

PETITION NO.....



RIHAND SUPER THERMAL POWER STATION STAGE-I

(2X500 MW)

**PETITION FOR APPROVAL OF TARIFF FOR
THE PERIOD 01.04.2019 TO 31.03.2024**

BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

PETITION NO.....

IN THE MATTER OF : Petition Under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-V of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Chapter-3, Regulation-9 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for approval of tariff of **Rihand Super Thermal Power Station, Stage-I (1000 MW)** for the period from **01.04.2019 to 31.03.2024.**

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BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

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IN THE MATTER OF : Petition Under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-V of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Chapter-3, Regulation-9 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for approval of tariff of **Rihand Super Thermal Power Station, Stage-I (1000 MW) for the period from 01.04.2019 to 31.03.2024.**

AND
IN THE MATTER OF

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

Respondents:

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

- 2 Rajasthan Urja Vika Nigam Limited (RUVNL)
(on behalf of DISCOMs of Rajasthan),
Vidyut Bhawan, Janpath,
Jaipur 302 005

- 3 Tata Power Delhi Distribution Ltd.
Grid Substation, Hudson Road
Kingsway Camp
Delhi-110009.

S. P. ...

- 4 BSES Rajdhani Power Ltd.,
2nd floor, B-Block
BSES Bhawan, Nehru Place
New Delhi-110019.
- 5 BSES Yamuna Power Ltd.,
Shakti Kiran Building
Karkardooma
Delhi-110092
- 6 Haryana Power Purchase Centre (HPPC)
Shakti Bhawan, Sector – VI,
Panchkula
Haryana – 134 109
- 7 Punjab State Power Corporation Ltd. (PSPCL)
The Mall
Patiala – 147 001
- 8 Himachal Pradesh State Electricity Board Ltd.
(HPSEB)
Kumar Housing Complex Building-II
Vidyut Bhawan
Shimla – 171 004
- 9 Power Development Department (J&K)
Govt. of J&K, Secretariat
Srinagar
- 10 Electricity Department (Chandigarh)
Union Territory of Chandigarh
Addl. Office Building
Sector-9 D, Chandigarh
- 11 Uttarakhand Power Corporation Ltd. (UPCL)
Urja Bhawan, Kanwali Road
Dehradun – 248 001
Uttarakhand.

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. Rihand Super Thermal Power Station, Stage-I (1000 MW) (hereinafter referred to as Rihand St-I) is one such station located in the State of Uttar Pradesh (UP). The power generated from Rihand St-I is being supplied to the respondents herein above.
- 4) The Hon'ble Commission has notified the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2019 (hereinafter 'Tariff Regulations 2019') which came into force from 01.04.2019, specifying the terms & conditions and methodology of tariff determination for the period 01.04.2019 to 31.03.2024.
- 5) Regulation 9(2) of Tariff Regulations 2019 provides as follows:
"(2) In case of an existing generating station or unit thereof, or transmission system or element thereof, the application shall be made by the generating company or the transmission licensee, as the case may be, by 31.10.2019, based on admitted capital cost including additional capital expenditure already admitted and incurred up to 31.3.2019 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the tariff period 2019-24 along with the true up petition for the period 2014-19 in accordance with the CERC (Terms and Conditions of Tariff) Regulations, 2014."

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

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

- 6) The tariff of the Rihand St-I for the tariff period 1.4.2014 to 31.3.2019 was determined by the Hon'ble Commission vide its order dated 23.08.2016 in Petition No. 291/GT/2014 in accordance with the CERC (Terms & Conditions of Tariff) Regulations 2014. Further, Hon'ble Commission vide Review Order dated 06.04.2017 in petition no. 58/RP/2016 has revised the tariff of the station. The Petitioner has filed an Appeal (being No. 304 of 2016) in Appellate Tribunal of Electricity on certain aspects of the order dated 23.08.2016. The appeal is under consideration of the Hon'ble Appellate Tribunal of Electricity. The petitioner vide affidavit dated 11.11.2019 had filed a separate true up petition for the period 01.04.2014 to 31.03.2019 for revision of tariff in line with the applicable provisions of Tariff Regulations 2014.
- 7) It is submitted that Hon'ble Commission vide order dated 06.04.2017 in Review petition no 58/RP/2016 in Petition no 291/GT/2014 has allowed a capital cost of Rs 2423.4824 Cr as on 31.03.2019 based on the admitted projected capital expenditure for the 2014-19 period. However, the actual closing capital cost as on 31.03.2019 has been worked out in the foresaid true-up petition as Rs. 2452.3360 Cr based on the actual expenditure after truing up exercise for the period 2014-19. Accordingly, the Petitioner has adjusted an amount of Rs. 28.8537 Cr from the admitted capital cost as on 31.03.2019 and accordingly the opening capital cost as on 01.04.2019 has been considered as Rs 2452.3360 Cr. in the instant petition. The Hon'ble Commission may be pleased to accordingly adopt this adjustment in the admitted capital cost as on 31.3.2019 and determine the tariff in the present petition for the period 2019-24.
- 8) The capital cost claimed in the instant petition is based on the opening capital cost as on 01.04.2019 considered as above and projected estimated capital expenditures for the period 2019-24 under Regulation 19 and Regulation 26 of the Tariff Regulations, 2019.

- 9) The Petitioner further respectfully submits that as per Regulation 35(1)(6) of the Tariff Regulations 2019, the water charges, security expenses and capital spares consumed for thermal generating stations are to be allowed separately. The details in respect of water charges such as type of cooling water system, water consumption, rate of water charges as applicable for 2019-20 have been furnished below. Accordingly, water charges may be allowed in tariff based on the same for the 2019-24. In accordance with provision of the Regulations, the petitioner shall be furnishing the details of actual for the relevant year at the time of truing up and the same shall be subject to retrospective adjustment.

Description	Remarks
Type of Plant	Coal
Type of cooling water system	Once Through Cooling
Consumption of Water	37.19 Cusec
Rate of Water charges	295.543
Total Water Charges	466.24 Lacs

- 10) Similarly, the Petitioner is claiming the security expenses based on the estimated expenses for the period 2019-24, the same shall be subject to retrospective adjustment based on actuals at the time of truing up. In respect of capital spares consumption, it is submitted that the same shall be claimed at the time of true-up in terms of the proviso to the Regulation 35 (1)(6) based on actual consumption of spares during the period 2019-24.
- 11) The present petition is filed on the basis of norms specified in the Tariff Regulations 2019. It is submitted that the petitioner is in the process of installing the Emission Control Systems (ECS) in compliance of the Revised Emission Standards as notified by MOEF vide notification dated 07.12.2015 as amended. Completion of these schemes in compliance of revised emission norms will effect the station APC, Heat Rate , O&M expenses etc. In addition the availability of the unit/ station would be also effected due to shutdown of the units for installation of ECS. The petitioner would be filing the details of the same in a separate petition in terms of the Regulation 29 of Tariff Regulations 2019.

5 S. P. U.

The tariff of the instant petition would undergo changes consequent to the the order of the Hon'ble Commission in the said ECS petition.

- 12) It is submitted that a notification dated 25.01.2016 has been issued by Government of India, Ministry of Environment, Forest & Climate Change (MOEFCC) under the statutory provisions of Environment (Protection) Act 1986. The said notification of MOEFCC prescribed bearing of the transportation cost of Fly Ash generated at power stations. In this regard, Petitioner filed a petition, being no. 172/MP/2016, before the Hon'ble Commission seeking reimbursement of the additional expenditure for Fly Ash Transportation directly from the beneficiaries as the same was in the nature of statutory expense. Hon'ble Commission vide order dated 05.11.2018 disposed of the said petition and directed as follows :

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

a) Award of fly ash transportation contract through a transparent competitive bidding procedure. Alternatively, the schedule rates of the respective State Governments, as applicable for transportation of fly ash.

b) Details of the actual additional expenditure incurred on Ash transportation after 25.1.2016, duly certified by auditors.

c) Details of the Revenue generated from sale of fly ash/ fly ash products and the expenditure incurred towards Ash utilisation up to 25.1.2016 and from 25.1.2016 to till date, separately.

d) Revenue generated from fly Ash sales maintained in a separate account as per the MoEF notification.

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

The expenditure towards the ash transportation charges are recurring in nature. The Petitioner has been incurring ash transportation expenditure in some of its stations in

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

- 13) It is submitted that the Petitioner has already paid the requisite filing fee vide UTR No. CMS1106438370 on 22.04.2019 for the year 2019-20 and the details of the same have been duly furnished to the Hon'ble Commission vide our letter dtd. 25.04.2019. For the subsequent years, it shall be paid as per the provisions of the CERC (Payment of Fees) Regulations, 2012 as amended. Further Regulation 70 (1) of Tariff Regulations 2019 provides that the application fee and publication expenses may be allowed to be recovered directly from the beneficiaries at the discretion of the Hon'ble Commission. Accordingly, it is prayed that Hon'ble Commission may be pleased to allow recover filing fee and publication fee directly from the beneficiaries.
- 14) The petitioner has accordingly calculated the tariff for 2019-24 period based on the above and the same is enclosed as **Appendix-I** to this petition.
- 15) It is submitted the Petitioner has served the copy of the Petition on to the Respondents mentioned herein above and has posted the Petition on the company website i.e. www.ntpc.co.in
- 16) It is submitted that the petitioner is filing this tariff petition subject to the outcome of its various appeals/ petitions pending before different courts. Besides, the petitions filed by NTPC for determination of capital base as on 31.3.2014 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.

S. Kumar

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


(Petitioner)

BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

PETITION NO:

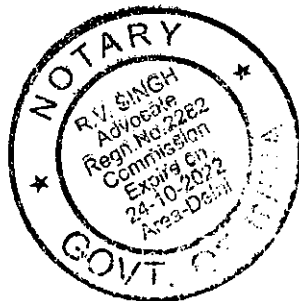
IN THE MATTER OF : Petition Under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-V of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Chapter-3, Regulation-9 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff)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

AND

IN THE MATTER OF

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

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



.....

and Others

S. Singh

*

AFFIDAVIT

I, E. Prabhakara Rao, son of Late Shri E. K. Rama Sharma aged about 52 years resident of D-311, Parsvnath Prestige, Sector-93A, Noida (UP) solemnly affirm and state as follows:

1. That I am the Additional General Manager (Commercial) in Petitioner Corporation NTPC Ltd. and am well conversant with the facts of the case and am competent to swear the present affidavit.
2. The statement made in the accompanying Petition for approval of tariff of **Rihand Super Thermal Power Station Stage-I (2 x 500 MW)** for the period from 01.04.2019 to 31.03.2024 are based on the official records maintained during the ordinary course of business and believed by the deponent to be true.


Deponent

Verification

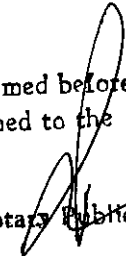
I, the deponent above named, do hereby verify that the contents of the above affidavit are true to the best of my knowledge, no part of it is false and nothing material has been concealed there from.

Verified at New Delhi on this 24th January, 2020


Deponent



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


Notary Public, DELHI

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TARIFF FILING FORMS (THERMAL)

FOR DETERMINATION OF TARIFF

FOR

Rihand St-I

(From 01.04.2019 to 31.03.2024)

PART-I

ANNEXURE-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	✓
FORM- 4	Details of Foreign loans	NA
FORM- 4A	Details of Foreign Equity	NA
FORM-5	Abstract of Admitted Capital Cost for the existing Projects	✓
FORM-5A**	Abstract of Claimed Capital Cost for the existing Projects	✓
FORM- 6	Financial Package upto COD	NA
FORM- 7	Details of Project Specific Loans	NA
FORM- 8	Details of Allocation of corporate loans to various projects	✓
FORM-9A**	Summary of Statement of Additional Capitalisation claimed during the period	✓
FORM-9 ##	Statement of Additional Capitalisation after COD	✓
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

PART-I

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

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

** Additional Forms

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

Signature

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)	NA
10	Reconciliation with Balance sheet of any actual additional capitalization and amongst stages of a generating station	***
11	BBMB is maintaining the records as per the relevant applicable Acts. Formats specified herein may not be suitable to the available information with BBMB. BBMB may modify the formats suitably as per available information to them for submission of required information for tariff purpose.	NA

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

S. Anand

Summary of Tariff

Name of the Petitioner:		NTPC Limited						
Name of the Generating Station:		Rihand St-I						
Place (Region/District/State):		Northern Region/ Sonbhadra/ Uttar Pradesh						
S. No.	Particulars	Unit	Existing 2018-19	Amount in Rs. Lakhs				
				2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7	8	9
1.1	Depreciation	Rs Lakh	1,564.91	1,603.60	2,804.25	3,308.55	1,575.00	675.00
1.2	Interest on Loan	Rs Lakh	30.77	25.94	39.59	39.61	-	-
1.3	Return on Equity	Rs Lakh	23,831.17	13,842.71	14,012.82	14,214.52	14,313.13	14,355.38
1.4	Interest on Working Capital	Rs Lakh	5,561.77	4,222.17	4,290.45	4,341.90	4,357.33	4,385.93
1.5	O&M Expenses	Rs Lakh	24,390.92	24,217.53	25,136.60	25,956.98	26,775.05	27,646.60
1.6	Special Allowance (If applicable)	Rs Lakh	9,594.25	9,500.00	9,500.00	9,500.00	9,500.00	9,500.00
	Total	Rs Lakh	64,973.79	53,411.95	55,783.71	57,361.55	56,520.51	56,562.91
2.1	Landed Fuel Cost (coal/gas/RLNG/liquid) as per FSA	Rs/Ton	2228.62					
	(%) of Fuel Quantity	(%)						
2.2	Landed Fuel Cost Imported Coal as per FSA							
	(%) of Fuel Quantity		NA					
2.3	Landed Fuel Cost (coal/gas /RLNG/liquid) other than FSA	Rs/Ton						
	(%) of Fuel Quantity	(%)						
2.4	Landed Fuel Cost Imported Coal other than FSA.							
	(%) of Fuel Quantity							
2.5	Secondary fuel oil cost	Rs/Unit	0.029					
	Energy Charge Rate ex-bus (Paise/kWh) 2A, 2B, 2C, 2D	Rs/Unit	1.420					

SPW
(Petitioner)

Name of the Petitioner: NTPC Limited

Name of the Generating Station: Rihand St-I

Amount in Rs. Lakhs

Statement showing claimed capital cost – (A+B)

S. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Opening Capital Cost	2,45,233.60	2,46,112.93	2,51,465.26	2,53,465.26	2,54,965.26
2	Add: Addition during the year/period	879.33	5,352.33	2,000.00	1,500.00	-
3	Less: De-capitalisation during the year/period	-	-	-	-	-
4	Less: Reversal during the year / period	-	-	-	-	-
5	Add: Discharges during the year/ period	-	-	-	-	-
6	Closing Capital Cost	2,46,112.93	2,51,465.26	2,53,465.26	2,54,965.26	2,54,965.26
7	Average Capital Cost	2,45,673.27	2,48,789.10	2,52,465.26	2,54,215.26	2,54,965.26

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

S. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Opening Capital Cost	245233.60	246112.93	251042.93	253042.93	254542.93
2	Add: Addition during the year / period	879.33	4930.00	2000.00	1500.00	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	246112.93	251042.93	253042.93	254542.93	254542.93
7	Average Capital Cost	245673.27	248577.93	252042.93	253792.93	254542.93

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

S. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Opening Capital Cost	0.00	0.00	422.33	422.33	422.33
2	Add: Addition during the year / period	0.00	422.33	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	422.33	422.33	422.33	422.33
7	Average Capital Cost	0.00	211.17	422.33	422.33	422.33


(Petitioner)


Name of the Petitioner: NTPC Limited

Name of the Generating Station: Rihand St-I

Statement showing Return on Equity at Normal Rate

Amount in Rs. Lakhs

S. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
	Return on Equity					
1	Gross Opening Equity (Normal)	1,21,021.39	1,21,285.19	1,22,764.19	1,23,364.19	123814.1894
2	Less: Adjustment in Opening Equity	47,451.31				
3	Adjustment during the year		47451.31	47451.31	47451.31	47451.31
4	Net Opening Equity (Normal)	73,570.08	73,833.88	75,312.88	75,912.88	76,362.88
5	Add: Increase in equity due to addition during the year / period	263.80	1479.00	600.00	450.00	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)	73,833.88	75,312.88	75,912.88	76,362.88	76,362.88
11	Average Equity (Normal)	73,701.98	74,573.38	75,612.88	76,137.88	76,362.88
12	Rate of ROE (%)	18.782	18.782	18.782	18.782	18.782
13	Total ROE	13,842.71	14,006.37	14,201.61	14,300.22	14,342.48


(Petitioner)

Name of the Petitioner: NTPC Limited

Name of the Generating Station: Rihand St-I

Statement showing Return on Equity at Weighted Average Rate of Interest

Amount in Rs. Lakhs

S. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
Return on Equity (beyond the original scope of work excluding additional capitalization due to Change in Law)						
1	Gross Opening Equity (Normal)	0.00	0.00	126.70	126.70	126.70
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	126.70	126.70	126.70
5	Add: Increase in equity due to addition during the year / period	0.00	126.70	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	126.70	126.70	126.70	126.70
11	Average Equity (Normal)	0.00	63.35	126.70	126.70	126.70
12	Rate of ROE (%)	10.179	10.182	10.186	10.189	10.186
13	Total ROE	0.00	6.45	12.91	12.91	12.91


 (Petitioner)

Plant Characteristics	
Name of the Petitioner	NTPC Ltd.
Name of the Generating Station	Rihand St-I
Unit(s)/Block(s)/Parameters	Unit-I
Installed Capacity (MW)	500
Schedule COD as per Investment Approval	NA
Actual COD /Date of Taken Over (as applicable)	1-Jan-90
Pit Head or Non Pit Head	Pit Head
Name of the Boiler Manufacture	NEI
Name of Turbine Generator Manufacture	NEI
Main Steams Pressure at Turbine inlet (kg/Cm ²) abs ¹ .	
Main Steam Temperature at Turbine inlet (°C) ¹	
Reheat Steam Pressure at Turbine inlet (kg/Cm ²) ¹	
Reheat Steam Temperature at Turbine inlet (°C) ¹	
Main Steam flow at Turbine inlet under MCR condition (tons /hr) ²	
Main Steam flow at Turbine inlet under VWO condition (tons /hr) ²	
Unit Gross electrical output under MCR /Rated condition (MW) ²	
Unit Gross electrical output under VWO condition (MW) ²	
Guaranteed Design Gross Turbine Cycle Heat Rate (kCal/kWh) ³	
Conditions on which design turbine cycle heat rate guaranteed	Not Applicable
% 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 (%) ⁴	
Design Fuel with and without Blending of domestic/imported coal	
Type of Cooling Tower	Not Applicable
Type of cooling system ⁵	Once Through Cooling
Type of Boiler Feed Pump ⁶	Electric Motor Driven-3 Nos per unit
Fuel Details ⁷	
-Primary Fuel	Coal
-Secondary Fuel	LDO
-Aternate Fuels	
Special Features/Site Specific Features ⁸	
Special Technological Features ⁹	Not Applicable
Environmental Regulation related features ¹⁰	Electrostatic Precipitators
Any other special features	FGD/ De Nox system is under Implementation.
1: At Turbine MCR condition.	
2: with 0% (Nil) make up and design Cooling water temperature	
3: at TMCR output based on gross generation, 0% (Nil) makeup and design Cooling water temperature.	
4: With Performance coal based on Higher Heating Value (HHV) of fuel and at BMCR) out put	
5: Closed circuit cooling, once through cooling, sea cooling, natural draft cooling, induced draft cooling etc.	
6: Motor driven, Steam turbine driven etc.	
7: Coal or natural gas or Naptha or lignite etc.	
8: Any site specific feature such as Merry-Go-Round, Vicinity to sea, Intake /makeup water systems etc. scrubbers etc. Specify all such features	
9: Any Special Technological feature like Advanced class FA technology in Gas Turbines, etc.	
10: Environmental Regulation related features like FGD, ESP etc.	


(Petitioner)

Normative parameters considered for tariff computations

Name of the Petitioner:		NTPC Limited					
Name of the Generating Station:		Rihand St-I					
							(Year Ending March)
Particulars	Unit	Existing 2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7	8
Base Rate of Return on Equity \$\$	%	15.50	15.50	15.50	15.50	15.50	15.50
Base Rate of Return on Equity on Add. Capitalization** \$\$	%	-	8.401	8.403	8.406	8.408	8.406
Effective Tax Rate	%	21.5488	17.4720	17.4720	17.4720	17.4720	17.4720
Target Availability	%	85.00	85.00				
In High Demand Season	%	-	-	85.00	85.00	85.00	85.00
Peak Hours	%	-	-	85.00	85.00	85.00	85.00
Off-Peak Hours	%	-	-	85.00	85.00	85.00	85.00
In Low Demand Season(Off-Peak)	%	-	-	85.00	85.00	85.00	85.00
Peak Hours	%	-	-	85.00	85.00	85.00	85.00
Off-Peak Hours	%	-	-	85.00	85.00	85.00	85.00
Auxiliary Energy Consumption	%	7.75	8.00	8.00	8.00	8.00	8.00
Gross Station Heat Rate	kCal/kWh	2335.00	2350.00	2350.00	2350.00	2350.00	2350.00
Specific Fuel Oil Consumption	ml/kWh	0.50	0.50	0.50	0.50	0.50	0.50
Cost of Coal/Lignite for WC1	in Days	45	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	0	22.51	23.3	24.12	24.97	25.84
Maintenance Spares for WC	% of O&M	20.00	20.00	20.00	20.00	20.00	20.00
Receivables for WC	in Days	60	45	45	45	45	45
Storage capacity of Primary fuel	MT	8.9			8.9		
SBI 1 Year MCLR plus 350 basis point ³	%	13.50	12.05	12.05	12.05	12.05	12.05
Blending ratio of domestic coal/imported coal							

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

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


 Petitioner

Calculation of O&M Expenses

Name of the Company :	NTPC Limited
Name of the Power Station :	Rihand St-I

Amount in Rs. Lakhs

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	7	8
1	O&M expenses under Reg.35(1)					
1a	Normative	22510.00	23300.00	24120.00	24970.00	25840.00
2	O&M expenses under Reg.35(6)					
2a	Water Charges	466.24	466.24	466.24	466.24	466.24
2b	Secutiry expenses	1241.29	1370.36	1370.74	1338.81	1340.36
2c	Capital Spares**	0.00	0.00	0.00	0.00	0.00
3	O&M expenses-Ash Transportation**	0.00	0.00	0.00	0.00	0.00
	Total O&M Expenses	24217.53	25136.60	25956.98	26775.05	27646.60

** Shall be provided at the time of truing up

S. An.
Petitioner

Computation of Special Allowance

Name of the Company : NTPC Limited

Name of the Power Station : Rihand St-I


Rate of Special allowance @lakh/MW/year 9.5

(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 2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
1	500	1-Jan-90	2014-15	4797.13	4750.00	4750.00	4750.00	4750.00	4750.00
2	500	1-Jan-91	2015-16	4797.13	4750.00	4750.00	4750.00	4750.00	4750.00
Year wise Total for the Station				9594.25	9500.00	9500.00	9500.00	9500.00	9500.00

Stu
Petitioner

Abstract of Admitted Capital Cost for the existing Projects

Name of the Company :	NTPC Limited	
Name of the Power Station :	Rihand St-I	
Last date of order of Commission for the project	Date (DD-MM-YYYY)	06-04-2017
Reference of petition no. in which the above order was passed	Petition no.	58/RP/2016 in Petition No 291/GT/2014.
Following details (whether admitted and /or considered) as on the last date of the period for which tariff is approved, in the above order by the Commission:		
Capital cost*	(Rs. in lakh)	2,42,348.24
Amount of un-discharged liabilities included in above (& forming part of admitted capital cost)		
Amount of un-discharged liabilities corresponding to above admitted capital cost (but not forming part of admitted capital cost being allowed on cash basis as on 01.04.2014)		377.62
Gross Normative Debt		1,22,192.46
Cumulative Repayment		1,22,192.46
Net Normative Debt		-
Normative Equity		1,20,155.78
Cumulative Depreciation		2,15,313.64
Freehold land		3,112.59
*As on 31.03.2019		
		 (Petitioner)

Abstract of Claimed Capital Cost for the existing Projects

Name of the Company :	NTPC Limited	
Name of the Power Station :	Rihand St-I	
Reference of Final True-up Tariff Petition	Affidavit dated	11-Nov-19
Capital Cost as on 31.03.2014 as per Hon'ble Commission's Order dated 06-04-2017 In Pet. No. 58/RP/2016 in Petition No 291/GT/2014	Rs. Lakhs	2,42,348.24
Adjustment as per Para (7) of this petition		2885.37
Following details as considered by the Petitioner as on the last date of the period for which final true-up tariff is claimed:		
Capital cost as on 01.04.2019	(Rs. in lakh)*	245233.60
Amount of un-discharged liabilities included in above (& forming part of admitted capital cost)		
Amount of un-discharged liabilities corresponding to above admitted capital cost (but not forming part of admitted capital cost being allowed on cash basis)		523.10
Gross Normative Debt		1,24,212.21
Cumulative Repayment		1,23,594.57
Net Normative Debt		617.64
Normative Equity		1,21,021.39
Cumulative Depreciation		2,16,665.12
Freehold land		3,152.47


 (Petitioner)

Form 8- Domestic Bonds

Particulars	<u>XLVIII.84%</u>
Source of Loan ¹	BONDS
Currency ²	INR
Amount of Loan sanctioned	1030683
Interest Type ⁶	Fixed
Fixed Interest Rate, if applicable	8.49%
Annual surveillance fees	0.0300%
Total interest rate incl. sur. Fees	8.5200%
Base Rate, if Floating Interest ⁷	N/A
Margin, if Floating Interest ⁸	N/A
Are there any Caps/Floor ⁹	No
If above is yes, specify caps/floor	N/A
Moratorium Period ¹⁰	8
Moratorium effective from #	25-03-2015
Repayment Period ¹¹	Installments Due on 25/03/2023, 25/03/2024 & 25/03/2025
Repayment effective from	25-03-2023
Repayment Frequency ¹²	Installments Due on 25/03/2023, 25/03/2024 & 25/03/2025
Repayment Instalment ^{13,14}	Installments 1st - 206,136.61 2nd - 412,273.22 3rd - 412,273.22
Base Exchange Rate ¹⁶	N/A
Door to Door Maturity	10
Name of the Projects	
Anantpur Solar	5,600
ANTA	-
AURAIYA	-
Auraiya R & M	-
Badarpur R&M	2,300
BARH I	74,883
BARH II	63,500
Bhadla Solar	-
BONGAIGAON	54,000
Chatti Bariatu CMB	8,100
Dadri Gas R & M	600
DADRI GAS	-
DARLIPALLI	49,200
Dulanga CMB	-
FARAKKA II	-
FARAKKA III	10,900
Farakka R & M	2,000
FARIDABAD	-
GADARWARA	81,000
GANDHAR	-
Gandhar R & M	4,300
Kahalgaoon II Phase I	-

Form 8- Domestic Bonds

Particulars	<i>XLVII 8.84%</i>
Source of Loan ¹	BONDS
Currency ²	INR
Amount of Loan sanctioned	1030683
Interest Type ⁶	Fixed
Fixed Interest Rate, if applicable	8.49%
Annual surveillance fees	0.0300%
Total interest rate incl. sur. Fees	8.5200%
Base Rate, if Floating Interest ⁷	N/A
Margin, if Floating Interest ⁸	N/A
Are there any Caps/Floor ⁹	No
If above is yes, specify caps/floor	N/A
Moratorium Period ¹⁰	8
Moratorium effective from #	25-03-2015
Repayment Period ¹¹	Installments Due on 25/03/2023, 25/03/2024 & 25/03/2025
Repayment effective from	25-03-2023
Repayment Frequency ¹²	Installments Due on 25/03/2023, 25/03/2024 & 25/03/2025
Repayment Instalment ^{13, 14}	Installments 1st - 206,136.61 2nd - 412,273.22 3rd - 412,273.22
Base Exchange Rate ¹⁶	N/A
Door to Door Maturity	10
Kahalgaon II Phase II	1,800
Khstpp R & M	2,000
KAWAS	-
Kawas R & M	1,400
Khargone	45,000
KOLDAM	25,100
KORBA III	9,200
Korba R & M	4,400
Kudgi	1,23,300
LARA I	53,300
Lata Tapovan	1,600
LOHARINAGPALA	-
Mauda	21,900
Mauda II	45,800
Mandsaur Solar	-
NCTPP	-
NCTPP II	11,000
NCTPP R & M	3,700
NORTH KARANPURA	12,400
Pakri Barwadih CMB	26,600
Ramagundam I & II R & M	2,400
RAMAGUNDAM III	-
Rammam	3,100
RIHAND II	-

Form 8- Domestic Bonds

Particulars	<u>XLVIII.84%</u>
Source of Loan ¹	BONDS
Currency ²	INR
Amount of Loan sanctioned	1030683
Interest Type ⁶	Fixed
Fixed Interest Rate, if applicable	8.49%
Annual surveillance fees	0.0300%
Total interest rate incl. sur. Fees	8.5200%
Base Rate, if Floating Interest ⁷	N/A
Margin, if Floating Interest ⁸	N/A
Are there any Caps/Floor ⁹	No
If above is yes, specify caps/floor	N/A
Moratorium Period ¹⁰	8
Moratorium effective from #	25-03-2015
Repayment Period ¹¹	Installments Due on 25/03/2023, 25/03/2024 & 25/03/2025
Repayment effective from	25-03-2023
Repayment Frequency ¹²	Installments Due on 25/03/2023, 25/03/2024 & 25/03/2025
Repayment Instalment ^{13,14}	Installments 1st - 206,136.61 2nd - 412,273.22 3rd - 412,273.22
Base Exchange Rate ¹⁶	N/A
Door to Door Maturity	10
RIHAND III	28,300
Rihand R & M	2,500
SIMHADRI	-
Simhadari II	26,800
Simhadari R & M	900
Vidhyachal Hydro**	1,900
Singrauli R & M	1,600
Vindyachal Solar**	4,800
SIPAT I	20,500
SIPAT II	-
SOLAPUR	70,300
TALCHER I	-
TALCHER II	12,000
Tanda II	9,000
Tanda R & M	-
Tapovan Vishnugad	26,400
Telangana	-
TSTPP R & M	1,600
TTPS R & M	1,000
Unchahar R & M	3,400
Unchahar IV	17,400
UNCHAHAR II	-
Unchahar III	-
VINDHYACHAL II	-

S. Ans.

Form 8- Domestic Bonds

Particulars	XLVII 8.84%
Source of Loan ¹	BONDS
Currency ²	INR
Amount of Loan sanctioned	1030683
Interest Type ⁶	Fixed
Fixed Interest Rate, if applicable	8.49%
Annual surveillance fees	0.0300%
Total interest rate incl. sur. Fees	8.5200%
Base Rate, if Floating Interest ⁷	N/A
Margin, if Floating Interest ⁸	N/A
Are there any Caps/Floor ⁹	No
If above is yes, specify caps/floor	N/A
Moratorium Period ¹⁰	8
Moratorium effective from #	25-03-2015
Repayment Period ¹¹	Installments Due on 25/03/2023, 25/03/2024 & 25/03/2025
Repayment effective from	25-03-2023
Repayment Frequency ¹²	Installments Due on 25/03/2023, 25/03/2024 & 25/03/2025
Repayment Instalment ^{13,14}	Installments 1st - 206,136.61 2nd - 412,273.22 3rd - 412,273.22
Base Exchange Rate ¹⁶	N/A
Door to Door Maturity	10
Vindhyachal III	-
Vindhyachal IV	17,200
Vindhyachal V	33,500
Vindhyachal R & M	1,200
DADRI SOLAR	-
A&N SOLAR	-
RAMAGUNDAM SOLAR	-
TALCHER SOLAR	-
UNCHAHAR SOLAR	-
FARIDABAD SOLAR	-
RAJGARH SOLAR	-
Talaipali Coal Mine	-
CC	-
TOTAL	10,30,683

S. A. W.

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

TRANCHE NO
BP NO 5070000011 T00001 D00032

Unsecured Loan From PFC-V		
Source of Loan :	PFC-V	
Currency :	INR	
Amount of Loan :	1,00,00,00,00,000	
Total Drawn amount :	5,00,00,00,00,000	
Date of Drawl	0	
Interest Type :	Floating	
Rate of Interest as on 01.04.2019	7.68%	
Margin, If Floating Interest :	Nil	
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	4 Years	
Moratorium effective from :	26.12.2008	
Repayment Period (Inc Moratorium) :	16 Years	
Repayment Frequency :	48 Quarterly Instalments	
Repayment Type :	FIFO	
First Repayment Date :	15.07.2013	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	SIMHADRI-II	82,00,00,000.00
	VINDHYACHAL-IV	50,00,00,000.00
	PAKRI BARWADIH	73,00,00,000.00
	FARAKKA-III	42,00,00,000.00
	NCTPP-II	37,00,00,000.00
	TALCHER STPP-II	34,00,00,000.00
	TAPOVAN VISHNUGAD	48,00,00,000.00
	KOLDAM	97,00,00,000.00
	BADARPUR R&M	30,00,00,000.00
	RIHAND R&M	7,00,00,000.00
Total Allocated Amount		5,00,00,00,000.00

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Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

BP NO 5050000521

T00001

D00004

Unsecured Loan From HDFC Bank Ltd.-IV		
Source of Loan :	HDFC Bank Ltd.-IV	
Currency :	INR	
Amount of Loan :	20,00,00,00,000	
Total Drawn amount :	12,45,00,00,000	
Date of drawl	29.06.2018	
Interest Type :	Floating	
Fixed Interest Rate :		
Rate of Interest as on 01.04.2019	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 :	3 Years	
Moratorium effective from :	29.06.2018	
Repayment Period (Inc Moratorium) :	12 Years	
Repayment Frequency :	9 Yearly Instalment	
Repayment Type :	AVG	
First Repayment Date :	17.04.2021	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	KORBA R&M	90,00,00,000
	RAMAGUNDAM R&M	2,20,00,00,000
	UNCHAHAH R&M	70,00,00,000
	RIHAND R&M	90,00,00,000
	KAWAS R&M	1,80,00,00,000
	AURAIYA R&M	1,80,00,00,000
	TSTPP R&M	90,00,00,000
	GANDHAR R&M	1,85,00,00,000
	NCTPP R&M	30,00,00,000
	KAHALGAON R&M	30,00,00,000
	ANTA R&M	80,00,00,000
Total Allocated Amount		12,45,00,00,000

Saw...

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

TRANCHE NO

BP NO 5050000571

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 :		
Rate of Interest as on 01.04.2019	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
	UNCHAHAH R&M	20,00,00,000.00
Total Allocated Amount		5,00,00,00,000.00

Saw.

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTPC Limited			
Name of the Generating Station	Rihand St-I			
COD	01-01-1991			
For Financial Year	2019-24 (Summary)			

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)				Regulation Under which Claimed/Justification	Amount in Rs Lakh Admitted Cost by the Commission, if any
		2019-20	2020-21	2021-22	2022-23		
1	2	3	4	5	6	7	8
A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate							
1	Dry Ash Extraction System (DAES)	500.00	4,000.00	2,000.00	1,500.00		Please refer respective financial Year for Justification
2	Augmentation of Fire detection & Protection System (CHP)	276.00					Please refer respective financial Year for Justification
3	Package of ClO ₂ Plants	103.33	930.00				Please refer respective financial Year for Justification
	Total (A)	879.33	4,930.00	2,000.00	1,500.00		
B. Works beyond Original scope excluding add-cap due to Change in Law eligible for RoE at Wtd. Average rate of Interest							
4	Nitrogen Sparging	-	422.33				Please refer respective financial Year for Justification
	Total (B)	-	422.33	-	-		
	Total Add. Cap. Claimed (A+B)	879.33	5,352.33	2,000.00	1,500.00		

Sd/-
(Petitioner)

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTPC Limited	
Name of the Generating Station	Rihand St-1	
COD	01-01-1991	
For Financial Year	2019-20	

Sl. No.	Head of Work/Equipment	Accrual basis as per IGAAP	ACE Claimed (Projected)		Regulations under which claimed	Amount in Rs Lakhs Admitted Cost by the Commission, if any
			Un-discharged Liability included in col. 3	Cash basis 5= (3-4)		
A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate						
1	Dry Ash Extraction System (DAES)	500.00		500.00	26(1)(b)	It is submitted that 100% Ash utilization has been made mandatory by MOEF &CC vide its notification dtd. 25.01.2016 and subsequent NGT Order dtd 20.11.2018.(Attached as Annexure-A) For compliance of MOEF Gazette Notification and NGT order, and to avoid imposition of penalty for "damages for environment restoration" as prescribed in the said Order, NTPC is incurring this expenditure for achieving 100% Ash utilisation target in Rihand St I. In view of this, Hon'ble Commission may be pleased to allow the same under Reg. 26(1)(b) of Tariff Regulations 2019.
2	Augmentation of Fire Detection & Protection System (CHIP)	276.00		276.00	26(1)(b)	The amount capitalized as a balance payment of the works carried out to prevent any catastrophic damage in case fire breaks out in CHP as existence of coal in CHP area makes it vulnerable to fire hazard and mobile fire protection equipments may not be able to control the spread of fire. Hon'ble Commission may please allow capitalisation on account of fire protection system under Regulation 26(1)(b) of 2019 tariff Regulations inline with regulation 12(S) of Central Electricity Authority (Technical Standards for construction of Electrical Plants and Electric Lines) Regulations, 2010, published in The Gazette of India no 211 dtd 20th Aug, 2010 (Attached as Annexure B).
3	Package of ClO2 Plants	103.33		103.33	26(1)(b), 26(1)(d)	In the instant station, at present Chlorine gas is being dozed directly at various stages of water treatment to maintain water quality and to inhibit organic growth in the water retaining structures/ equipment such as clarifiers, storage tanks, cooling towers, condenser tubes & piping etc. Chlorine dosing is done from chlorine stored in cylinders/ tonners. Chlorine gas is very hazardous and may prove fatal in case of leakage; handling and storage of same involves risk to the life of public at large. In the interest of public safety the chlorine dosing system is now being replaced by Chlorine Dioxide (ClO2) system, which is much safer and less hazardous than chlorine. In the proposed scheme ClO2 shall be produced on site by use of commercial grade HCl and sodium chlorite. As ClO2 is generated at site, avoids handling and storage risk. Further, at Kudgi NTPC project Department of Factories, Boiler, Industrial Safety and Health, Govt of Karnataka has directed NTPC to replace highly hazardous gas chlorination system with ClO2 system. SPCB, Odisha while issuing consent to establish in case of Darlipalli Station has asked NTPC to explore the possibility of installing ClO2 system instead of Chlorine gas system (Relevant documents is attached at Annexure-C). For safety of public NTPC is replacing the chlorination system with ClO2 system. Accordingly, Hon'ble Commission may be pleased to allow the same under Reg. 24(1)(b), (d) of Tariff Regulations 2019.
Total (A)		879.33		879.33		
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)		879.33		879.33		

NA

Stu
(Petitioner)

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner: NTPC Limited
 Name of the Generating Station: Rihand St-I
 COD: 01-01-1991
 For Financial Year: 2020-21

Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed (Projected)		Regulations under which claimed	Justification	Amount in Rs Lakh
			Un-discharged Liability included in col. 3	Cash basis included in col. 3			
1	2	3	4	5 = (3-4)	6	7	8
A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate							
1	Dry Ash Extraction System (DAES)	4,000.00		4,000.00		Same as Sl no 1 FY 2019-20	
2	Package of ClO2 Plants	930.00		930.00		Same as Sl no 3 FY 2019-20	
	Total (A)	4,930.00		4,930.00			
B. Works beyond Original scope extending add-cap due to Change in Law eligible for RoE at Wtd. Average rate of Interest							
3	Nitrogen Sparging	422.33		422.33	Regulation 26(1) with Regulation 76	Boilers, condensers and other steam/ water handling equipments are very sensitive to corrosion and fouling. Main fouling impurity causing corrosion is the dissolved oxygen which enter the water-steam cycle through the cycle make-up water or during the start-up after outages when the system is filled with DM water. At present the DM water is stored in the vented storage tanks exposed to air wherein CO2 and O2 gets absorbed into this water. When this water containing high concentrations O2 & CO2 enters the system causes stress corrosion, fatigue corrosion, pitting etc. leading to failures. Further, it causes pH swings detrimental to pressure parts and forms oxides which precipitate and gets deposited in the system. Most of the adverse effects are visible in the long run. Due to temperature and pressure variations during start-ups and load variations these deposits gets dis-lodged and need lot of time to mechanically scavenging out of the system by way of continuous blowdown which is a waste of energy or through polishing units. By nitrogen sparging/ blanketing the storage tanks and other related systems ingress of O2 and Co2 could be avoided resulting in increased life of components, reduce failures, reduce start-up time. Moreover it would unplanned outages increasing the system stability and reliability. In view of various technological benefits the Hon'ble Commission may be please to allow the capitalization of the same under Regulation 26 read with Regulation 76 of 2019 tariff Regulations.	
	Total (B)	422.33		422.33			
	Total Add. Cap. Claimed (A+B)	5,352.33		5,352.33			

Signature
(Petitioner)

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTPC Limited	
Name of the Generating Station	Rihand St-I	
COD	01-01-1991	
For Financial Year	2021-22	

Sl. No.	Head of Work /Equipment	ACE Claimed (Projected)				Regulations under which claimed	Justification	Amount in Rs Lakh Admitted Cost by the Commission, if any
		Accrual basis as per IGAAP in col. 3	Un-discharged Liability included in col. 3	Cash basis in col. 3	IDC included in col. 3			
1	2	3	4	5= (3-4)	6	7	8	9
A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate								
1	Dry Ash Extraction System (DAES)	2,000.00		2,000.00		26(1)(b)	Same as SI no I FY 2019-20	
	Total (A)	2,000.00	-	2,000.00	-			

B. Works beyond Original scope excluding add-cap due to Change in Law eligible for RoE at Wtd. Average rate of Interest								
2	NA							
	Total (B)	-	-	-	-			
	Total Add. Cap. Claimed (A+B)	2,000.00	-	2,000.00	-			

S. Kumar
(Petitioner)

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTPC Limited	
Name of the Generating Station	Rihand St-I	
COD	01-01-1991	
For Financial Year	2022-23	

Sl. No.	Head of Work /Equipment	ACE Claimed (Projected)				Regulations under which claimed	Justification	Amount in Rs Lakh Admitted Cost by the Commission, if any
		Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3			
1	2	3	4	5= (3-4)	6	7	8	9
A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate								
1	Dry Ash Extraction System (DAES)	1,500.00		1,500.00		26(1)(b)	Same as SI no 1 FY 2019-20	
	Total (A)	1,500.00		1,500.00				

B. Works beyond Original scope excluding add-cap due to Change in Law eligible for RoE at Wtd. Average rate of Interest								
2							NA	
	Total (B)							
	Total Add. Cap. Claimed (A+B)	1,500.00		1,500.00				

Sgt
(Petitioner)

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner		NTPC Limited						
Name of the Generating Station		Rihand St-I						
COD		01-01-1991						
For Financial Year		2023-24						

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

Sgt
(Petitioner)

Name of the Petitioner **NTPC Limited**
 Name of the Generating Station **Rihand St-I**
 Date of Commercial Operation **01-01-1991**

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

Amount capitalised in Work/ Equipment

Financing Details	2019-20	2020-21	2021-22	2022-23	2023-24	2019-20	2020-21	2021-22	2022-23	2023-24
Loan-1										
Loan-2										
Loan-3 and so on										
Total Loan2										
Equity										
Internal Resources										
Others (Pl. specify)										
Total										

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


(Petitioner)

Statement of Depreciation

Name of the Company :		NTPC Limited								
Name of the Power Station :		Rihand St-I								
S. No.	Particulars	Existing 2018-19	(Amount in Rs Lakh)							
			2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	
1	2	3	4	5	6	7	8			
1	Opening Capital Cost	242546.38	2,45,233.60	2,46,112.93	2,51,465.26	2,53,465.26	2,54,965.26	2,54,965.26	2,54,965.26	
2	Closing Capital Cost	245233.60	2,46,112.93	2,51,465.26	2,53,465.26	2,54,965.26	2,54,965.26	2,54,965.26	2,54,965.26	
3	Average Capital Cost	243889.99	2,45,673.27	2,48,789.10	2,52,465.26	2,54,215.26	2,54,965.26	2,54,965.26	2,54,965.26	
1a	*Cost of IT Equipments & Software included in (1) above		-	-	-	-	-	-	-	
2a	*Cost of IF Equipments & Software included in (2) above		-	-	-	-	-	-	-	
3a	*Average Cost of IT Equipments & Software		-	-	-	-	-	-	-	
4	Freehold land	3,150.97	3,152.47	3,152.47	3,152.47	3,152.47	3,152.47	3,152.47	3,152.47	
5	Rate of depreciation									
6	Depreciable value	2,16,665.12	2,18,268.72	2,21,072.97	2,24,381.52	2,25,956.52	2,26,631.52	2,26,631.52	2,26,631.52	
7.	Balance useful life at the beginning of the period									
8	Remaining depreciable value	1,564.91	1,603.60	2,804.25	3,308.55	1,575.00	675.00	675.00	675.00	
9	Depreciation (for the period)	1,564.91	1,603.60	2,804.25	3,308.55	1,575.00	675.00	675.00	675.00	
10	Depreciation (annualised)	1,564.91	1,603.60	2,804.25	3,308.55	1,575.00	675.00	675.00	675.00	
11	Cumulative depreciation at the end of the period		2,18,268.72	2,21,072.97	2,24,381.52	2,25,956.52	2,26,631.52	2,26,631.52	2,26,631.52	
12	Less: Cumulative depreciation adjustment on account of un-discharged liabilities deducted as on 01.04.2009		-	-	-	-	-	-	-	
13	Add: Cumulative depreciation adjustment on account of liability Discharge		-	-	-	-	-	-	-	
14	Less: Cumulative depreciation adjustment on account of de-capitalisation	228.13	-	-	-	-	-	-	-	
15	Net Cumulative depreciation at the end of the period after adjustments	2,16,665.12	2,18,268.72	2,21,072.97	2,24,381.52	2,25,956.52	2,26,631.52	2,26,631.52	2,26,631.52	

* Shall be submitted at the time of truing up.


 (Petitioner)

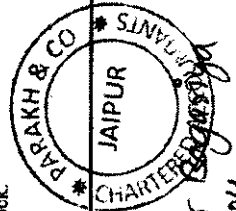
Name of the Company		NTPC Ltd				
Name of the station		Rihand Stage I				
		Rs Lacs				
S No	Loan	2019-20	2020-21	2021-22	2022-23	2023-24
1	PFC V D-32					
	Net loan - Opening	364.58	306.25	247.92	189.58	131.25
	Addition	0.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	58.33	58.33	58.33	58.33	58.33
	Net loan - Closing	306.25	247.92	189.58	131.25	72.92
	Average Net Loan	335.42	277.08	218.75	160.42	102.08
	Rate of Interest on Loan	7.6800%	7.6800%	7.6800%	7.6800%	7.6800%
	Interest on loan	25.76	21.28	16.80	12.32	7.84
2	HDFC Bank-IV- D4(Repayment from 17.04.2021)					
	Net loan - Opening	9000.00	9000.00	9000.00	8000.00	7000.00
	Addition	0.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	0.00	0.00	1000.00	1000.00	1000.00
	Net loan - Closing	9000.00	9000.00	8000.00	7000.00	6000.00
	Average Net Loan	9000.00	9000.00	8500.00	7500.00	6500.00
	Rate of Interest on Loan with monthly r	8.4500%	8.4500%	8.4500%	8.4500%	8.4500%
	Interest on loan	760.50	760.50	718.25	633.75	549.25
3	Punjab National Bank-III- D3(Repayment fom 01.02.2022)					
	Net loan - Opening	5000.00	5000.00	5000.00	4444.44	3888.89
	Addition	0.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	0.00	0.00	555.56	555.56	555.56
	Net loan - Closing	5000.00	5000.00	4444.44	3888.89	3333.33
	Average Net Loan	5000.00	5000.00	4722.22	4166.67	3611.11
	Rate of Interest on Loan with monthly r	8.3000%	8.3000%	8.3000%	8.3000%	8.3000%
	Interest on loan	415.00	415.00	391.94	345.83	299.72
4	Bonds-54- repayment on 25.03.2023/2024/2025					
	Net loan - Opening	2500.00	2500.00	2500.00	2500.00	2000.00
	Addition	0.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	0.00	0.00	0.00	500.00	1000.00
	Net loan - Closing	2500.00	2500.00	2500.00	2000.00	1000.00
	Average Net Loan	2500.00	2500.00	2500.00	2250.00	1500.00
	Rate of Interest on Loan	8.5200%	8.5200%	8.5200%	8.5200%	8.5200%
	Interest on loan	213.00	213.00	213.00	191.70	127.80
	Total Loans					
	Net Loan Opening	16864.58	16806.25	16747.92	15134.03	13020.14
	Additions	0.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	58.33	58.33	1613.89	2113.89	2613.89
	Net Loan Closing	16806.25	16747.92	15134.03	13020.14	10406.25
	Avg Loan	16835.42	16777.08	15940.97	14077.08	11713.19
	Interest Rate	8.4005%	8.4030%	8.4060%	8.4080%	8.4060%
	Interest	1414.26	1409.78	1339.99	1183.60	984.61

Signature

Details of Source wise Fuel for Computation of Energy Charges

S. No.	Month	Unit	Oct-18		Nov-18		Dec-18	
			Domestic	Imported	Domestic	Imported	Domestic	Imported
1	Quantity of Coal/Lignite supplied by Coal/Lignite Company	(MMT)	1.9024		1.8894		2.0237	
2	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)						
3	Coal supplied by Coal/Lignite Company (1+2)	(MMT)	1.9024		1.8894		2.0237	
4	Normative Transit & Handling Losses (For coal/Lignite based projects)	(MMT)	0.0032		0.0027		0.0034	
5	Net coal / Lignite Supplied (3-4)	(MMT)	1.8991		1.8867		2.0203	
6	Amount charged by the Coal/Lignite Company	(Rs.)	3937795494		4358312222		4377921225	
7	Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs.)						
8	Total amount Charged (6+7)	(Rs.)	3937795494		4358312222		4377921225	
9	Transportation charges by rail/ship/road transport	(Rs.)	36520499		22283997		38310986	
10	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs.)						
11	Demurrage Charges, if any	(Rs.)						
12	Cost of diesel in transporting coal through MGR system, if applicable	(Rs.)	20994373		18434410		18527883	
13	Total Transportation Charges (9+10-11+12)	(Rs.)	57514872		40718407		56838869	
13A	Others (stone picking charges, loco driver's salary, sampling charges etc)	(Rs.)	24146258		28111557		58428824	
14	Total amount Charged for coal/Lignite supplied including Transportation (8+13+13A)	(Rs.)	4019456624		4427142186		4493188918	
15	Landed cost of coal/Lignite (14/5)	Rs./MT	2116.46		2346.48		2224.00	
16	Blending Ratio (Domestic/Imported)		100.00		100.00		100.00	
17	Weighted average cost of coal/Lignite for preceding three months	Rs./MT			2228.62			
18	GCV of Domestic Coal as per bill of Coal Company (Eq Basis)	(kCal/Kg)	4660		5009		4667	
19	GCV of Imported Coal as per bill Coal Company	(kCal/Kg)						
20	Weighted average GCV of coal/Lignite as Billed	(kCal/Kg)	4660		5009		4667	
21	GCV of Domestic Coal as received at Station (TM basis)	(kCal/Kg)	4000		4402		4137	
22	GCV of Imported Coal as received at Station	(kCal/Kg)						
23	Weighted average GCV of coal/Lignite as Received (TM basis)	(kCal/Kg)	4000		4402		4137	

Note: Qty and Value at Sl. No. 1 and 6 respectively also includes the Qty and Value of Opening stock.



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21/12/2002

Station
Grotam kumar
MAN - 425304
FPN - 0001475C

060500

Details of Secondary Fuel for Computation of Energy Charges

Name of the Company :		NTPC Limited											
Name of the Power Station :		Rihand Super Thermal Power Station Stage-I											
Sl.No.	Month	Unit	Oct-18		Nov-18		Dec-18		LDO		HFO		
1	Quantity of Oil supplied by Oil Company	KL	LDO	HFO	LDO	HFO	LDO	HFO	LDO	HFO	LDO	HFO	
4	Adjustment (+/-) in quantity supplied made by Oil Company	KL	794.95	4,383.40	4,170.43	4,263.20	3,639.84	4,114.20					
5	Oil supplied by oil company (3+4)	KL	794.95	4,383.40	4,170.43	4,263.20	3,639.84	4,114.20					
6	Normative Transit & Handling Losses	KL	-	-	-	-	-	-					
7	Net Oil Supplied (5-6)	KL	794.95	4,383.40	4,170.43	4,263.20	3,639.84	4,114.20					
8	Amount charged by the Oil Company	(Rs)	4,42,62,495	13,41,81,533	24,70,21,936	13,05,02,056	21,55,94,390	12,59,40,974					
9	Adjustment(+/-) in amount charged made by Oil Company	(Rs)											
10	Total amount charged (8+9)	(Rs)	4,42,62,495	13,41,81,533	24,70,21,936	13,05,02,056	21,55,94,390	12,59,40,974					
11	Transportation charges by rail / ship / road transport	(Rs)											
12	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs)											
13	Demurrage Charges, if any	(Rs)											
14	Cost of diesel in transporting Oil through MGR system	(Rs)											
15	Total Transportation Charges (11+12+13+14)	(Rs)											
16	Others -Entry Tax on Oil	(Rs.)											
17	Total amount Charged for fuel supplied including Transportation (8+13+14)	(Rs)	4,42,62,495	13,41,81,533	24,70,21,936	13,05,02,056	21,55,94,390	12,59,40,974					
16	Weighted average GCV of Oil as fired	(kCal/L)	9,349.00	9,790.00	9,419.00	9,790.00	9,597.00	9,790					
17	Weighted average rate of Secondary Fuel	Rs/KL	55,679.60	30,611.29	59,231.77	30,611.29	59,231.77	30,611.29					

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

Computation of Energy Charges

Form-15B

ADDITIONAL FORM

Name of the Company	NTPC Limited
Name of the Power Station	Rihand St-I

Computation of Energy Charges

1 Rate of Energy Charge from Sec. Fuel Oil/ Alternate Fuel (REC)_s (p/kwh) = $(Q_p)_n \times P_s$ = 2.945

2 Heat Contribution from SFO / Alternate Fuel (H_p) = $(Qs)_n \times (GCV)_s$ = 4.744

3 Heat Contribution from coal (H_p)_s = $GHR \cdot H_s$ = 2345.26

4 Specific Primary Fuel Consumption (Qp)_n = $H_p / (GCV)_p$ = 0.573

5 Rate of Energy charge from Primary Fuel (p/kwh) (REC)_p = $(Qp)_n \times (REC)_p$ = 127.689

6 Rate of Energy charge ex-bus (p/kWh) (REC) = $\frac{((REC)_s + (REC)_p)}{(1-(AUX))}$ = 141.994

	2019-20	2020-21	2021-22	2022-23	2023-24
No of Days in the year	366	365	365	365	366
Sp. Oil consumption ml/kwh	0.5	0.5	0.5	0.5	0.5
Auxiliary consumption %	8.00	8.00	8.00	8.00	8.00
Heat Rate Kcal/Kwh	2,350.00	2,350.00	2,350.00	2,350.00	2350.00
Computation of Variable Charges					
Variable Charge (Coal) p/kwh	138.792	138.792	138.792	138.792	138.792
Variable Charge (Oil) p/kwh	3.201	3.201	3.201	3.201	3.201
Total p/kwh	141.994	141.994	141.994	141.994	141.994

Price of fuel from Form-15/15A

Coal Cost (Rs./MT)	2228.62	2228.62	2228.62	2228.62	2228.62
Oil Cost (Rs./KL)	58903.62	58903.62	58903.62	58903.62	58903.62

Computation of Fuel Expenses for Calculation of IWC:

ESO in a year (MUs)	6869.09	6850.32	6850.32	6850.32	6869.088
ESO for 40 days (MUs)	750.720	750.720	750.720	750.720	750.720
Cost of coal for 45 Days (Rs. Lakh)	10419.41	10419.41	10419.41	10419.41	10419.41
Cost of oil for 2 months (Rs. Lakh)	366.50	365.50	365.50	365.50	366.50
Energy Expenses for 45 days (Rs. Lakh)	11992.21	11992.21	11992.21	11992.21	11992.21

Coal	3rd month	2nd month	1st month	Wtd. Ave.
Wtd. Avg. Price of Coal Rs./MT	2116.45	2346.48	2195.87	2228.62
Wtd. Avg. GCV of Coal as received kCal/Kg	4000	4402	4137	4178.30
Wtd. Avg. GCV of Coal as received after adjustment of 85 kcal/kg				
Sec. Oil				4093.30
Wtd. Avg. Price of Secondary Fuel Rs/KL	55679.60	59231.77	59231.77	58903.62
Wtd. Avg. GCV of Secondary Fuel kCal/L	9349.00	9419.00	9597.00	9487.82

S. Sw.
PETITIONER

Name of the Petitioner
Name of the Generating StationNTPC Ltd
Rihand St-IStatement of Capital cost

(Rs lacs)

S. No.	Particulars	01.04.2019
A	a) Opening Gross Block Amount as per books	288372.49
	b) Amount of capital liabilities in A(a) above	405.32
	c) Amount of IDC in A(a) above	824.11
	d) Amount of FC in A(a) above	
	e) Amount of FERV in A(a) above	-772.41
	f) Amount of Hedging Cost in A(a) above	
	g) Amount of IEDC in A(a) above	
B	a) Addition in Gross Block Amount during the period (Direct purchases)	
	b) Amount of capital liabilities in B(a) above	
	c) Amount of IDC in B(a) above	
	d) Amount of FC in B(a) above	
	e) Amount of FERV in B(a) above	
	f) Amount of Hedging Cost in B(a) above	
	g) Amount of IEDC in B(a) above	
C	a) Addition in Gross Block Amount during the period (Transferred from CWIP)	
	b) Amount of capital liabilities in C(a) above	
	c) Amount of IDC in C(a) above	
	d) Amount of FC in C(a) above	
	e) Amount of FERV in C(a) above	
	f) Amount of Hedging Cost in C(a) above	
	g) Amount of IEDC in C(a) above	
D	a) Deletion in Gross Block Amount during the period incl Liability Reversal	
	b) Amount of capital liabilities in D(a) above	
	c) Amount of IDC in D(a) above	
	d) Amount of FC in D(a) above	
	e) Amount of FERV in D(a) above	
	f) Amount of Hedging Cost in D(a) above	
	g) Amount of IEDC in D(a) above	
E	a) Closing Gross Block Amount as per books	
	b) Amount of capital liabilities in E(a) above	
	c) Amount of IDC in E(a) above	
	d) Amount of FC in E(a) above	
	e) Amount of FERV in E(a) above	
	f) Amount of Hedging Cost in E(a) above	
	g) Amount of IEDC in E(a) above	


(Petitioner)

Name of the Petitioner
Name of the Generating StationNTPC Ltd
Rihand St-I**Statement of Capital Works in Progress**

(To be given for relevant dates and year wise)

(Amount in Rs. Lakh)

S. No.	Particulars	01.04.2019
A	a) Opening CWIP as per books	1,744.07
	b) Amount of capital liabilities in A(a) above	310.98
	c) Amount of IDC in A(a) above	-
	d) Amount of FC in A(a) above	-
	e) Amount of FERV in A(a) above	-
	f) Amount of Hedging Cost in A(a) above	-
	g) Amount of IEDC in A(a) above	-
B	a) Addition in CWIP during the period	
	b) Amount of capital liabilities in B(a) above	
	c) Amount of IDC in B(a) above	
	d) Amount of FC in B(a) above	
	e) Amount of FERV in B(a) above	
	f) Amount of Hedging Cost in B(a) above	
	g) Amount of IEDC in B(a) above	
C	a) Transferred to Gross Block Amount during the period	
	b) Amount of capital liabilities in C(a) above	
	c) Amount of IDC in C(a) above	
	d) Amount of FC in C(a) above	
	e) Amount of FERV in C(a) above	
	f) Amount of Hedging Cost in C(a) above	
	g) Amount of IEDC in C(a) above	
D	a) Deletion in CWIP during the period	
	b) Amount of capital liabilities in D(a) above	
	c) Amount of IDC in D(a) above	
	d) Amount of FC in D(a) above	
	e) Amount of FERV in D(a) above	
	f) Amount of Hedging Cost in D(a) above	
	g) Amount of IEDC in D(a) above	
E	a) Closing CWIP as per books	
	b) Amount of capital liabilities in E(a) above	
	c) Amount of IDC in E(a) above	
	d) Amount of FC in E(a) above	
	e) Amount of FERV in E(a) above	
	f) Amount of Hedging Cost in E(a) above	
	g) 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 :		Rihand St-I							
S. No.	Particulars	Existing	2019-20	2020-21	2021-22	2022-23	2023-24	(Amount in Rs Lakh)	
		2018-19	4	5	6	7	8		
1	2	3							
1	Gross Normative loan – Opening	1,22,331.16	1,24,212.21	1,24,827.75	1,28,574.38	1,29,974.38	1,31,024.38		
2	Cumulative repayment of Normative loan up to previous year	1,22,207.09	1,23,594.56	1,24,827.75	1,27,631.99	1,29,974.38	1,31,024.38		
3	Net Normative loan – Opening	124.07	617.65	-	942.38	-	-		
4	Add: Increase due to addition during the year / period	2050.75	615.53	3,746.63	1,400.00	1,050.00	-		
5	Less: Decrease due to de-capitalisation during the year / period	177.43	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	7.74	0.00	0.00	0.00	0.00	0.00		
8	Less: Repayment of Loan	1564.91	1233.18	2804.25	2342.38	1050.00	0.00		
9	Adj decap	177.43							
10	Adj Liability	-							
11	Net Normative loan - Closing	617.65	-	942.38	-	-	-		
12	Average Normative loan	370.86	308.83	471.19	471.19	-	-		
13	Weighted average rate of interest	8.2957	8.4005	8.4030	8.4060	8.4080	8.4060		
14	Interest on Loan	30.77	25.94	39.59	39.61	0.00	0.00		

(Petitioner)

Calculation of Interest on Working Capital

Name of the Company :		NTPC Limited							
Name of the Power Station :		Rihand St-I							
		(Amount in Rs Lakh)							
S. No.	Particulars	Existing 2018-19	2019-20	2020-21	2021-22	2022-23	2023-24		
1	2	3	4	5	6	7	8		
1	Cost of Coal/Lignite	10,373.11	10419.41	10419.41	10419.41	10419.41	10419.41		
2	Cost of Main Secondary Fuel Oil	330.80	366.50	365.50	365.50	365.50	366.50		
3	Fuel Cost								
4	Liquid Fuel Stock								
5	O & M Expenses	2,032.58	2018.13	2094.72	2163.08	2231.25	2303.88		
6	Maintenance Spares	4,878.18	4843.51	5027.32	5191.40	5355.01	5529.32		
7	Receivables	23,583.65	17391.22	17698.42	17892.95	17789.26	17778.63		
8	Total Working Capital	41198.32	35038.76	35605.36	36032.33	36160.43	36397.75		
9	Rate of Interest	13.5000	12.0500	12.0500	12.0500	12.0500	12.0500		
10	Interest on Working Capital	5561.77	4222.17	4290.45	4341.90	4357.33	4385.93		

S. W.
Petitioner

Flow of Capital liabilities		01.04.2019			
Name of the Generating Station		Rihand Super Thermal Power Station St-I			
		(Amount in Rs.)			
Sr. No.	Name of the Party	Name of the work	Year of creation of liability capitalised in Gross Block	Undischarged liabilities relating to GB 31.03.2019	
(1)	(2)	(3)	(4)	(11= 5+6+7-10)	
1	Land Compensation	FREEHOLD LAND -PLANT/OFFICE	2009-10	1,88,88,211	Allowed
2	UPJVNL	LEASE HOLD LAND PLANT/OFFICE	2013-14	1,85,51,427	Allowed
3	UPJVNL	Submergence Land 1144.59 acre (MGR+Ash dyke)	2013-14	1,48,90,290	Allowed
4	K N INTERNATIONAL LTD	1ST RAISING OF MITHINI ASH DYKE LAGOON-1	2014-15	27,56,398	Disallowed
5	UPJVNL	FREE HOLD LAND PLANT/OFFICE	2015-16	10,73,733	Allowed
6	K N INTERNATIONAL LTD	1ST RAISING OF MITIHINI ASH DYKE LAGOON-1	2015-16	62,14,737	Dis Allowed
7	ALSTOM INDIA LTD	IPGV SPINDLE AND HEAD ASSY.	2015-16	1,75,132	Not Claimed
8	UPJVNL	FREE HOLD LAND PLANT/OFFICE	2016-17	9,16,932	Allowed
9	TIRUPATI INDUSTRIAL AGENCIES	RELY NUM:5A:REG 670 (ABB);YN1M301396-HA	2016-17	16,185	Not Claimed
10	HITACHI LTD	R&M ESP Capitalisation Stage I	2016-17	(5,93,25,173)	Disallowed
11	ABB India Ltd	R&M of GRP (ABB)	2016-17	12,44,983	Not Claimed
12	Land Compensation	Freehold Land	2017-18	7,79,793	Allowed
13	BAGHEL INFRASTRUCTUR	1st Raising of MAD lagoon-II	2017-18	31,82,518	Disallowed
14	BAGHEL INFRASTRUCTUR	1ST RAISING ON THE HILL SIDE OF MITHINI ASH DYKE LAGOON II	2017-18	39,62,809	Disallowed
15	National Prestige Construction Co	2nd Raising of Central Dyke Lagoon - II	2017-18	24,93,326	Disallowed
16	THYSSENKRUPP ELEVATOR INDIA	Replacement of Existing Boiler lift-1	2017-18	19,19,585	Not Claimed
17	EAST WEST ENGINEERING &	Procurement of stress Relieving machine.	2017-18	54,000	Not Claimed
18	TECHMARK ENGINEERS AND CONSULTANTS	Procurement of Portable Flue Gas Analyser.	2017-18	36,000	Not Claimed
19	CSPL COMPUTERS PVT	Procurement of Multimedia Projector.	2017-18	1,13,257	Not Claimed
20	CSPL COMPUTERS PVT	Procurement of Printer and Scanner.	2017-18	1,81,000	Not Claimed
21	ENVAIR ELECTRODYNE LTD	Supply of Lub Oil Filtration Unit.	2017-18	66,000	Not Claimed
22	TOTAL SOLUTIONS	Procurement of Flue Gas Analyser.	2017-18	99,600	Not Claimed
23	FAIR DEALS	Procurement of Coloured Photocopier	2017-18	14,407	Not Claimed
24	INDUSTRIAL TRADE LINKS	Complete centrifugal seperator with accessories for turbine lube oil	2017-18	2,07,000	Not Claimed
25	INFONICS TECHNOLOGIES	Procurement of Outdoor LED Display.	2017-18	2,28,750	Not Claimed
26	BNA TECHNOLOGY CONSU	Procurement of Network attached storage server.	2017-18	59,000	Not Claimed
27	DHR HOLDING INDIA PVT LTD	Procurement of Conductivity <(><> Turbidity meter.	2017-18	62,000	Not Claimed
28	SCRUM SYSTEM PVT LTD	Supply of Enterprise Safety Training Kiosk for NTPC-Rihand Nagar	2017-18	60,000	Not Claimed
29	EMERSON PROCESS MANAGEMENT INDIA	HFO TO LDO CONVERSION IN STAGE-I UNITS (2 X 500 MW)-C&I	2018-19	51,52,544	Claimed
30	BHARAT HEAVY ELECTRICALS LTD	HFO TO LDO CONVERSION IN STAGE-I UNITS (2X500MW)	2018-19	2,13,711	Claimed

Flow of Capital liabilities		01.04.2019		Rihand Super Thermal Power Station St-I		(Amount in Rs.)
Name of the Generating Station						
Sr. No.	Name of the Party	Name of the work	Year of creation of liability capitalised in Gross Block	Undischarged liabilities relating to GB 31.03.2019		
(1)	(2)	(3)	(4)	(11= 5+6+7-10)		
31	UPJVNL	FREE HOLD LAND PLANT/OFFICE	2018-19	9,14,893	Allowed	
32	National Prestige Construction Co	2nd Raising of Central Ash Dyke Lagoon - II	2018-19	8,07,816	Disallowed	
33	National Prestige Construction Co	3RD RAISING OF CENTRAL ASH DYKE LAGOON - I	2018-19	62,65,766	Claimed	
34	Aistom T&D India Ltd	400KV / 132KV CTs for Rihand	2018-19	4,84,749	Not Claimed	
35	AGARWAL AUTO SALES	PROCUREMENT OF HOSPITAL FURNITURE	2018-19	559	Not Claimed	
36	DHR HOLDING INDIA PVT LTD	Procurement of Turbidity Meter.	2018-19	9,00,794	Not Claimed	
37	MAHINDRA STILLER AUTO TRUCKS LTD	BATTERY OPERATED TROLLEY CAPACITY- 4 MT	2018-19	49,000	Not Claimed	
38	ORBIT TECHNOLOGIES PVT LTD	BOMB CALORIMETER- COMPLETE ASSY.	2018-19	2,33,000	Not Claimed	
39	WIDSONS SCIENTIFIC WORKS	:FURNANCE:STANDARD -HIGH TEMP:	2018-19	26,000	Not Claimed	
40	TAKYON NETWORKS PVT.LTD.	WIRELESS LAN CONTROLLER	2018-19	5,40,111	Not Claimed	
41	MONARCH ELECTRONICS	Supply of Four Sheave Pulley with Accessories for Pulling & Lifting of Power Transformers.	2018-19	5,887	Not Claimed	
42	OBLUM ELECTRICAL INDUSTRIES	Supply of 132 KV Lighting Arresters.	2018-19	100	Not Claimed	
43	CG POWER AND INDUSTRIAL SOLUTIONS	Supply of 400KV CTs for Rihand.	2018-19	1,77,179	Not Claimed	
44	LOGIC PLUS PLUS INDIA PVT LTD	Procurement of Acoustic Monitoring(Ultrasonic) & Analysis System.	2018-19	70,000	Not Claimed	
45	OMEGA CONSTRUCTION EQUIPMENT	Supply of Diesel Fork Lifts and Mobile Hydra Cranes.	2018-19	5,79,609	Not Claimed	
46	UP SMALL INDUSTRIES CORPORATION LTD	Procurement of SS Sofa, Service Table, Electric chimney	2018-19	50,375	Not Claimed	
47	MASS-TECH CONTROLS PVT LTD	Supply and installation of AC EV Chargers at NTPC Rihand	2018-19	1,27,440	Not Claimed	
48	PRUFTECHNIK AIMIL CONDITION	Procurement of Upgradation of Vibration Analyzer VibXpert-II.	2018-19	42,480	Not Claimed	
49	ENERGY EFFICIENCY SERVICES LTD	Supply of Energy Efficient fan.	2018-19	48,00,000	Not Claimed	
50	RhSTPP EMPLOYEES CONSUMERS	Procurement of water purifier(Aquaguard Reviva)	2018-19	5,002	Not Claimed	
51	RhSTPP EMPLOYEES CONSUMERS	Procurement of items for CISF (Television,Frozen,Weighing & Insect Falsher)	2018-19	2,426	Not Claimed	
52	RhSTPP EMPLOYEES CONSUMERS	Procurement of 55 Inch LED TVs.	2018-19	1,383	Not Claimed	
53	RhSTPP EMPLOYEES CONSUMERS	Procurement of Deep Freezer	2018-19	643	Not Claimed	
54	CHEMICAL & INSTRUMENTS CORPORATION	Procurement of Laboratory Coal Pulveriser.	2018-19	1,98,738	Not Claimed	
Total				4,05,32,105		

Signature

Flow of Capital liabilities
Name of the Generating Station

01.04.2019

Rihand Super Thermal Power Station St-I

(Amount in Rs.)

Sr. No.	Name of the Party	Name of the work	Year of creation of liability capitalised in Gross Block	Undischarged liabilities relating to GB 31.03.2019	
(1)	(2)	(3)	(4)	(11= 5+8+7-10)	
A		Disc. of liab. by way of pmt. out of liability on allowed items during 2009-14		5,23,09,928	
B.		Disc. of liab. by way of pmt. out of liability on not Claimed items during 2009-14		-	
C.		Disc. of liab. by way of pmt. out of liability on Disallowed items during 2009-14		-	
		S.Total of Allowed and Not claimed Items (A+B+C)		5,23,09,928	
D.		Disc. of liab. by way of pmt. on disallowed items after 1.4.14		(3,99,07,570)	
E.		Disc. of liab. by way of pmt. on claimed & Allowed items after 1.4.2014		1,53,17,372	
F.		Liabilities in relation to 2014-19 not claimed		1,28,12,374	
		S.Total of Allowed, Disallowed and not claimed Items (D + E+ F)		(1,17,77,823)	
		Total		4,05,32,105	


 (Petitioner)

Summary of issue involved in the petition

Name of the Company :		NTPC Limited
Name of the Power Station :		Rihand St-I
1	Petitioner:	NTPC Limited
2	Subject	DETERMINATION OF TARIFF FOR THE PERIOD 2019-24
3	<p>i) Approve tariff of Rihand St-I for the tariff period 01.04.2019 to 31.03.2024.</p> <p>ii) Allow the recovery of filing fees as & when paid to the Hon'ble Commission and publication expenses from the beneficiaries.</p> <p>iii) Allow reimbursement of Ash Transportation Charges directly from the beneficiaries quarterly on net basis.</p> <p>iv) Pass any other order as it may deem fit in the circumstances mentioned above.</p>	
4	Respondents: 11	
	1. Uttar Pradesh Power Corp. Ltd. (UPPCL) Shakti Bhawan 14, Ashok Marg, Lucknow - 226 001.	2. Rajasthan Urja Vika Nigam Limited (RUVNL) (on behalf of DISCOMs of Rajasthan), Vidyut Bhawan, Janpath, Jaipur 302 005
	3. Tata Power Delhi Distribution Ltd. Grid Substation, Hudson Road Kingsway Camp Delhi-110009.	4. BSES Rajdhani Power Ltd., 2nd floor, B-Block BSES Bhawan, Nehru Place New Delhi-110019.
	5. BSES Yamuna Power Ltd., Shakti Kiran Building Karkardooma Delhi-110092	6. Haryana Power Purchase Centre (HPPC) Shakti Bhawan, Sector - VI, Panchkula Haryana - 134 109
	7. Punjab State Power Corporation Ltd. (PSPCL) The Mall Patiala - 147 001	8. Himachal Pradesh State Electricity Board Ltd. (HPSEB) Kumar Housing Complex Building-II Vidyut Bhawan Shimla - 171 004
	9. Power Development Department (J&K) Govt. of J&K, Secretariat Srinagar/Jammu	10. Electricity Department (Chandigarh) Union Territory of Chandigarh Addl. Office Building Sector-9 D, Chandigarh
	11. Uttarakhand Power Corporation Ltd. (UPCL) Urja Bhawan, Kanwali Road Dehradun - 248 001 Uttarakhand.	
5	Project Scope	1000 MW Super Thermal Power Station
	Cost	NA
	Commissioning	Jul-89
	Claim (2019-24)	9731.66
	AFC (Average; 2019-24)	55,928.13
	Capital cost as on 01.04.2019	245233.6
	Initial spare	-
	NAPAF (Gen)	85%
	Any Specific	-


 PETITIONER



भारत का राजपत्र

The Gazette of India

असाधारण

EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii)

PART II—Section 3—Sub-section (ii)

प्राधिकार से प्रकाशित

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पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 25 जनवरी, 2016

का.आ. 254(अ).—भारत सरकार, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय की अधिसूचना सं. का.आ. 763(अ), तारीख 14 सितंबर, 1999 (जिसे इसमें इसके पश्चात् उक्त अधिसूचना कहा गया है) में कतिपय संशोधनों का प्रारूप, जिन्हें केन्द्रीय सरकार 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) के अंतर्गत करने का प्रस्ताव करती है, भारत के राजपत्र, असाधारण, भाग II, खंड 3, उप-खंड (ii) में अधिसूचना सं. का.आ. 1396(अ), तारीख 25 मई, 2015 द्वारा प्रकाशित किया गया था, जिसके द्वारा ऐसे सभी व्यक्तियों से, जिनके उनसे प्रभावित होने की संभावना थी, उस तारीख से, जिसको उक्त प्रारूप संशोधनों को अंतर्विष्ट करने वाली राजपत्र की प्रतियां जनता को उपलब्ध करा दी जाती हैं, माठ दिनों के अवसान से पूर्व आक्षेप और सुझाव आमंत्रित किए गए थे;

और उक्त राजपत्र की प्रतियां 25 मई, 2015 को जनता को उपलब्ध करा दी गई थी;

और उक्त प्रारूप अधिसूचना के संबंध में, ऐसे सभी व्यक्तियों से, जिनके उनसे प्रभावित होने की संभावना थी, प्राप्त सभी आक्षेपों और सुझावों पर केन्द्रीय सरकार द्वारा मस्यक रूप से विचार कर लिया गया है;

अतः, अब, केन्द्रीय सरकार 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 उक्त अधिसूचना में निम्नलिखित संशोधन करती है, अर्थात् :-

1. उक्त अधिसूचना के पैरा 1 में-

- (क) उप पैरा 1(क) में "सौ किलोमीटर" शब्दों के स्थान पर "तीन सौ किलोमीटर" शब्द रखे जाएंगे;
- (ख) उप पैरा 3 में "100 कि.मी." अंकों और शब्दों के स्थान पर "तीन सौ किलोमीटर" शब्द रखे जाएंगे;
- (ग) उप पैरा 5 में "सौ किलोमीटर" शब्दों के स्थान पर "तीन सौ किलोमीटर" शब्द रखे जाएंगे;
- (घ) उप पैरा 7 में "सौ किलोमीटर" शब्दों के स्थान पर "तीन सौ किलोमीटर" शब्द रखे जाएंगे;

2. उक्त अधिसूचना के पैरा 2 में:-**(क) उप पैरा (1) के पश्चात् निम्नलिखित परंतुक अंतःस्थापित किया जाएगा, अर्थात्:-**

"परंतु यह और कि शुष्क ईएसपी फ्लाई ऐश के 20 प्रतिशत का निःशुल्क प्रदाय करने का निर्बंधन उन तापीय विद्युत संयंत्रों पर लागू नहीं होगा, जो विहित रीति में मौ प्रतिशत फ्लाई ऐश का उपयोग करने में मसर्थ हैं।"

(ख) उप पैरा (7) के पश्चात् निम्नलिखित उप पैरा अंतःस्थापित किए जाएंगे, अर्थात् :-

- (8) प्रत्येक कोयला या लिग्नाइट आधारित तापीय विद्युत संयंत्र (जिसके अंतर्गत कैपटिव और/या मह उत्पादन केन्द्र भी हैं), अधिसूचना की तारीख से तीन मास के भीतर उनके पास उपलब्ध प्रत्येक किस्म की ऐश के स्टॉक के व्यौरे अपनी वेबसाइट पर अपलोड करेगा और उसके पश्चात् मास में कम से कम एक बार स्टॉक की स्थिति को अद्यतन करेगा।
- (9) प्रत्येक कोयला या लिग्नाइट आधारित तापीय विद्युत संयंत्र मसर्षित शुष्क ऐश साइलोस प्रतिष्ठापित करेगा, जिनके पास पृथक् पहुंच मार्ग होंगे, जिससे कि फ्लाई ऐश के परिदान को सुगम बनाया जा सके।
- (10) कोयला या लिग्नाइट आधारित तापीय विद्युत संयंत्र से 100 किलोमीटर की परिधि के भीतर सड़क मनिर्माण परियोजनाओं या ऐश आधारित उत्पादों के संनिर्माण के लिए या कृषि संबंधित क्रियाकलापों में मृदा अनुकूलक के रूप में उपयोग के लिए ऐश के परिवहन की लागत ऐसे कोयला या लिग्नाइट आधारित तापीय विद्युत संयंत्र द्वारा वहन की जाएगी और 100 किलोमीटर की परिधि से परे और 300 किलोमीटर की परिधि के भीतर ऐसे परिवहन की लागत को उपयोक्ता और कोयला या लिग्नाइट आधारित तापीय विद्युत संयंत्र के बीच समान रूप से अंश भाजित की जाएगी।
- (11) कोयला या लिग्नाइट आधारित तापीय विद्युत संयंत्र अपने परिसरों के भीतर या अपने परिसरों के आस-पास ऐश आधारित उत्पाद मनिर्माण सुविधाओं का संवर्धन करेंगे, उन्हें अपनाएंगे और उनकी स्थापना करेंगे (वित्तीय और अन्य सहबद्ध अवमंरचना)।
- (12) नगरों के आस-पास बने कोयला या लिग्नाइट आधारित तापीय विद्युत संयंत्र ऐश आधारित उत्पाद विनिर्माण इकाइयों का संवर्धन करेंगे और उनकी स्थापना का मसर्थन और उसमें सहायता करेंगे ताकि ईटों और अन्य भवन संनिर्माण सामग्रियों की अपेक्षाओं की पूर्ति की जा सके और साथ ही परिवहन में कमी की जा सके।
- (13) यह सुनिश्चित करने के लिए कि किसी सड़क संनिर्माण का संविदाकार सड़क निर्माण में ऐश का उपयोग करता है, सड़क संनिर्माण के लिए संबद्ध प्राधिकारी संविदाकार को किए जाने वाले संदाय को तापीय विद्युत संयंत्र में ऐश के प्रदाय के प्रमाणीकरण के साथ जोड़ेगा।
- (14) कोयला या लिग्नाइट आधारित तापीय विद्युत संयंत्र, 300 किलोमीटर की परिधि के भीतर प्रधानमंत्री ग्रामीण सड़क योजना के अधीन सड़क संनिर्माण परियोजनाओं और भवनों, सड़कों, बांधों और तटबंधों के संनिर्माण को अंतर्वलित करने वाले सरकार के आस्ति सृजन कार्यक्रमों के स्थल तक ऐश के परिवहन की संपूर्ण लागत का वहन करेगा।"

3. उक्त अधिसूचना के पैरा (2) के उप-पैरा (2क) को उप-पैरा (15) के रूप में पढ़ा जाए और उक्त उप-पैरा के अंत में निम्नलिखित उप-पैरा जोड़ा जाएगा, अर्थात् :-

"और तटीय जिलों में अवस्थित कोयला या लिग्नाइट आधारित तापीय विद्युत संयंत्र तटरेखा सुरक्षा उपायों का मसर्थन करेंगे, उनके संनिर्माण में सहायता करेंगे या उसमें प्रत्यक्ष रूप से सम्मिलित होंगे।"

4. उक्त अधिसूचना के पैरा 3 में उप-पैरा (7) के पश्चात् निम्नलिखित अंतःस्थापित किया जाएगा, अर्थात् :-

- (8) विभिन्न संनिर्माण परियोजनाओं का अनुमोदन करने वाले सभी राज्य प्राधिकारियों का यह उत्तरदायित्व होगा कि वे यह सुनिश्चित करें कि फ्लाई ऐश का उपयोग करने या फ्लाई ऐश आधारित उत्पादों के लिए तापीय विद्युत संयंत्रों और संनिर्माण अभिकरण या संविदाकारों के बीच परस्पर समझ ज्ञापन या कोई अन्य ठहराव किया जाता है।
- (9) राज्य प्राधिकारी, दस लाख या अधिक की जनसंख्या वाले नगरों की भवन निर्माण संबंधी उप विधियों का संशोधन करेंगे ताकि भार वहन करने वाली संरचनाओं हेतु तकनीकी अपेक्षाओं के अनुसार आवश्यक विनिर्देशों को ध्यान में रखते हुए ऐश आधारित ईटों के आज्ञापक उपयोग को सुनिश्चित किया जा सके।

S. M.

- (10) संबद्ध प्राधिकारी सभी सरकारी स्कीमों या कार्यक्रमों में, उदाहरणार्थ महात्मा गांधी राष्ट्रीय ग्रामीण रोजगार गारंटी अधिनियम, 2005 (मनरेगा), स्वच्छ भारत अभियान, शहरी और ग्रामीण आवासन स्कीम, जहां संनिर्मित क्षेत्र एक हजार वर्ग फुट से अधिक है और अवसंरचना संबंधी संनिर्माण में, जिनके अंतर्गत अभिहित औद्योगिक संपदाओं या पार्कों या विशेष आर्थिक जोनों में भवन निर्माण भी है, ऐश आधारित ईटों या उत्पादों के आज़ापक उपयोग को सुनिश्चित करेंगे।
- (11) कृषि मंत्रालय कृषि क्रियाकलापों में ऐश के मृदा अनुकूलक के रूप में उपयोग का संवर्धन करने पर विचार कर सकेगा।”

5. सभी संबद्ध प्राधिकारियों द्वारा उपरोक्त उपबंधों का अनुपालन करने की समयावधि 31 दिसंबर, 2017 है। कोयला या लिग्नाइट आधारित तापीय विद्युत संयंत्र, उनके द्वारा उत्पादित फ्लाई ऐश के 100 प्रतिशत उपयोग के अतिरिक्त उपरोक्त उपबंधों का अनुपालन 31 दिसंबर, 2017 से पूर्व करेंगे।

[फा. सं. 9-8/2005-एचएमएमडी]

विश्वनाथ सिन्हा, संयुक्त मचिव

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

MINISTRY OF ENVIRONMENT, FORESTS AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 25th January, 2016

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

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

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

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

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

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

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2. In the said notification, in paragraph 2:-**(a) after sub-paragraph (1), the following proviso shall be inserted, namely:-**

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

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

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

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

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

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

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




- (11) The Ministry of Agriculture may consider the promotion of ash utilisation in agriculture as soil conditioner.”
5. The time period to comply with the above provisions by all concerned authorities is 31st December, 2017. The coal or lignite based thermal power plants shall comply with the above provision in addition to 100 % utilization of fly ash generated by them before 31st December, 2017.

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

BISHWANATH SINHA, Jt. Secy.

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



Item Nos. 01 to 03

Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No. 117/2014
WITH
Original Application No. 499/2014
WITH
Original Application No. 102/2014
(M.A. No. 858/2014, M.A. No.872/2014, 42/2015, 287/2015,
694/2015 & 580/2016)

Shantanu Sharma Applicant(s)

Versus

Union of India & Ors. Respondent(s)

WITH

Anupam Raghav & Anr. Applicant(s)

Versus

U.O.I. & Ors. Respondent(s)

WITH

Sandplast (India) Ltd. & Ors. Applicant(s)

Versus

MoEF & Ors. Respondent(s)

Date of hearing: 20.11.2018

CORAM : HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE S.P. WANGDI, JUDICIAL MEMBER
HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER

For Applicant(s): Tasneema Ahmadi & Mahima Rathi, Advocates

For Respondent (s): Krishna Kumar Singh, Advocate for MoEF & CC
Edward Belho, K Michael, Hoinethiam,
Leishangtham Roshmani, Maibam Babina,
Anupama Ngangom, Advocates for State of
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K. Enatoli Sema, Advocate for Nagaland PCB
Arun Mathur, Avneesh Arputham, Anuradha
Arputham & Geetanjali, Advocates for State of
Sikkim
G.M. Kawoosa, Advocate for State of J&K
Balendu shekhar & Sriansh Prakash, Advocates
V.K. Shukla, Ms. Vijay Laxmi, Advocates for
State of M.P.
Rajul Srivastav, Advocate for MPPCB
Rahul Verma, Addl. AG for State of U.K.
Ankit Verma, Advocate for State of U.K.
Deepak Anand, Advocate
Jayesh Gaurav, Advocate for JSPCB
Jogy Scaria, Reegan S. Bel, Advocates for KSPCB
Abhishek Paruthi, Advocate for CPCB
Mr. R. Rakesh Sharma, Advocate for TNPCB

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Mr. Shubham Bhalla, Advocate
Roopam Rai, Advocate
Hemantika Wahi, Puja Siingh, Advocates for
State of Gujrat & GPCB
K.V. Jagdishvaran & G. Indira, Advocates
Tayenjam Singh, Advocate for MPCB
Aprajita Mukherjee & Upendra Mishra,
Advocates for State of Meghalaya
Dhruv Pal & Himanshu Pal, Advocates for GPCB
Nishe Rajen Shonker, Anu K. Joy & Alim Anvar,
Advocates for State of Kerala
Ardhendhumauli Kr. Prasad , Advocate for
CGSC/MOC and Mr. Shashank Saxena,
Advocate for CGSC/MOC
Debojit Borkakati, Advocate for State of Assam
Rajul Shrivastav, Advocate for State of MPPCB
Shuvodeep Roy & Rituraj Biswas, Advocates for
State of Tripura
Anil Srivastav & Sujaya Bardhan, Advocates for
State of Arunachal Pradesh
M. Paikaray, Advocate for State of SPCB
Devraj Ashok, Advocate for State of Karnataka
Raja Chatterjee, Piyush Sachdev & Abhinandini
Yadav, Advocates for State of West Bengal
Anand Verma, S. Jain & S. Singh, Advocates
Ajit Pudussery & Ajeet Singh Verma, Advocates
Bharat Sangal & Isha Gupta, Advocates
M. Paikroy, Advocate for state of SPCB
Puja Kalra, Advocate for North & South, MCD
Shashi Juneja, Advocate for State of
Chhattisgarh
Dhananjaj Bajjal & Nikhil Naggar, Advocates for
AACB & TSPCB
Kshitij Mudgal, Advocate for DGMS
Hemantika Wahi & Puja Singh, Advocates for
State of GPCB
Soumyajit Pani & Chittaranjan Singh, Advocates
for state of Odisha
Santosh Kumar & Sarthak Agarwal, Advocates
for SAIL
Guntur Prabhakar, Guntur Pramod, Prashant
Mathur, P. Venkat Reddy & Prashant Tyagi,
Advocates for State of A.P
Prashant Tyagi, Advocate for State of Talangana
Tayenjam Momo Singh, Advocate
Mr. Dhruv Pal & Himanshu Pal, Advocates for
GPCB
Atul Jha, Advocate
Sandeep Mahapatra, Advocate
Somesh Tiwari, Advocate for Jindal Stainless Ltd.
Jayant K Sud, Senior Advocate with Ranjith
Kumar, Advocate
K. Mudgal, Advocate
Yogmaya Agnihotri, Advocate for CECB
Shubham Bhalla, Roopam Rai, Advocate
Pankaj Kr. Mishra & Ajit S. Bhasme, Advocates
Ravin Dubey, Advocate
Debovishi Bhuyan alongwith Mishal Vij,
Advocate for State of Goa
Priyanka Sinha & Alok K Singh, Advocates for
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Abhishek Gupta, Win Koul & Ayush Kr.
Shrivastava, Advocates
Debarshi Bhadra, Advocate for NBCC Ltd.

Nishant Talwar, Advocate for State of Punjab
Daleep Dhyani, Advocate for UPPCB
Mukesh Verma, Advocate
Amit Tiwari, Advocate for State of UP
Jayesh Gaurav, Advocate for JSPCB
Rahul Khurana, Mishal Vij, Proxy Counsel for
Anil Grover, AAG for State of HSPCB
Mr. Shoeb, Gautam Singh & Rudreshwar Singh,
Advocates for BSPCB
Debarshi Bhiyan, Advocate for GSPCB

ORDER

1. These matters raise concern of management of fly ash generated by the Thermal Power Plants (TPP). We may refer to the pleadings in Original Application No. 117/2014, Shantanu Sharma Vs. Union of India & Ors. Other matters are said to be identical.
2. The applicant claims to be interested in protection of environment and forest. He claims to be aggrieved by non-implementation of Notifications issued by the Ministry of Environment, Forest and Climate Change (MoEF&CC) for proper utilization of fly ash generated by the coal and lignite based TPP.
3. Case of the applicant is that non-utilization and improper disposal of fly ash leads to increase in air pollution and causes severe health problems. It also affects horticulture and agricultural crops. As at present, there are increased ash pond areas and increased height of ash dykes. Apart from air pollution, there is pollution of surface water and ground water. Major pollutants in fly ash are Arsenic and Mercury. Both the said pollutants are injurious for the land and the water bodies. Thus, there is need for 100% utilization of fly ash by all possible means such as conversion to ash based products, preventing its washing away or flying in the air. MoEF&CC has failed to ensure proper monitoring mechanism inspite of issuing notification on the subject.
4. Notification dated 14.09.1999 required use of atleast 25% of the ash for clay bricks or tiles or blocks for use in construction

activities. The Delhi High Court vide judgment dated 05.08.2004 in Writ Petition (C) No. 2145/1999 directed the Government to make use of fly ash mandatory in roads apart from using it in bricks for construction. Land, electricity and water is required to be made available for promoting ash based production units. Vide amendment dated 03.11.2009, provision was made for its use in manufacturing of building material and in construction activity to preserve top soil by restricting excavation for disposal. Since quantum of fly ash has increased, the extent of fly ash required to be used was also increased.

5. In view of more and more concern on account of failure of efficacy of the measures already taken, a working group was constituted by the Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Govt. of India. In its report submitted in the year 2011, the said group *inter-alia* observed that increase in generation of fly ash led to increase in the requirement of land and thus target has to be of 100% utilization as against 60% utilization which was happening. The disposal process lacked transparency and it was necessary that each thermal power plant displays complete information. Other measures adopted include policy of financial institutions to require compliance of fly ash as a condition for grant of loan and incentives in rate of excise duty. The applicant has also referred to the report jointly published by the World Bank and the Department of Economic Affairs, Govt. of India pointing out the deficiencies in pro-active government policies on the subject.
6. We may now refer to the Notifications on the subject. Vide Notification dated 14.09.1999, the MoEF&CC issued directions requiring manufacturers of clay bricks or tiles or blocks or construction activities to mix atleast 25% of ash which is to be ensured by the Pollution Control Boards/Committees by

canceling the consent order for brick kilns or mining leases. Every thermal power plant was required to make available such ash and phase out dumping and disposal in three years to the extent of 30%, and in six years the remaining. This applied to plants permissioned subject to Environmental Clearance having such conditions. The remaining are required to phase-out the same in 15 years and compliance was required to be furnished to the Central Pollution Control Board and the concerned State Pollution Control Boards/Committees. The Electricity Boards, NTPC and the management of the power plants are to facilitate making available land, electricity and water for manufacturing activities and also to provide access to the ash lifting area and furnish annual implementation report. Manufacturers of ash based products such as cement, blocks, brick panels were to operate as per the guidelines laid down by the Bureau of Indian Standards, Indian Bureau of Mines, Indian Road Congress, Central Building Research Institute, Roorkee, Central Road Research Institute, New Delhi, Building Materials and Technology Promotion Council, New Delhi, Central Public Works Department, State Public Works Departments and other Central and State Government agencies. The said authorities are to prescribe the use of ash and ash based products in schedules of specifications. Local authorities are to specify such requirement in building bye-laws.

7. Vide Notification dated 27.08.2003, certain amendments were made particularly to the effect that construction agencies were required to use the fly ash to the extent of 100% in a phased manner upto 31.08.2007.
8. Next Notification is dated 03.11.2009, revising the timelines and the period for implementation. The revised timelines apply to the construction agencies as well as thermal power plants as per

details mentioned in the said Notification. The said Notification also provided for shifting of the fly ash by filling empty mined voids by stowing.

9. The report of the Working Group of Cement Industries for 12th Five Year Plan (2012-2017) by the Department of Industrial Policy and Promotion, Ministry of Commerce and Industry goes into the extent of the problems and challenges in tackling the issue. The report shows that if the fly ash generated is not consumed, the cost on the economy by way of disposal risks and threat to health will be very high. Thus, to conserve top soil and prevent dumping and disposal on land, proper disposal of fly ash was significant. It was recommended that the Ministry of Power, Govt. of India should make proper assessment of the level of fly ash generation. The fly ash need not be required to be supplied free by the cement manufacturers to small bricks manufacturers and should be utilized by the cement plants for their own consumption. If the cement plants are required to purchase the fly ash at a cost, it will require transportation and add to the cost unnecessarily.

10. We now note the stand of the respondents. The Ministry of Finance and Revenue, Govt. of India in its reply has stated that the excise duty is 2% without CENVAT credit and 6% with CENVAT credit. Fly ash products are covered by SSI exemption. No excise duty is payable upto a clearance value of Rs. 1.5 crores.

11. The Reserve Bank of India has stated that the Banks have been advised to have an appropriate policy in this regard in the matter of giving loans.

12. The MoEF&CC has referred to the Notifications issued from time to time to deal with the problem. In respect of thermal power

stations in its operation before 03.11.2009, extent of fly ash utilizations is as per following table:

Sr. No.	Percentage Utilization of Fly Ash	Target Date
1.	At least generation 50% of fly ash	One year from the date of issue of this notification.
2.	At least generation 60% of fly ash	Two years from the date of issue of this notification.
3.	At least generation 75% of fly ash	Three years from the date of issue of this notification
4.	At least generation 90% of fly ash	Four years from the date of issue of this notification
5.	At least generation 100% of fly ash	Five years from the date of issue of this notification

13. For those commissioned thereafter, the extent of fly ash utilization is as follows:

Sr. No.	Percentage Utilization of Fly Ash	Target Date
1.	At least generation 50% of fly ash	One year from the date of issue of commissioning.
2.	At least generation 70% of fly ash	Two years from the date of issue of commissioning.
3.	At least generation 90% of fly ash	Three years from the date of issue of commissioning.
4.	At least generation 100% of fly ash	Four years from the date of issue of commissioning.

14. Conditions prescribed for utilization of fly ash are as follows:

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

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

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

15. Under the above notification, a Monitoring Committee is to be constituted in every State/Union Territory under the Chairmanship of the Secretary, Department of Environment with representatives from Department of Power, Department of Mining, Road and Building Construction Department and State Pollution Control Board. The Committee is required to deal with

any unresolved issue by Dispute Settlement Committee in addition to the monitoring and facilitating the implementation of the notification.

16. Monitoring Committee constituted by the MoEF&CC is to have members from Ministry of Coal., Ministry of Power., Central Pollution Control Board., Central Electricity Authority., Head, Fly Ash Unit of the Department of Science and Technology and Building Material Technology Promotion Council.

17. It is further stated, in the affidavit of the MoEF&CC, that as per the information received from Central Electricity Authority (CEA), during a meeting, the fly ash generation from 138 thermal power plants is reported to be 163.56 million tons during the year 2012-13. The overall utilization of fly ash was 100.73 million ton, which is about 61.37% of the total fly ash generated. During the year 2012-13, out of 138 (one hundred thirty-eight) thermal power stations for which data was received, 66 (sixty-six) power stations have achieved the targets of fly ash utilization as stipulated in the notification dated 03.11.2009. The remaining 33 (thirty-three) plants have achieved the level of fly ash utilization up to 75%. The 19 (nineteen) plants have achieved the level of fly ash utilization up to 60%.

18. CPCB has given a chart showing progress of fly ash generation and utilization from 1996 to 2012. Some of the State Pollution Control Boards/Committees have filed their affidavits indicating the extents to which utilization of fly ash has taken place.

19. Vide Notification dated 25.01.2016, further amendment was made to the Notification dated 14.09.1999 mainly to the effect that the area within which the fly ash is to be utilized has been increased to 300 kms. The time period to comply with the requirements of 100% utilization of fly ash was extended to 31.12.2017.

20. The matter has been considered on several dates in the last four and a half years. Reference may be made to some of the orders passed.
21. Vide order dated 06.01.2016, the MoEF&CC, the State Governments/Union Territories were required to furnish the details of the Monitoring Committees and if such Committees were not constituted as per the mandate of the Notification, the same were directed to be constituted.
22. On 03.01.2018, the States/Union Territories were directed to furnish their action plans for utilization of fly ash produced and generated by thermal power plants in accordance with the Notifications.
23. On 16.02.2018, it was noted that only eight States have submitted their action plans. MoEF&CC was directed to expedite the collection of action plans from the concerned States.
24. On 20.03.2018, the Chief Secretaries of the States, who had failed to submit action plans, were again required to do so.
25. On 12.07.2018, it was stated that 20 States have submitted their action plans out of which 13 were not complete or satisfactory. The MoEF&CC was directed to monitor the compliance of the earlier orders referred to above and submit a status report.
26. Accordingly, status report has been filed before this Tribunal on 07.09.2018 by the MoEF&CC stating that no fly ash is generated in 15 States/UTs namely Goa, Himachal Pradesh, Jammu & Kashmir, Kerala, Manipur, Mizoram, Nagaland, Sikkim, Tripura, Andaman and Nicobar, Chandigarh, Daman & Diu, Dadra & Nagar Haveli, Lakshadweep and Pondicherry. Accordingly, the said States and Union Territories and their authorities be deleted from the array of parties.
27. Twenty States have given their action plans. Only State of Arunachal Pradesh has not furnished any action plan. Since there is nothing to show that there is any fly ash generation in the said

State, the said State or its authorities are also deleted from array of parties. We do not understand why deletion of unnecessary parties was never sought.

28. The position of each of the remaining twenty States has been mentioned. It may be noted that though the last date for achieving 100% utilization was 31.12.2017 and the said date has not been extended, the States have sought extension of time by 2 to 5 years upto the year 2023 which is wholly uncalled for. This Tribunal has no jurisdiction to grant any extension of time in conflict with the mandate of notification under the Environment (Protection) Act, 1986, particularly when such extension will enable harm to environment, in violation of statutory scheme. It is also stated by some of the States that action plans to achieve 100% utilization of fly ash has not even been furnished by some of the Thermal Power Plants.

29. We may also note that the NITI Aayog, vide order dated 12.06.2018, constituted a Committee headed by Joint Secretary, MoEF&CC, Govt. of India, to develop a focused strategy for best utilization of fly ash to manufacture end products. Issues to be gone into by the Committee are - revisiting existing notifications / guidelines, transportation of fly ash, better utilization in MSME Sector, cement and allied industries, use of mobile app in data base, guidelines for ash parks, regulation of red bricks, incentives for 100% utilization, incentives to TPPs for new innovations. Draft report was circulated by MoEF&CC on 16.10.2018. The Committee noted that the existing notification needed review and the same were not being fully implemented.

30. In view of the above, only question for consideration is the directions to be issued on account of failure of 100% utilization of fly ash which has admitted adverse impact on public health and to give effect to the 'Precautionary Principle' and the 'Polluter Pays'

Principle to be applied under Section 20 the National Green Tribunal Act, 2010.

31. Since non-utilization of 100% fly ash, especially after 31.12.2017, the date fixed in the Notification of the MoEF&CC dated 25.01.2016, invites penal consequences under the provisions of the Environment Protection Act, 1986, liability in this regard is not only of the persons responsible for non-utilization but also for generators of the fly ash. The generator cannot avoid responsibility for due disposal of any residue pollutants on account of its activity. The principle of 'extended producer's liability' is well recognized as part of 'Sustainable Development'. Applying the 'Precautionary Principle', the permission to dump fly ash in the mined voids has to be subject to all precautionary measures necessary for environment protection: Area of utilization of fly ash has been extended to 300 kms, which may call for more stringent conditions to avoid damage to the environment.

32. The adverse effect of fly ash mismanagement is well acknowledged in decision of Courts¹ as well as by public authorities².

33. We are of the view that a Joint Committee of the representatives of the Ministry of Environment, Forest and Climate Change, Central Pollution Control Board and IIT Roorkee and any other member considered necessary by MoEF&CC needs to be forthwith constituted to finalize action plan covering all aspects so as to not only achieve 100% utilization of fly ash but also to ensure its scientific and environmentally sound disposal. The Committee will also be required to determine the amount of damages to be paid for the violation of requirement of utilization of fly ash. Needless to say that statutory authorities under the Environment

¹ Occupational Health and Safety Association v. Union of India & Ors. (2004) 3 SCC 547 ¶12-15

² <http://pib.nic.in/PressReleaseDetail.aspx?PRID=1520080>, <https://economictimes.indiatimes.com/news/politics-and-nation/pmo-asks-agencies-to-increase-usage-of-fly-ash-by-10-times/articleshow/65814656.cms>, <https://energy.economictimes.indiatimes.com/news/power/from-coal-production-to-renewable-power-obligations-niti-aayog-lays-down-its-3-year-agenda-for-indias-energy-sector/58486230>, <http://pib.nic.in/newsite/PrintRelease.aspx?relid=179785>

(Protection) Act, 1986, the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974 are entitled to assess and recover damages on 'Polluter Pay's Principle' in exercise of incidental powers to protect environment. The Committee may determine any other allied or incidental issue.

34. Accordingly, we direct constitution of such a Committee by the MoEF&CC forthwith. The Committee may give its report within two months from the date of its assuming charge to the MoEF&CC.

35. The report of the Committee may be complied with by all concerned, subject to any challenge to such report, in accordance with law.

36. Pending submissions of such report, we direct all Thermal Power Stations who have failed to dispose of 100% fly ash up to 31.12.2017, to deposit damages for environment restoration as follows:

Sl. No.	Capacity of the Thermal Power Plant	Cost of damages
1.	Thermal Power Plants upto the capacity of 500 MW	Rs. 1 Crore
2.	Thermal Power Plants upto the capacity of 1000 MW	Rs. 3 Crores
3.	Thermal Power Plants beyond the capacity of 1000 MW	Rs. 5 Crores

37. The above amount may be deposited with the CPCB within one month from today, failing which interest @ 12% p.a. will be payable for the delayed period. The amount may be spent on restoration and restitution of the environment.

38. No damages will be payable by the Thermal Power Plants which have utilized 100% of the ash generated by it in accordance with law up to 31.12.2017 and disposing it in scientific manner. In case, any such claim is found to be false by the Committee, the amount of penalty payable may be up to five times.

39. The MoEF&CC may furnish an action taken report to this Tribunal on or before 31.03.2019 by e-mail at ngt.filing@gmail.com. All the applications are disposed of.

40. Report may be put up for consideration on 9th April, 2019.

Adarsh Kumar Goel, CP

S.P. Wangdi, JM

K. Ramakrishnan, JM

Dr. Nagin Nanda, EM

November 20, 2018
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S.W.



भारत का राजपत्र

The Gazette of India

असाधारण

EXTRAORDINARY

भाग III—खण्ड 4

PART III—Section 4

प्राधिकार से प्रकाशित

PUBLISHED BY AUTHORITY

सं. 211]

नई दिल्ली, शुक्रवार, अगस्त 20, 2010/श्रावण 29, 1932

No. 211]

NEW DELHI, FRIDAY, AUGUST 20, 2010/SHRAVANA 29, 1932

CENTRAL ELECTRICITY AUTHORITY

NOTIFICATION

New Delhi, the 20th August, 2010

No. CEAT/ETD/MP/R/01/2010.—In exercise of the powers conferred by sub-section (2) of Section 177 of the Electricity Act, 2003, the Central Electricity Authority hereby makes the following regulations namely :—

1. Short Title and Commencement.—(1) These regulations may be called the Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2010.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. Definitions.—(1) In these regulations, unless the context otherwise requires,—

(a) "Act" means the Electricity Act, 2003;

(b) "Authority" means the Central Electricity Authority established under sub-section (2) of Section 70 of the Act;

(c) "Base Load Operation" means operation at maximum continuous rating (MCR) or its high fraction;

(d) "Basic Insulation Level (BIL)" means reference voltage level expressed in peak (crest) voltage with standard 1.2/50 μ s lightning impulse wave. Apparatus should be capable of withstanding test wave of basic insulation level or higher;

(e) "Black Start" means the start up of a generating unit or gas turbine or internal combustion (IC) engine based generating set without use of external power following grid failure;

(f) "Boiler Maximum Continuous Rating (BMCR)" means the maximum steam output, the steam generator (boiler) can deliver continuously at rated parameters;

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- (ii) The demineralized water shall be stored in minimum 2 nos. DM water storage tanks of total storage capacity equal to 24 hour Station requirement.

(e) *Waste Water Treatment System*

The waste water generated at various locations shall be segregated at the source of generation according to its type. Similar type of waste water shall be collected at one point and treated. The treated water shall be collected in central monitoring basin and recycled for plant use or disposed off complying with the requirements of MOE&F and any other stipulation of the CPCB and SPCB in this regard.

(5) **Fire detection, alarm and protection system**

- (a) A comprehensive fire detection, alarm as well as fire protection system shall be installed for the Station in conformity with relevant IS. In addition, all buildings shall conform to National Building Code. Fire protection system shall be designed as per the guidelines of Tariff Advisory Committee (TAC) established under Insurance Act 1938 and /or NFPA.
- (b) Automatic fire detection and alarm system shall be intelligent and addressable type and shall be provided to facilitate detection of fire at the incipient stage and give warning to the fire fighting staff.
- (c) Major equipment to be used for fire detection and protection system shall be in accordance with Indian Standards or UL (Underwriters Laboratories, USA) or FM (Factory Mutuals, USA) or LPCB (Loss Prevention Certification Board, UK) or VDS (Germany).
- (d) Dedicated fire water storage and pumping facilities shall be provided for the fire fighting system as per TAC guidelines. Main fire water pumps shall be electrically driven and standby pumps shall be diesel engine driven.
- (e) Hydrant system, complying with TAC guidelines, shall be provided at various locations to cover the entire Station.
- (f) All major and minor fire risks in the Station shall be protected against fire by suitable automatic fire protection systems. Following systems shall be generally adopted for various fire risks:
- (i) Automatic high velocity water spray system, complying with TAC guidelines, shall be provided for the following areas:
- (A) Transformers of rating 10 MVA and above or oil filled transformers with oil capacity of more than 2000 litres;

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- (B) Alternatively, these transformers may be provided with Nitrogen injection based fire protection system. The transformers of 220kV or higher voltage may preferably be provided with Nitrogen injection based fire protection system in addition to automatic high velocity water spray system;
- (C) Lubricating oil systems including storage tanks, purifier units, coolers, turbine oil canal pipelines;
- (D) Generator seal oil system tanks, coolers;
- (E) Steam generator burner fronts.
- (ii) Steam turbine bearing housing and air pre-heater shall be provided with manually actuated high velocity water spray system.
- (iii) Automatic medium velocity water spray system, complying with TAC guidelines, shall be provided for the areas relating to:
- (A) Cable galleries, cable vaults, cable spreader rooms, cable risers, cable shafts etc.;
- (B) Coal conveyors, transfer points, crusher houses etc.;
- (C) Fuel oil pumping stations;
- (D) LDO and day oil tanks;
- (E) DG set building.
- (iv) Automatic foam system shall be provided for fuel oil storage tanks as per NFPA guidelines.
- (v) Automatic inert gas flooding system, comprising of 2x100% inert gas cylinder batteries and conforming to NFPA, shall be provided for Unit control rooms, control equipment rooms and area above false ceiling of these rooms.
- (g) Portable fire extinguishers as per TAC guidelines shall be provided for each room/area of power station in addition to fixed fire protection system to extinguish fire in its early phase to prevent its spread.
- (h) Fire station and fire tenders alongwith trained staff shall also be provided for the Station.
- (i) Passive fire protection measures such as fire barriers for cable galleries and shafts etc., fire retardant coatings, fire resistant penetration sealing for all openings in floors, ceilings, walls etc., fire proof doors etc. shall be provided to prevent spreading and for containment of fire.

- (6) **Compressed air system**
- (a) Compressed air system comprising of instrument air and service air shall be provided to cater to the requirement for operation of various pneumatically operated drives and general purpose cleaning and maintenance services. Air dryers shall be provided for instrument air to achieve desired dryness.
 - (b) At least one number air compressor shall be provided as standby.
- (7) **Ventilation and air-conditioning system**
- (a) Suitable ventilation and air-conditioning system shall be provided to achieve proper working environment in the Station.
 - (b) Central control room, local control rooms and service building for O&M personnel shall be air conditioned. Air- conditioned areas shall be maintained at about 25°C and 50 % relative humidity for comfort conditions. Water chilling unit or condensing units shall have 2x100% capacity equipment. Package type air-conditioners shall have 2x100% capacity or 3x50% capacity equipment. For window air conditioners and split air conditioners, if used for small control rooms, at least one unit shall be kept as standby.
 - (c) The type of ventilation systems to be provided for non-air conditioned areas shall be as under:
 - (i) All floors of TG building, switchgear : Evaporating cooling system rooms and cable gallery
 - (ii) Other buildings : Mechanical ventilation system
- (8) **Mill rejects system-** The mill rejects system shall be provided to collect reject from coal mills in case of vertical mills. The system shall be mechanized i.e. drag chain conveyor or pneumatically pressurized conveying system. The system shall consist of collection of rejects from each coal mill and transport to silos for final disposal.
- (9) **Electric overhead travelling (EOT) crane**
- (a) The EOT cranes shall be provided for maintenance of TG cycle equipment and CW pumps. These shall comply with the requirements of latest versions of relevant IS. The crane capacity shall be taken as 10% more than the single heaviest equipment to be lifted.

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GOVERNMENT OF KARNATAKA
DEPARTMENT OF FACTORIES, BOILERS, INDUSTRIAL SAFETY & HEALTH

Phone No 080 26531200
Fax No 080-26531262

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

General Manager,
M/s. NTPC Limited,
Kudga Super Thermal Power Project,
Plot No. 9, Mallikarjun Nagar,
Mangaluru Road, Bijapur-586 400

Sir,

Subject: [REDACTED]

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

* * *

We are pleased to inform you that the Task Force Committee in its meeting held on 12.09.2013 has reviewed the presentation documents, details of the safety systems adopted etc and has concurred in principle to issue the Site Clearance for the establishment of super thermal power project for generating electrical power of 2 X 810 MW at Near Kudga village, Basavana bagewadi Taluk, Bijapur District.

The site clearance is issued subject to the following conditions:

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

- 7. The mitigation measures as submitted by the contractor and as suggested by the committee shall be incorporated in the safety emergency plan. The same shall be submitted for scrutiny and approval.
- 8. The provisions of rule 50 to 251 of Building and Other Construction Workers (Regulation of Employment and condition of service) (Karnataka) Rules 2016 shall be complied to ensure occupational safety and health of the construction workers involved project. The compliance shall be furnished regularly to jurisdiction officers of our department and to the Director, Factories, Boilers, Industrial Safety and Health.

Suggestions

- a. The industry shall adopt the rain harvesting system to supply water to the canteen.
- b. The industry shall adopt solar energy system at least catering to street lighting and in other suitable areas like water heating in the canteen, etc.

All the above conditions and suggestions shall be complied and a report shall be submitted to the department in respect of the rights to modify or withdraw clearance issued at any point of time.

Your's Faithfully,

[Signature]
 Chairman,
 Task Force Committee
 and Director of Factories, Boilers,
 Industrial Safety and Health, Bangalore.

[Handwritten mark]

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

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

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

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

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

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

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

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

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

Director of Factories &
Boilers,
Bengaluru

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

for kind information please.

45/11
29/4/16

29/4/2016

मे. द्वारा अनुमित

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29/4/16

ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ಕಾರ್ಖಾನೆಗಳು, ಬಾಂಬ್‌ಯುನಿಟ್‌ಗಳು, ಕೈಗಾರಿಕಾ ಸುರಕ್ಷತೆ ಮತ್ತು ಸ್ವಾಸ್ಥ್ಯ ಇಲಾಖೆ

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

ನಿರ್ದೇಶಕರ ಕಾರ್ಯಾಲಯ.

ಕಾರ್ಮಿಕ ಭವನ, 2ನೇ ಮಹಡಿ, ಬನ್ನೇರುಘಟ್ಟ ರಸ್ತೆ,
ಬೆಂಗಳೂರು-29, ದಿನಾಂಕ: 13.04.2016

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

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

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

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

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

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

ಇವುಗಳಿಗೆ ಅನುಮೋದನೆ ನೀಡುವುದು

ಇಂಜಿನಿಯರ್

ಸಹಾಯಕ ನಿರ್ದೇಶಕರು (ಕಾರ್ಮಿಕ ಸೇವೆ)

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