR system, if applicable	(Rs.)	23074921	0	0
16	Total Transportation Charges (12+13-14+15)	(Rs.)	316699230	51222554	0
17	Total amount Charged for Coal supplied including Transportation (11+16)	(Rs.)	2900990553	175508859	448178225
E)	TOTAL COST				
18	Landed cost of Coal (2+17)/(1+7)	Rs./MT	4426.65	3723.69	12389.04
19	Blending Ratio (Domestic/Imported)		83.18%	6.75%	10.06%
20	Weighted average cost of Coal/ Lignite (Including Biomass)	Rs./MT	5180.42		
20a	Weighted average cost of Coal/ Lignite (Excluding Biomass)		5180.42		
F)	QUALITY (Stage - I, II, III, & IV)				
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/Kg)	5172	4750	0
22	GCV of Domestic Coal supplied as per bill of Coal Company	(kCal/Kg)	5219	4750	0
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/Kg)			5047
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)			5050
25	Weighted average GCV of coal as billed (Including Biomass)	(kCal/Kg)	5166		
25a	Weighted average GCV of coal as billed (Excluding Biomass)	(kCal/Kg)	5166		
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/Kg)	3835	3359	0
27	GCV of Domestic Coal / Bio Mass supplied as received at Station	(kCal/Kg)	3563	3369	0
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)			4925
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)			4929
30	Weighted average GCV of coal/ Lignite as received (Including Biomass)	(kCal/Kg)	3711		
30a	Weighted average GCV of coal/ Lignite as received (Excluding Biomass)	(kCal/Kg)	3711		

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For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS Stage-I&II

S. No.	Month	Unit	Nov-23		
			Domestic Coal	NTPC Mine Coal	Imported
			M1149100657	M1149100620	M1149100666
A)	OPENING QUANTITY				
1	Opening Quantity of Coal	(MT)	106433.79	4093.16	671.02
2	Value of Stock	(Rs.)	471148548	15241677	8313282
B)	QUANTITY				
3	Quantity of Coal supplied by Coal Company	(MT)	762488.62	27053.05	62424.94
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	0.00	0.00	0.00
5	Coal supplied by Coal Company (3+4)	(MT)	762488.62	27053.05	62424.94
6	Normative Transit & Handling Losses (For Coal based Projects)	(MT)	4816.58	216.42	124.85
7	Net Coal Supplied (5-6)	(MT)	757672.04	26836.63	62300.09
C)	PRICE				
8	Amount charged by the Coal Company	(Rs.)	3040576146	69368366	753482252
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	0	0	0
10	Handling, Sampling and such other similar charges	(Rs.)	22061452	782739	0
11	Total amount Charged (8+9+10)	(Rs.)	3062637598	70151105	753482252
D)	TRANSPORTATION				
12	Transportation charges by rail/ship/road transport	(Rs.)	319332792	31333607	0
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs.)	0	0	0
14	Demurrage Charges, if any	(Rs.)	0	0	0
15	Cost of diesel in transporting Coal through MGR system, if applicable	(Rs.)	24987501	0	0
16	Total Transportation Charges (12+13-14+15)	(Rs.)	344320293	31333607	0
17	Total amount Charged for Coal supplied including Transportation (11+16)	(Rs.)	3406957891	101484712	753482252
E)	TOTAL COST				
18	Landed cost of Coal (2+17)/(1+7)	Rs./MT	4488.00	3773.91	12097.54
19	Blending Ratio (Domestic/Imported)		90.54%	1.12%	8.34%
20	Weighted average cost of Coal/ Lignite (Including Biomass)	Rs./MT	5114.52		
20a	Weighted average cost of Coal/ Lignite (Excluding Biomass)		5114.52		
F)	QUALITY (Stage - I, II, III, & IV)				
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/Kg)	5214	4750	0
22	GCV of Domestic Coal supplied as per bill of Coal Company	(kCal/Kg)	5314	4750	0
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/Kg)			5049
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)			5050
25	Weighted average GCV of coal as billed (Including Biomass)	(kCal/Kg)	5274		
25a	Weighted average GCV of coal as billed (Excluding Biomass)	(kCal/Kg)	5274		
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/Kg)	3569	3351	0
27	GCV of Domestic Coal / Bio Mass supplied as received at Station	(kCal/Kg)	3807	3314	0
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)			4925
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)			4975
30	Weighted average GCV of coal/ Lignite as received (Including Biomass)	(kCal/Kg)	3871		
30a	Weighted average GCV of coal/ Lignite as received (Excluding Biomass)	(kCal/Kg)	3871		

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For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS Stage-I&II

S. No.	Month	Unit	Dec-23		
			Domestic Coal	NTPC Mine Coal	Imported
			M1149100657	M1149100620	M1149100666
A)	OPENING QUANTITY				
1	Opening Quantity of Coal	(MT)	239917.82	4081.79	19692.11
2	Value of Stock	(Rs.)	1076750695	15404322	238226100
B)	QUANTITY				
3	Quantity of Coal supplied by Coal Company	(MT)	828807.41	0.00	49236.93
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	0.00	0.00	0.00
5	Coal supplied by Coal Company (3+4)	(MT)	828807.41	0.00	49236.93
6	Normative Transit & Handling Losses (For Coal based Projects)	(MT)	5460.94	0.00	98.47
7	Net Coal Supplied (5-6)	(MT)	823346.47	0.00	49138.46
C)	PRICE				
8	Amount charged by the Coal Company	(Rs.)	3251991260	-2159769	612517044
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	0	0	0
10	Handling, Sampling and such other similar charges	(Rs.)	46063721	0	0
11	Total amount Charged (8+9+10)	(Rs.)	3298054981	-2159769	612517044
D)	TRANSPORTATION				
12	Transportation charges by rail/ship/road transport	(Rs.)	472227785	0	0
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs.)	0	0	0
14	Demurrage Charges, if any	(Rs.)	0	0	0
15	Cost of diesel in transporting Coal through MGR system, if applicable	(Rs.)	24085704	0	0
16	Total Transportation Charges (12+13-14+15)	(Rs.)	496313489	0	0
17	Total amount Charged for Coal supplied including Transportation (11+16)	(Rs.)	3794368470	-2159769	612517044
E)	TOTAL COST				
18	Landed cost of Coal (2+17)/(1+7)	Rs./MT	4581.29	3244.79	12359.96
19	Blending Ratio (Domestic/Imported)		85.52%	0.00%	14.48%
20	Weighted average cost of Coal/ Lignite (Including Biomass)	Rs./MT	5707.44		
20a	Weighted average cost of Coal/ Lignite (Excluding Biomass)		5707.44		
F)	QUALITY (Stage - I, II, III, & IV)				
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/Kg)	5302	4750	0
22	GCV of Domestic Coal supplied as per bill of Coal Company	(kCal/Kg)	4932	0	0
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/Kg)			5050
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)			5050
25	Weighted average GCV of coal as billed (Including Biomass)	(kCal/Kg)	5020		
25a	Weighted average GCV of coal as billed (Excluding Biomass)	(kCal/Kg)	5020		
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/Kg)	3774	3278	0
27	GCV of Domestic Coal / Bio Mass supplied as received at Station	(kCal/Kg)	3872	3267	0
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)			4964
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)			4991
30	Weighted average GCV of coal/ Lignite as received (Including Biomass)	(kCal/Kg)	4014		
30a	Weighted average GCV of coal/ Lignite as received (Excluding Biomass)	(kCal/Kg)	4014		

Sr Mgr (Fin) UFCG-Fuel Group

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For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS Stage-I&II

S. No.	Month	Unit	Jan-24		
			Domestic Coal	NTPC Mine Coal	Imported
			M1149100657	M1149100620	M1149100666
A)	OPENING QUANTITY				
1	Opening Quantity of Coal	(MT)	471094.30	4081.79	0.00
2	Value of Stock	(Rs.)	2158216665	13244553	0
B)	QUANTITY				
3	Quantity of Coal supplied by Coal Company	(MT)	820725.45	0.00	30384.99
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	0.00	0.00	0.00
5	Coal supplied by Coal Company (3+4)	(MT)	820725.45	0.00	30384.99
6	Normative Transit & Handling Losses (For Coal based Projects)	(MT)	5481.28	0.00	60.77
7	Net Coal Supplied (5-6)	(MT)	815244.17	0.00	30324.22
C)	PRICE				
8	Amount charged by the Coal Company	(Rs.)	3383309940	0	374378537
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	0	0	0
10	Handling, Sampling and such other similar charges	(Rs.)	22385661	0	0
11	Total amount Charged (8+9+10)	(Rs.)	3405695601	0	374378537
D)	TRANSPORTATION				
12	Transportation charges by rail/ship/road transport	(Rs.)	416831600	0	0
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs.)	0	0	0
14	Demurrage Charges, if any	(Rs.)	0	0	0
15	Cost of diesel in transporting Coal through MGR system, if applicable	(Rs.)	0	0	0
16	Total Transportation Charges (12+13-14+15)	(Rs.)	416831600	0	0
17	Total amount Charged for Coal supplied including Transportation (11+16)	(Rs.)	3822527200	0	374378537
E)	TOTAL COST				
18	Landed cost of Coal (2+17)/(1+7)	Rs./MT	4649.43	3244.79	12345.86
19	Blending Ratio (Domestic/Imported)		95.17%	0.00%	4.83%
20	Weighted average cost of Coal/ Lignite (Including Biomass)	Rs./MT	5021.25		
20a	Weighted average cost of Coal/ Lignite (Excluding Biomass)		5021.25		
F)	QUALITY (Stage - I, II, III, & IV)				
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/Kg)	5014	4750	0
22	GCV of Domestic Coal supplied as per bill of Coal Company	(kCal/Kg)	4932	0	0
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/Kg)			5050
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)			5082
25	Weighted average GCV of coal as billed (Including Biomass)	(kCal/Kg)	4967		
25a	Weighted average GCV of coal as billed (Excluding Biomass)	(kCal/Kg)	4967		
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/Kg)	3824	3278	0
27	GCV of Domestic Coal / Bio Mass supplied as received at Station	(kCal/Kg)	4063	0	0
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)			4980
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)			5037
30	Weighted average GCV of coal/ Lignite as received (Including Biomass)	(kCal/Kg)	4029		
30a	Weighted average GCV of coal/ Lignite as received (Excluding Biomass)	(kCal/Kg)	4029		

Sr Mgr (Fin) UFCG-Fuel Group

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For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS Stage-I&II

S. No.	Month	Unit	Feb-24		
			Domestic Coal	NTPC Mine Coal	Imported
			M1149100657	M1149100620	M1149100666
A)	OPENING QUANTITY				
1	Opening Quantity of Coal	(MT)	626804.46	4081.79	1207.22
2	Value of Stock	(Rs.)	2914286700	13244553	14904160
B)	QUANTITY				
3	Quantity of Coal supplied by Coal Company	(MT)	594022.57	3525.60	92798.80
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	0.00	0.00	0.00
5	Coal supplied by Coal Company (3+4)	(MT)	594022.57	3525.60	92798.80
6	Normative Transit & Handling Losses (For Coal based Projects)	(MT)	3818.65	28.20	185.60
7	Net Coal Supplied (5-6)	(MT)	590203.92	3497.40	92613.20
C)	PRICE				
8	Amount charged by the Coal Company	(Rs.)	2425800029	8620725	1171070195
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	0	0	0
10	Handling, Sampling and such other similar charges	(Rs.)	22561688	133907	0
11	Total amount Charged (8+9+10)	(Rs.)	2448361717	8754632	1171070195
D)	TRANSPORTATION				
12	Transportation charges by rail/ship/road transport	(Rs.)	278560342	0	0
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs.)	0	0	0
14	Demurrage Charges, if any	(Rs.)	0	0	0
15	Cost of diesel in transporting Coal through MGR system, if applicable	(Rs.)	8025778	0	0
16	Total Transportation Charges (12+13-14+15)	(Rs.)	286586120	0	0
17	Total amount Charged for Coal supplied including Transportation (11+16)	(Rs.)	2734947837	8754632	1171070195
E)	TOTAL COST				
18	Landed cost of Coal (2+17)/(1+7)	Rs./MT	4641.90	2902.58	12640.90
19	Blending Ratio (Domestic/Imported)		85.78%	0.00%	14.22%
20	Weighted average cost of Coal/ Lignite (Including Biomass)	Rs./MT	5779.05		
20a	Weighted average cost of Coal/ Lignite (Excluding Biomass)		5779.05		
F)	QUALITY (Stage - I, II, III, & IV)				
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/Kg)	4962	4750	0
22	GCV of Domestic Coal supplied as per bill of Coal Company	(kCal/Kg)	6127	4750	0
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/Kg)			5081
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)			5060
25	Weighted average GCV of coal as billed (Including Biomass)	(kCal/Kg)	5462		
25a	Weighted average GCV of coal as billed (Excluding Biomass)	(kCal/Kg)	5462		
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/Kg)	3964	3278	0
27	GCV of Domestic Coal / Bio Mass supplied as received at Station	(kCal/Kg)	4018	3718	0
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)			5079
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)			4993
30	Weighted average GCV of coal/ Lignite as received (Including Biomass)	(kCal/Kg)	4134		
30a	Weighted average GCV of coal/ Lignite as received (Excluding Biomass)	(kCal/Kg)	4134		

Sr Mgr (Fin) UFCG-Fuel Group

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For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS Stage-I&II

S. No.	Month	Unit	Mar-24		
			Domestic Coal	NTPC Mine Coal	Imported
			M1149100657	M1149100620	M1149100666
A)	OPENING QUANTITY				
1	Opening Quantity of Coal	(MT)	716177.38	7579.18	10822.42
2	Value of Stock	(Rs.)	3324427118	21999185	136805103
B)	QUANTITY				
3	Quantity of Coal supplied by Coal Company	(MT)	850772.73	0.00	27172.60
4	Adjustment (+/-) in quantity supplied made by Coal Company	(MT)	-3448.82	0.00	0.00
5	Coal supplied by Coal Company (3+4)	(MT)	847323.91	0.00	27172.60
6	Normative Transit & Handling Losses (For Coal based Projects)	(MT)	5305.59	0.00	54.35
7	Net Coal Supplied (5-6)	(MT)	842018.32	0.00	27118.25
C)	PRICE				
8	Amount charged by the Coal Company	(Rs.)	3726667101	4002224	296675647
9	Adjustment (+/-) in amount charged made by Coal Company	(Rs.)	0	0	0
10	Handling, Sampling and such other similar charges	(Rs.)	65015723	0	0
11	Total amount Charged (8+9+10)	(Rs.)	3791682824	4002224	296675647
D)	TRANSPORATION				
12	Transportation charges by rail/ship/road transport	(Rs.)	345890117	0	0
13	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs.)	0	0	0
14	Demurrage Charges, if any	(Rs.)	0	0	0
15	Cost of diesel in transporting Coal through MGR system, if applicable	(Rs.)	36282382	0	0
16	Total Transportation Charges (12+13-14+15)	(Rs.)	382172499	0	0
17	Total amount Charged for Coal supplied including Transportation (11+16)	(Rs.)	4173855323	4002224	296675647
E)	TOTAL COST				
18	Landed cost of Coal (2+17)/(1+7)	Rs./MT	4812.16	3430.63	11425.22
19	Blending Ratio (Domestic/Imported)		98.87%	0.39%	0.74%
20	Weighted average cost of Coal/ Lignite (Including Biomass)	Rs./MT	4855.74		
20a	Weighted average cost of Coal/ Lignite (Excluding Biomass)		4855.74		
F)	QUALITY (Stage - I, II, III, & IV)				
21	GCV of Domestic Coal of the opening coal stock as per bill of Coal Company	(kCal/Kg)	4962	4750	0
22	GCV of Domestic Coal supplied as per bill of Coal Company	(kCal/Kg)	6169	4750	0
23	GCV of Imported Coal of the opening stock as per bill Coal Company	(kCal/Kg)			5081
24	GCV of Imported Coal supplied as per bill Coal Company	(kCal/Kg)			5024
25	Weighted average GCV of coal as billed (Including Biomass)	(kCal/Kg)	5615		
25a	Weighted average GCV of coal as billed (Excluding Biomass)	(kCal/Kg)	5615		
26	GCV of Domestic Coal of the opening stock as received at Station	(kCal/Kg)	4026	3496	0
27	GCV of Domestic Coal / Bio Mass supplied as received at Station	(kCal/Kg)	3909	3750	0
28	GCV of Imported Coal of opening stock as received at Station	(kCal/Kg)			4990
29	GCV of Imported Coal supplied as received at Station	(kCal/Kg)			5025
30	Weighted average GCV of coal/ Lignite as received (Including Biomass)	(kCal/Kg)	3968		
30a	Weighted average GCV of coal/ Lignite as received (Excluding Biomass)	(kCal/Kg)	3968		

Sr Mgr (Fin) UFCG-Fuel Group

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For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Secondary Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS

S. No.	Month	Unit	Apr-23		
			HFO	LDO	LSHS
			M1149201055	M1149200900	M1149201417N
A)	OPENING QUANTITY				
1	Opening Stock of Oil	(KL)	4125.99	96.94	0.00
2	Value of Opening Stock	(Rs.)	260348625.27	5716011.00	0.00
B)	QUANTITY				
3	Quantity of Secondary Fuel/ supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
4	Adjustment (-) in quantity supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
5	Secondary Fuel Supplied by Secondary Fuel / Company (3-4)	(KL)	0.00	0.00	0.00
6	Normative transit & Handling losses (for Secondary Fuel / based projects)	(KL)	0.00	0.00	0.00
7	Net Secondary Fuel / supplied (5-6)	(KL)	0.00	0.00	0.00
C)	PRICE				
8	Amount Charged by the Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
9	Adjustment (+/-) in amount charged by Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
10	Handling, Sampling & Such other similar charges	(Rs.)	0.00	0.00	0.00
11	Total Amount Charged (8+9+10)	(Rs.)	0.00	0.00	0.00
D)	TRANSPORATION				
12	Transportation charges by Rail/Ship/Road Transport	(Rs.)	0.00	0.00	0.00
13	Adjustment (+/-) in amount charged by Rail/Ship/Road Company	(Rs.)	0.00	0.00	0.00
14	Demurrage charges , if any	(Rs.)	0.00	0.00	0.00
15	Cost of diesel in transporting Secondary Fuel through MGR system if applicable	(Rs.)	0.00	0.00	0.00
16	Total Transportation Charges (12-13+14+15)	(Rs.)	0.00	0.00	0.00
17	Total amount charged for Secondary Fuel/ supplied including transportation	(Rs.)	0.00	0.00	0.00
18	Landed cost of Secondary Fuel (2+17) / (1+7)	Rs./KL	63099.690	58964.421	0.000
			Stage I & II		
19	Blending Ratio		1.00	0.00	0.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	63099.69		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9760		
			Stage III		
19	Blending Ratio		1.00	0.00	0.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	63099.69		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9760		

Sr Mgr (Fin) UFCG-Fuel Group

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For M.C. Bhandari & Co.
Chartered Accountants

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FORM- 15 : Details of Secondary Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS

S. No.	Month	Unit	May-23		
			HFO	LDO	LSHS
			M1149201055	M1149200900	M1149201417N
A)	OPENING QUANTITY				
1	Opening Stock of Oil	(KL)	3685.99	96.94	0.00
2	Value of Opening Stock	(Rs.)	232584761.84	5716011.00	0.00
B)	QUANTITY				
3	Quantity of Secondary Fuel/ supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	2939.49
4	Adjustment (-) in quantity supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
5	Secondary Fuel Supplied by Secondary Fuel / Company (3-4)	(KL)	0.00	0.00	2939.49
6	Normative transit & Handling losses (for Secondary Fuel / based projects)	(KL)	0.00	0.00	0.00
7	Net Secondary Fuel / supplied (5-6)	(KL)	0.00	0.00	2939.49
C)	PRICE				
8	Amount Charged by the Secondary Fuel/ Company	(Rs.)	0.00	0.00	171464368.00
9	Adjustment (+/-) in amount charged by Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
10	Handling, Sampling & Such other similar charges	(Rs.)	0.00	0.00	0.00
11	Total Amount Charged (8+9+10)	(Rs.)	0.00	0.00	171464368.00
D)	TRANSPORATION				
12	Transportation charges by Rail/Ship/Road Transport	(Rs.)	0.00	0.00	0.00
13	Adjustment (+/-) in amount charged by Rail/Ship/Road Company	(Rs.)	0.00	0.00	0.00
14	Demurrage charges , if any	(Rs.)	0.00	0.00	0.00
15	Cost of diesel in transporting Secondary Fuel through MGR system if applicable	(Rs.)	0.00	0.00	0.00
16	Total Transportation Charges (12-13+14+15)	(Rs.)	0.00	0.00	0.00
17	Total amount charged for Secondary Fuel/ supplied including transportation	(Rs.)	0.00	0.00	171464368.00
18	Landed cost of Secondary Fuel (2+17) / (1+7)	Rs./KL	63099.690	58964.421	58331.253
			Stage I & II		
19	Blending Ratio		1.00	0.00	0.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	63099.69		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9750		
			Stage III		
19	Blending Ratio		1.00	0.00	0.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	63099.69		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9750		

Sr Mgr (Fin) UFCG-Fuel Group

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For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Secondary Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS

S. No.	Month	Unit	Jun-23		
			HFO	LDO	LSHS
			M1149201055	M1149200900	M1149201417N
A)	OPENING QUANTITY				
1	Opening Stock of Oil	(KL)	2785.99	96.94	2939.49
2	Value of Opening Stock	(Rs.)	175795041.18	5716011.00	171464368.00
B)	QUANTITY				
3	Quantity of Secondary Fuel/ supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
4	Adjustment (-) in quantity supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
5	Secondary Fuel Supplied by Secondary Fuel / Company (3-4)	(KL)	0.00	0.00	0.00
6	Normative transit & Handling losses (for Secondary Fuel / based projects)	(KL)	0.00	0.00	0.00
7	Net Secondary Fuel / supplied (5-6)	(KL)	0.00	0.00	0.00
C)	PRICE				
8	Amount Charged by the Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
9	Adjustment (+/-) in amount charged by Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
10	Handling, Sampling & Such other similar charges	(Rs.)	0.00	0.00	0.00
11	Total Amount Charged (8+9+10)	(Rs.)	0.00	0.00	0.00
D)	TRANSPORATION				
12	Transportation charges by Rail/Ship/Road Transport	(Rs.)	0.00	0.00	0.00
13	Adjustment (+/-) in amount charged by Rail/Ship/Road Company	(Rs.)	0.00	0.00	0.00
14	Demurrage charges , if any	(Rs.)	0.00	0.00	0.00
15	Cost of diesel in transporting Secondary Fuel through MGR system if applicable	(Rs.)	0.00	0.00	0.00
16	Total Transportation Charges (12-13+14+15)	(Rs.)	0.00	0.00	0.00
17	Total amount charged for Secondary Fuel/ supplied including transportation	(Rs.)	0.00	0.00	0.00
18	Landed cost of Secondary Fuel (2+17) / (1+7)	Rs./KL	63099.690	58964.421	58331.253
			Stage I & II		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	58331.25		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9740		
			Stage III		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	58331.25		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9740		

Sr Mgr (Fin) UFCG-Fuel Group

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For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Secondary Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS

S. No.	Month	Unit	Jul-23		
			HFO	LDO	LSHS
			M1149201055	M1149200900	M1149201417N
A)	OPENING QUANTITY				
1	Opening Stock of Oil	(KL)	2785.99	96.94	2330.49
2	Value of Opening Stock	(Rs.)	175795041.18	5716011.00	135940634.97
B)	QUANTITY				
3	Quantity of Secondary Fuel/ supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	2767.29
4	Adjustment (-) in quantity supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
5	Secondary Fuel Supplied by Secondary Fuel / Company (3-4)	(KL)	0.00	0.00	2767.29
6	Normative transit & Handling losses (for Secondary Fuel / based projects)	(KL)	0.00	0.00	0.00
7	Net Secondary Fuel / supplied (5-6)	(KL)	0.00	0.00	2767.29
C)	PRICE				
8	Amount Charged by the Secondary Fuel/ Company	(Rs.)	0.00	0.00	160417707.94
9	Adjustment (+/-) in amount charged by Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
10	Handling, Sampling & Such other similar charges	(Rs.)	0.00	0.00	0.00
11	Total Amount Charged (8+9+10)	(Rs.)	0.00	0.00	160417707.94
D)	TRANSPORATION				
12	Transportation charges by Rail/Ship/Road Transport	(Rs.)	0.00	0.00	0.00
13	Adjustment (+/-) in amount charged by Rail/Ship/Road Company	(Rs.)	0.00	0.00	0.00
14	Demurrage charges , if any	(Rs.)	0.00	0.00	0.00
15	Cost of diesel in transporting Secondary Fuel through MGR system if applicable	(Rs.)	0.00	0.00	0.00
16	Total Transportation Charges (12-13+14+15)	(Rs.)	0.00	0.00	0.00
17	Total amount charged for Secondary Fuel/ supplied including transportation	(Rs.)	0.00	0.00	160417707.94
18	Landed cost of Secondary Fuel (2+17) / (1+7)	Rs./KL	63099.690	58964.421	58134.739
			Stage I & II		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	58134.74		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9780		
			Stage III		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	58134.74		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9780		

Sr Mgr (Fin) UFCG-Fuel Group

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For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Secondary Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS

S. No.	Month	Unit	Aug-23		
			HFO	LDO	LSHS
			M1149201055	M1149200900	M1149201417N
A)	OPENING QUANTITY				
1	Opening Stock of Oil	(KL)	2785.99	96.94	3868.78
2	Value of Opening Stock	(Rs.)	175795041.18	5716011.00	224910748.53
B)	QUANTITY				
3	Quantity of Secondary Fuel/ supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
4	Adjustment (-) in quantity supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
5	Secondary Fuel Supplied by Secondary Fuel / Company (3-4)	(KL)	0.00	0.00	0.00
6	Normative transit & Handling losses (for Secondary Fuel / based projects)	(KL)	0.00	0.00	0.00
7	Net Secondary Fuel / supplied (5-6)	(KL)	0.00	0.00	0.00
C)	PRICE				
8	Amount Charged by the Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
9	Adjustment (+/-) in amount charged by Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
10	Handling, Sampling & Such other similar charges	(Rs.)	0.00	0.00	0.00
11	Total Amount Charged (8+9+10)	(Rs.)	0.00	0.00	0.00
D)	TRANSPORATION				
12	Transportation charges by Rail/Ship/Road Transport	(Rs.)	0.00	0.00	0.00
13	Adjustment (+/-) in amount charged by Rail/Ship/Road Company	(Rs.)	0.00	0.00	0.00
14	Demurrage charges , if any	(Rs.)	0.00	0.00	0.00
15	Cost of diesel in transporting Secondary Fuel through MGR system if applicable	(Rs.)	0.00	0.00	0.00
16	Total Transportation Charges (12-13+14+15)	(Rs.)	0.00	0.00	0.00
17	Total amount charged for Secondary Fuel/ supplied including transportation	(Rs.)	0.00	0.00	0.00
18	Landed cost of Secondary Fuel (2+17) / (1+7)	Rs./KL	63099.690	58964.421	58134.739
			Stage I & II		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	58134.74		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9820		
			Stage III		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	58134.74		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9820		

Sr Mgr (Fin) UFCG-Fuel Group

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For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Secondary Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS

S. No.	Month	Unit	Sep-23		
			HFO	LDO	LSHS
			M1149201055	M1149200900	M1149201417N
A)	OPENING QUANTITY				
1	Opening Stock of Oil	(KL)	2785.99	96.94	3202.78
2	Value of Opening Stock	(Rs.)	175795041.18	5716011.00	186193012.28
B)	QUANTITY				
3	Quantity of Secondary Fuel/ supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	2676.00
4	Adjustment (-) in quantity supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
5	Secondary Fuel Supplied by Secondary Fuel / Company (3-4)	(KL)	0.00	0.00	2676.00
6	Normative transit & Handling losses (for Secondary Fuel / based projects)	(KL)	0.00	0.00	0.00
7	Net Secondary Fuel / supplied (5-6)	(KL)	0.00	0.00	2676.00
C)	PRICE				
8	Amount Charged by the Secondary Fuel/ Company	(Rs.)	0.00	0.00	182196884.39
9	Adjustment (+/-) in amount charged by Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
10	Handling, Sampling & Such other similar charges	(Rs.)	0.00	0.00	0.00
11	Total Amount Charged (8+9+10)	(Rs.)	0.00	0.00	182196884.39
D)	TRANSPORATION				
12	Transportation charges by Rail/Ship/Road Transport	(Rs.)	0.00	0.00	0.00
13	Adjustment (+/-) in amount charged by Rail/Ship/Road Company	(Rs.)	0.00	0.00	0.00
14	Demurrage charges , if any	(Rs.)	0.00	0.00	0.00
15	Cost of diesel in transporting Secondary Fuel through MGR system if applicable	(Rs.)	0.00	0.00	0.00
16	Total Transportation Charges (12-13+14+15)	(Rs.)	0.00	0.00	0.00
17	Total amount charged for Secondary Fuel/ supplied including transportation	(Rs.)	0.00	0.00	182196884.39
18	Landed cost of Secondary Fuel (2+17) / (1+7)	Rs./KL	63099.690	58964.421	62664.334
			Stage I & II		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	62664.33		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9740		
			Stage III		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	62664.33		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9740		

Sr Mgr (Fin) UFCG-Fuel Group

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For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Secondary Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS

S. No.	Month	Unit	Oct-23		
			HFO	LDO	LSHS
			M1149201055	M1149200900	M1149201417N
A)	OPENING QUANTITY				
1	Opening Stock of Oil	(KL)	2785.99	96.94	4100.78
2	Value of Opening Stock	(Rs.)	175795041.18	5716011.00	256972710.65
B)	QUANTITY				
3	Quantity of Secondary Fuel/ supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
4	Adjustment (-) in quantity supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
5	Secondary Fuel Supplied by Secondary Fuel / Company (3-4)	(KL)	0.00	0.00	0.00
6	Normative transit & Handling losses (for Secondary Fuel / based projects)	(KL)	0.00	0.00	0.00
7	Net Secondary Fuel / supplied (5-6)	(KL)	0.00	0.00	0.00
C)	PRICE				
8	Amount Charged by the Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
9	Adjustment (+/-) in amount charged by Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
10	Handling, Sampling & Such other similar charges	(Rs.)	0.00	0.00	0.00
11	Total Amount Charged (8+9+10)	(Rs.)	0.00	0.00	0.00
D)	TRANSPORATION				
12	Transportation charges by Rail/Ship/Road Transport	(Rs.)	0.00	0.00	0.00
13	Adjustment (+/-) in amount charged by Rail/Ship/Road Company	(Rs.)	0.00	0.00	0.00
14	Demurrage charges , if any	(Rs.)	0.00	0.00	0.00
15	Cost of diesel in transporting Secondary Fuel through MGR system if applicable	(Rs.)	0.00	0.00	0.00
16	Total Transportation Charges (12-13+14+15)	(Rs.)	0.00	0.00	0.00
17	Total amount charged for Secondary Fuel/ supplied including transportation	(Rs.)	0.00	0.00	0.00
18	Landed cost of Secondary Fuel (2+17) / (1+7)	Rs./KL	63099.690	58964.421	62664.334
			Stage I & II		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	62664.33		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9740		
			Stage III		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	62664.33		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9740		

Sr Mgr (Fin) UFCG-Fuel Group

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For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Secondary Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS

S. No.	Month	Unit	Nov-23		
			HFO	LDO	LSHS
			M1149201055	M1149200900	M1149201417N
A)	OPENING QUANTITY				
1	Opening Stock of Oil	(KL)	2785.99	96.94	1963.78
2	Value of Opening Stock	(Rs.)	175795041.18	5716011.00	123059028.68
B)	QUANTITY				
3	Quantity of Secondary Fuel/ supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
4	Adjustment (-) in quantity supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
5	Secondary Fuel Supplied by Secondary Fuel / Company (3-4)	(KL)	0.00	0.00	0.00
6	Normative transit & Handling losses (for Secondary Fuel / based projects)	(KL)	0.00	0.00	0.00
7	Net Secondary Fuel / supplied (5-6)	(KL)	0.00	0.00	0.00
C)	PRICE				
8	Amount Charged by the Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
9	Adjustment (+/-) in amount charged by Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
10	Handling, Sampling & Such other similar charges	(Rs.)	0.00	0.00	0.00
11	Total Amount Charged (8+9+10)	(Rs.)	0.00	0.00	0.00
D)	TRANSPORATION				
12	Transportation charges by Rail/Ship/Road Transport	(Rs.)	0.00	0.00	0.00
13	Adjustment (+/-) in amount charged by Rail/Ship/Road Company	(Rs.)	0.00	0.00	0.00
14	Demurrage charges , if any	(Rs.)	0.00	0.00	0.00
15	Cost of diesel in transporting Secondary Fuel through MGR system if applicable	(Rs.)	0.00	0.00	0.00
16	Total Transportation Charges (12-13+14+15)	(Rs.)	0.00	0.00	0.00
17	Total amount charged for Secondary Fuel/ supplied including transportation	(Rs.)	0.00	0.00	0.00
18	Landed cost of Secondary Fuel (2+17) / (1+7)	Rs./KL	63099.690	58964.421	62664.334
			Stage I & II		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	62664.33		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9740		
			Stage III		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	62664.33		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9740		

Sr Mgr (Fin) UFCG-Fuel Group

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BISWAS Date: 2024.09.14
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For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Secondary Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS

S. No.	Month	Unit	Dec-23		
			HFO	LDO	LSHS
			M1149201055	M1149200900	M1149201417N
A)	OPENING QUANTITY				
1	Opening Stock of Oil	(KL)	2785.99	96.94	1021.78
2	Value of Opening Stock	(Rs.)	175795041.18	5716011.00	64029225.96
B)	QUANTITY				
3	Quantity of Secondary Fuel/ supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
4	Adjustment (-) in quantity supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
5	Secondary Fuel Supplied by Secondary Fuel / Company (3-4)	(KL)	0.00	0.00	0.00
6	Normative transit & Handling losses (for Secondary Fuel / based projects)	(KL)	0.00	0.00	0.00
7	Net Secondary Fuel / supplied (5-6)	(KL)	0.00	0.00	0.00
C)	PRICE				
8	Amount Charged by the Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
9	Adjustment (+/-) in amount charged by Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
10	Handling, Sampling & Such other similar charges	(Rs.)	0.00	0.00	0.00
11	Total Amount Charged (8+9+10)	(Rs.)	0.00	0.00	0.00
D)	TRANSPORATION				
12	Transportation charges by Rail/Ship/Road Transport	(Rs.)	0.00	0.00	0.00
13	Adjustment (+/-) in amount charged by Rail/Ship/Road Company	(Rs.)	0.00	0.00	0.00
14	Demurrage charges , if any	(Rs.)	0.00	0.00	0.00
15	Cost of diesel in transporting Secondary Fuel through MGR system if applicable	(Rs.)	0.00	0.00	0.00
16	Total Transportation Charges (12-13+14+15)	(Rs.)	0.00	0.00	0.00
17	Total amount charged for Secondary Fuel/ supplied including transportation	(Rs.)	0.00	0.00	0.00
18	Landed cost of Secondary Fuel (2+17) / (1+7)	Rs./KL	63099.690	58964.421	62664.334
			Stage I & II		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	62664.33		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9790		
			Stage III		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	62664.33		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9790		

Sr Mgr (Fin) UFCG-Fuel Group

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Date: 2024.09.14 17:33:25 +05'30'

For M.C. Bhandari & Co
Chartered Accountants

FORM- 15 : Details of Secondary Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS

S. No.	Month	Unit	Jan-24		
			HFO	LDO	LSHS
			M1149201055	M1149200900	M1149201417N
A)	OPENING QUANTITY				
1	Opening Stock of Oil	(KL)	2785.99	96.94	560.20
2	Value of Opening Stock	(Rs.)	175795041.18	5716011.00	35104371.97
B)	QUANTITY				
3	Quantity of Secondary Fuel/ supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	2768.90
4	Adjustment (-) in quantity supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
5	Secondary Fuel Supplied by Secondary Fuel / Company (3-4)	(KL)	0.00	0.00	2768.90
6	Normative transit & Handling losses (for Secondary Fuel / based projects)	(KL)	0.00	0.00	0.00
7	Net Secondary Fuel / supplied (5-6)	(KL)	0.00	0.00	2768.90
C)	PRICE				
8	Amount Charged by the Secondary Fuel/ Company	(Rs.)	0.00	0.00	162314175.50
9	Adjustment (+/-) in amount charged by Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
10	Handling, Sampling & Such other similar charges	(Rs.)	0.00	0.00	0.00
11	Total Amount Charged (8+9+10)	(Rs.)	0.00	0.00	162314175.50
D)	TRANSPORATION				
12	Transportation charges by Rail/Ship/Road Transport	(Rs.)	0.00	0.00	0.00
13	Adjustment (+/-) in amount charged by Rail/Ship/Road Company	(Rs.)	0.00	0.00	0.00
14	Demurrage charges , if any	(Rs.)	0.00	0.00	0.00
15	Cost of diesel in transporting Secondary Fuel through MGR system if applicable	(Rs.)	0.00	0.00	0.00
16	Total Transportation Charges (12-13+14+15)	(Rs.)	0.00	0.00	0.00
17	Total amount charged for Secondary Fuel/ supplied including transportation	(Rs.)	0.00	0.00	162314175.50
18	Landed cost of Secondary Fuel (2+17) / (1+7)	Rs./KL	63099.690	58964.421	59300.983
			Stage I & II		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	59300.98		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9770		
			Stage III		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	59300.98		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9770		

Sr Mgr (Fin) UFCG-Fuel Group

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Date: 2024.09.14 17:32:58 +05'30'

For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Secondary Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS

S. No.	Month	Unit	Feb-24		
			HFO	LDO	LSHS
			M1149201055	M1149200900	M1149201417N
A)	OPENING QUANTITY				
1	Opening Stock of Oil	(KL)	2785.99	96.94	2909.65
2	Value of Opening Stock	(Rs.)	175795041.18	5716011.00	172545343.06
B)	QUANTITY				
3	Quantity of Secondary Fuel/ supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
4	Adjustment (-) in quantity supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
5	Secondary Fuel Supplied by Secondary Fuel / Company (3-4)	(KL)	0.00	0.00	0.00
6	Normative transit & Handling losses (for Secondary Fuel / based projects)	(KL)	0.00	0.00	0.00
7	Net Secondary Fuel / supplied (5-6)	(KL)	0.00	0.00	0.00
C)	PRICE				
8	Amount Charged by the Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
9	Adjustment (+/-) in amount charged by Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
10	Handling, Sampling & Such other similar charges	(Rs.)	0.00	0.00	0.00
11	Total Amount Charged (8+9+10)	(Rs.)	0.00	0.00	0.00
D)	TRANSPORATION				
12	Transportation charges by Rail/Ship/Road Transport	(Rs.)	0.00	0.00	0.00
13	Adjustment (+/-) in amount charged by Rail/Ship/Road Company	(Rs.)	0.00	0.00	0.00
14	Demurrage charges , if any	(Rs.)	0.00	0.00	0.00
15	Cost of diesel in transporting Secondary Fuel through MGR system if applicable	(Rs.)	0.00	0.00	0.00
16	Total Transportation Charges (12-13+14+15)	(Rs.)	0.00	0.00	0.00
17	Total amount charged for Secondary Fuel/ supplied including transportation	(Rs.)	0.00	0.00	0.00
18	Landed cost of Secondary Fuel (2+17) / (1+7)	Rs./KL	63099.690	58964.421	59300.983
			Stage I & II		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	59300.98		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9770		
			Stage III		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	59300.98		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9770		

Sr Mgr (Fin) UFCG-Fuel Group

MOHD Digitally signed
by MOHD IMRAN
Date: 2024.07.30
16:09:44 +05'30'

Sanjay Sinha Digitally signed by Sanjay Sinha
Date: 2024.08.21 17:50:38
+05'30'

For M.C. Bhandari & Co.
Chartered Accountants

FORM- 15 : Details of Secondary Fuel for Computation of Energy Charges

Name of the Petitioner:
Name of the Generating Station

NTPC Limited
FSTPS

S. No.	Month	Unit	Mar-24		
			HFO	LDO	LSHS
			M1149201055	M1149200900	M1149201417N
A)	OPENING QUANTITY				
1	Opening Stock of Oil	(KL)	2785.99	96.94	2451.69
2	Value of Opening Stock	(Rs.)	175795041.18	5716011.00	145387864.78
B)	QUANTITY				
3	Quantity of Secondary Fuel/ supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
4	Adjustment (-) in quantity supplied by Secondary Fuel/ Company	(KL)	0.00	0.00	0.00
5	Secondary Fuel Supplied by Secondary Fuel / Company (3-4)	(KL)	0.00	0.00	0.00
6	Normative transit & Handling losses (for Secondary Fuel / based projects)	(KL)	0.00	0.00	0.00
7	Net Secondary Fuel / supplied (5-6)	(KL)	0.00	0.00	0.00
C)	PRICE				
8	Amount Charged by the Secondary Fuel/ Company	(Rs.)	30476019.00	0.00	0.00
9	Adjustment (+/-) in amount charged by Secondary Fuel/ Company	(Rs.)	0.00	0.00	0.00
10	Handling, Sampling & Such other similar charges	(Rs.)	0.00	0.00	0.00
11	Total Amount Charged (8+9+10)	(Rs.)	30476019.00	0.00	0.00
D)	TRANSPORATION				
12	Transportation charges by Rail/Ship/Road Transport	(Rs.)	0.00	0.00	0.00
13	Adjustment (+/-) in amount charged by Rail/Ship/Road Company	(Rs.)	0.00	0.00	0.00
14	Demurrage charges , if any	(Rs.)	0.00	0.00	0.00
15	Cost of diesel in transporting Secondary Fuel through MGR system if applicable	(Rs.)	0.00	0.00	0.00
16	Total Transportation Charges (12-13+14+15)	(Rs.)	0.00	0.00	0.00
17	Total amount charged for Secondary Fuel/ supplied including transportation	(Rs.)	30476019.00	0.00	0.00
18	Landed cost of Secondary Fuel (2+17) / (1+7)	Rs./KL	74038.720	58964.421	59300.983
			Stage I & II		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	59300.98		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9770		
			Stage III		
19	Blending Ratio		0.00	0.00	1.00
20	Weighted Average Cost of Secondary Fuel/ For the month	Rs./KL	59300.98		
E)	QUALITY				
21	Weighted average GCV of Secondary Fuel/ as Received	(kcal/L)	9770		

Sr Mgr (Fin) UFCG-Fuel Group

MOHD IMRAN Digitally signed by MOHD IMRAN
Date: 2024.07.30 16:10:07 +05'30'

Sanjay Sinha Digitally signed by Sanjay Sinha
Date: 2024.08.21 17:52:05 +05'30'

AMIT BISWAS Digitally signed by AMIT BISWAS
Date: 2024.09.14 17:31:24 +05'30'

For M.C. Bhandari & Co.
Chartered Accountants

ANNEXURE F

05-11.86

1700

12/10/77
209.18
17,473.50

General Manager
Irrigation Project - Farakka

Water charges for consumptive use of FSTPP

Your No. Genl/W₁-25/NTPC(IV)/1831 dt. 7.3.86
Minutes of meeting held on 23.10.86 between
FSTPP/NTPC and FBP Authority

of water charges i.e. Rs. 5.50/- per 5000cft has already been
by the Ministry of Irrigation & Power. But we intend to avoid
measurements of quantity of consumption of water to avoid
and other complications in such measurements. As already
we propose to fix some lump sum rates per 200 MW unit/
based on the theoretical water losses at 63% PLF as indicated.
which may be acceptable to you.

Water charges per 200 MW unit per month based on 63% PLF

Losses :	670		
Boiler Feed water @3% of 700 T/hr	=	21 MT/H	20 MT/H
Boiling water @1% of 15 x 200 T/hr	=	300 MT/H	30 MT/H
Sludge disposal @ 700 T/hr	=	700 MT/H	700 MT/H
		<u>1021 MT/H</u>	<u>750 MT/H</u>

Annual water losses considering 30 days overhauling period during a
and 35 days shutdown period during a year :

$$= 1021 \times 24 \times (365-65)$$

$$= 1021 \times 24 \times 300 \text{ MT} = 7351200 \text{ M}^3$$

$$\text{Total water charges} = 1021 \times 24 \times 300 \times \frac{35.3}{5000} \times 5.5 = \text{Rs. } 2,85,447/-$$

$$\text{Monthly charges per 200 MW will be} = \frac{\text{Rs. } 2,85,447/-}{12} = \text{Rs. } 23,787/-$$

are requested to please look into it and communicate your early
approval so that we may deposit fund accordingly.

For 500 ME unit, rate may fix in a same manner at a subsequent date.

Thanking you,

Yours faithfully,

Sd/-
K. RADHAKRISHNAN
GENERAL MANAGER/FSTPP/NTPC

CONSUMPTION FOR EN THERMAL POWER PROJECT

125
125

Water @ 13% of 1675 T/hr = 50.25 T/hr ≈ 50T/hr
(make-up)

Water @ 1% of 2x31500 Mt/hr = 630 T/hr

Consumption = (1700 + 1300) = 3000 m³/hr
≈ 3000 T/hr

consumption = (1) + (2) + (3)
= 50 + 630 + 3000
= 3680 T/hr

92

consumption = 300 x 24 x 3680
(operation) = 26496000 T

charges per = $\frac{26496000 \times 5.5}{5000} \times 35.3$

= Rs. 1028839.68

month = Rs. 85736.64

1675 T/hr
31500 m³/hr
FA = 1700 m³/hr
BA = 1300 m³/hr
2x1700 m³/hr
one pump

(1/2/1980)

110 003 Tele: 380100 (10 Lines) Telex: 031-74145 (OLD)
STREET, 3rd FLOOR, CALCUTTA-700 071 74159
54/55 + Telex: 021-2132 74105



भारत सरकार
जल संसाधन मंत्रालय
पराक्रमवादी का कार्यक्रम
कर्मकांडीय परिषद
गंगा परियोजना (मुर्शिदाबाद)

GOVT. OF INDIA
MINISTRY OF WATER RESOURCES
OFFICE OF THE GENERAL MANAGER
FARAKKA BARRAGE PROJECT
P.O.: FARAKKA BARRAGE, DIST.: MURSHIDABAD
WEST BENGAL, PIN - 742 212
PHONE : 03485-253044
FAX : 03485-253008 / 253283

No. Genl/Works/W-25/ (NTPC)/ 596 (5) (W.E)

Dated: 16-02-2012

To
The General Manager
Farakka Super Thermal Power Station
National Thermal Power Corporation Ltd.,
Farakka,
P.O. Nabarun
Dist- Murshidabad (WB)
PIN- 742236

Subject: Revision of water charges for consumptive use of water by N.T.P.C, F.S.T.P.P.,
Farakka.

Sir,

Kindly refer to this office letter No. Genl/Works/W-25(NTPC)/Vol-
VII/2423(W.E) dated 25.08.2011 on the subject mentioned above.

In this context it is to inform you that Ministry of Water Resources has concurred
the proposal for increasing the water charges being levied to NTPC, FSTPP, Farakka
from present rate of Rs. 5.50 per 1000 Gals. to Rs. 5.20 per 1000 gallons vide MoWR
U.O.No. 10/12/2003-Ganga/FBP dated 30.01.2012 (Copy enclosed). The revised rate of
water charges will be effecting from 01.02.2012.

This is for your information please.

Encl: As stated above.

Yours faithfully,

(Signature)
15/2/2012
(A.K. Sinha)

General Manager
Farakka Barrage Project

Copy to:-

- 1) The Sr. Jt. Commissioner-I (Ganga), Ministry of Water Resources, 11th Block, 8th Floor, C.G.O. Complex, Lodi Road, New Delhi- 110003 with reference to MoWR U.O.No.10/12/2003-Ganga/FBP dated 30.01.2012.

General Manager
Farakka Barrage Project

- 2) The Sr. Accounts Officer, Pay & Accounts Office, Farakka Barrage Project
- 3) The Superintending Engineer, Circle No.II, Farakka Barrage Project
- 4) The Executive Engineer, Feeder Canal Division, Farakka Barrage Project

Copy: RE-D(ERI) } for kind information.
Dir (OPW)

RE-D(BS)
Please
(Signature)

(Signature)
25/2
DC
25/2/2012
DAM/03

29-FEB-2012 11:36

GN'FBP

03485253808

P. 01

N.T.P.C. Ltd., with reference to General Manager, F.B. Project office letter No. Genl/Works/W-25/(NTPC)/596(5)(we) dated 16.02.2012.



Government of India
Ministry of Water Resources
Ganga Wing

11th Block, 8th Floor,
CGO Complex, Lodi Road,
New Delhi-110003.

Subject: Revision of water charges for consumptive use of water by N.T.P.C., FSTPP, Farakka.

Please refer to your letter dated 30.12.2011, vide which it has been opined that the raw water charges, as being levied by the DVC for non-agricultural purposes may be considered for revision of raw water charges being supplied to the NTPC, FSTPP for cooling purpose with prospective date. The case has been examined in this wing and sent to IFD, MOWR for their concurrence.

In the context, IFD, MOWR has concurred the proposal for increasing the raw water charges, being levied to NTPC, FSTPP, Farakka from present rate of Rs. 5.50 per 5000 Cft. to Rs. 5.20 per 1000 gallons for cooling purpose with prospective date provided it's at par with levies of other PSUs. IFD, MOWR has also advised that it is an administrative decision to be taken by FBP, any area of dispute may be referred to IFD for advice.

(Handwritten signature)
21/2/12
(T.S. Mehra)

Sr. Jt. Commissioner-I (Ganga)

General Manager, Farakka Barrage Project, P.O. Farakka, Distt. - Murshidabad, West Bengal.

U.O. No. 10/12/2003-Ganga/FBP /418-21

Dated 30.01.2012.

Copy for kind information to:

- (1) PPS to secretary (WR).
- (2) PS to Additional Secretary (WR).
- (3) JS & FA, MOWR, Shram Shakti Bhawan, New Delhi.

ESL
C.
2/12

97

Dr. M. (TS)
May pt. approve
Dr. V. Kumar
93

STO/SECRET

21/2/12

21/2/12
21/2/12
21/2/12

(T.S. Mehra)

Sr. Jt. Commissioner-I (Ganga)

भारत सरकार
जल संसाधन, नदी विकास एवं
नगर संस्कार मंत्रालय
महानदी विकास एवं संवर्धन,
फारका बैराज परियोजना
प.०.-फारका बैराज, जिला-मुरशिदाबाद,
पश्चिम बंगाल, पिन-742212
दूरभाष-03485 253608 / 253293
फैक्स-03485 253608 / 253293



GOVERNMENT OF INDIA
MINISTRY OF WATER RESOURCES,
RIVER DEVELOPMENT & GANGA REJUVENATION
OFFICE OF THE GENERAL MANAGER
FARAKKA BARRAGE PROJECT
P.O. - FARAKKA BARRAGE,
DIST. - MURSHIDABAD,
WEST BENGAL, PIN - 742212
TEL : (03485) 253608
FAX : (03485) 253608 / 253293

No. Genl/Works/W-25(N.T.P.C.)Vol-VI/ 616 (we)

Dated 25/02/2019

To
The Deputy General Manager
(O&M) EEMG
F.S.T.P.P. / N.T.P.C., Farakka,
P.O. - Nabarun,
Dist - Murshidabad
West Bengal
Pin - 742236.

Sub: Water Charges payable to Farakka Barrage Project for consumptive use by
ESTPP/NTPC, Farakka for the period from October 2018 to December 2018-Revised.

- Ref: 1. Yours letter No. FS: 42: O&M: EEMG: Dated 04.01.2019
2. This office letter no. Genl/Works/W-25(N.T.P.C.)Vol-VI/293(we) dtd 25.01.2019
3. MoWR, RD & GR's letter no Z-15013/5/2018-FM/183/184 dtd. 21.01.2019
4. This office letter no. Genl/Works/W-25(N.T.P.C.)Vol-VI/456(we) dtd 08.02.2019

Sir,

Kindly refer to the letter reference no. 2., vide which water charges for
FSTPP/NTPC Farakka of Rs 2,60,36,561/- (Rupees Two Crore Sixty Lakh Thirty Six
Thousand Five Hundred Sixty One) only for unit No. I, II, III (200 M.W) and Unit No. IV,
V, VI (500 M.W.), has already been submitted to your office.

Now, the rates has been enhanced by IFD, Ministry of Water Resources, RD & GR
vide reference no. 3

So, as per the enhanced rate, total amount of water charges comes to Rs
10,88,28,860/- (Rupees Ten Crore Eighty Eight Lakh Twenty Eight Thousand Eight
Hundred Sixty) only for unit No. I, II, III (200 M.W) and Unit No. IV, V, VI (500 M.W.),

Please arrange to remit the revised amount as stated to the General Manager,
Farakka Barrage Project by Cheque or Demand Draft drawn in State Bank of India, Farakka
in favour of Sr. Accounts Officer, Pay & Accounts Office, Farakka Barrage Project at an
early date.

Yours faithfully

(Pradip Kumar Biswas)
Executive Engineer-II
Farakka Barrage Project.

1/24122/2019



No. Z-15013/5/2018-FM/
Government of India
Ministry of Water Resources, RD & GR
(Flood Management Wing)

11th Block, 8th Floor, CGO Complex,
Lodhi Road, New Delhi-110 003.
Dated : 21 January, 2019

ORDER

Subject: Revision of water charges being recovered by FBP from NTPC, FSTPP, Farakka.

Kindly refer your letter No. Gen/Works/W-25(N.T.P.C.)/Vol-VI/ 3242(wc) dated 15.11.2018 seeking approval of the competent authority on the revision of water charges being recovered by FBP from NTPC, FSTPP, Farakka.

In this context, in supersession of this Ministry's U.O. No. 10/12/2003-Ganga/FBP/418-21 dated 30.01.2012, the undersigned is directed to convey the approval of competent authority of this Ministry to revise the water charges being recovered by Farakka Barrage Project from N.T.P.C, F.S.T.P.P., Farakka for cooling purpose as tabulated below:

S.No.	Mode of use	Present rate	Revised rate
1.	Beyond 10 MGD	Rs 5.20 per 1000 gallon	Rs 5.50 per kilo litre (1000 gallon = 3.785 kilo litre) Hence revised rate shall be Rs 20.82 per 1000 gallon.
2.	Below 10 MGD	Presently applicable	not Rs 5.00 per kilo litre Hence revised rate shall be Rs 18.92 per 1000 gallon.

This issues with the concurrence of IFD, Ministry of Water Resources, RD & GR vide Dy. No.543/IFD/2018-19 dated 15th January, 2019.

[Signature]
21/1/2019
(R.R.Sambharua)
Sr. Jt. Commissioner-I (FM)
Tel: 011-24362160

To,
General Manager,
Farakka Barrage Project,
P.O. Farakka, Murshidabad,
West Bengal.

Copy for kind information to:

- (i) PPS to Secretary (WR, RD & GR), Shram Shakti Bhawan, New Delhi
- (ii) Member (D&R), CWC & Chairman, TAC-FBP, Sewa Bhavan, New Delhi.
- (iii) JS & FA, MoWR, RD & GR, Shram Shakti Bhawan, New Delhi

SE (C) for SE (C-I) ma.
[Signature]

E.F. (Please give copy to SE (C-I))

I/24122/2019



No. Z-15013/5/2018-FM/
Government of India
Ministry of Water Resources, RD & GR
(Flood Management Wing)

11th Block, 8th Floor, CGO Complex,
Lodhi Road, New Delhi-110 003.
Dated : 21 January, 2019

ORDER

Subject: Revision of water charges being recovered by FBP from NTPC, FSTPP, Farakka.

Kindly refer your letter No. Gen/Works/W-25(N.T.P.C.)/Vol-VI/ 3242(we) dated 15.11.2018 seeking approval of the competent authority on the revision of water charges being recovered by FBP from NTPC, FSTPP, Farakka.

In this context, in supersession of this Ministry's U.O. No. 10/12/2003-Ganga/FBP/418-21 dated 30.01.2012, the undersigned is directed to convey the approval of competent authority of this Ministry to revise the water charges being recovered by Farakka Barrage Project from N.T.P.C, F.S.T.P.P., Farakka for cooling purpose as tabulated below:

S.No.	Mode of use	Present rate	Revised rate
1.	Beyond 10 MGD	Rs 5.20 per 1000 gallon	Rs 5.50 per kilo litre (1000 gallon = 3.785 kilo litre) Hence revised rate shall be Rs 20.82 per 1000 gallon.
2.	Below 10 MGD	Presently applicable	Rs 5.00 per kilo litre Hence revised rate shall be Rs 18.92 per 1000 gallon.

This issues with the concurrence of IFD, Ministry of Water Resources, RD & GR vide Dy. No.543/IFD/2018-19 dated 15th January, 2019.


(R.R.Sambharia)
Sr. Jt. Commissioner-I (FM)
Tel: 011-24362160

To,
General Manager,
Farakka Barrage Project,
P.O. Farakka, Murshidabad,
West Bengal.

Copy for kind information to:

- (i) PPS to Secretary (WR, RD & GR), Shram Shakti Bhawan, New Delhi
- (ii) Member (D&R), CWC & Chairman, TAC-FBP, Sewa Bhawan, New Delhi.
- (iii) JS & FA, MoWR, RD & GR, Shram Shakti Bhawan, New Delhi

SE (C-1) m/a.
EE-1 (Please give reply to SE (C-1))

136

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F.No.Z-15013/5/2018-FM Section
Government of India
Ministry of Jal Shakti
Department of Water Resources, RD&GR
(Flood Management Wing)

11th Block, 8th Floor,
 CGO Complex, Lodhi Road,
 New Delhi-110003.

Dated: 10th January, 2023

ORDER

Subject: Revision of water charges being recovered by FBP from NTPC (FSTPP, Farakka).

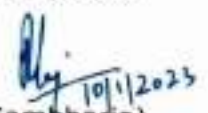
This has reference to FBP letter No. Genl/Works/W-25(NTPC)/Vol- VII/6681-82 dated 29.11.2022 seeking approval of the competent authority on the revision of water charges being recovered by FBP from NTPC in respect of Farakka Super Thermal Power Project (FSTPP) at Farakka.

In this context, in supersession of this Department's Order No. Z-15013/5/2018-FM dated 21st January, 2019, the undersigned is directed to convey the approval of competent authority of this Department to revise the water charges being recovered by Farakka Barrage Project from N.T.P.C in r/o F.S.T.P.P., Farakka for cooling purpose as under:

From January, 2022 to March, 2022	Rs 7.97 per Kilo Litre
For Financial Year 2022-23	Rs 8.39 per Kilo Litre

(an annual increment of 7.5% in raw water user charges w.e.f FY 23-24)

This issues with the concurrence of IFD, DoWR, RD&GR vide Dy. No. 899/IFD/2022-23 dated 22.12.2022.


 (R. R. Sambharia)
 Sr. Jt. Commissioner-I (FM)
 Tel: 011-24362160
sjcer1-mowr@nic.in

To
 ✓ General Manager,
 Farakka Barrage Project,
 P.O.-Farakka Barrage,
 Distt. - Murshidabad,
 West Bengal-742212.

Copy for kind information to:

- i. Sr. PPS to Secretary (WR, RD&GR), Shram Shakti Bhawan, New Delhi.
- ii. JS & FA, DoWR, RD&GR, Shram Shakti Bhawan, New Delhi.
- iii. Director, Establishment-III, Shram Shakti Bhawan, New Delhi.

/

(R. R. Sambharia)