

Petition No.....



**A Maharatna Company**

**SIMHADRI 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 Simhadri Super Thermal Power Station Stage-I (1000 MW) **for the period from 01.04.2019 to 31.03.2024**

**INDEX**

<b>Sl. No.</b>	<b>Description</b>	<b>Page No.</b>
1	Petition for Approval of Tariff of Simhadri Super Thermal Power Station Stage-I (1000 MW) for the period from 01.04.2019 to 31.03.2024	1 - 11
2	Affidavit	12 - 13
3	Appendix-I	14 - 56
4	Annexure-I	57
5	Annexure-II	58
6	Annexure-III	59
7	Annexure-IV	60 - 67
8	Annexure-V	68 - 71
9	Annexure-VI	72 - 74
10	Annexure-VII	75 - 80
11	Annexure-VIII	81
12	Annexure-IX	82
13	Annexure-X	83 - 90
14	Annexure-XI	91 - 98

*Signature*

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

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

Respondents

- 1** AP Eastern Power Distribution Company Ltd. (APEPDCL)  
Corporate Office  
P&T Colony, Seethammadhara,  
Visakhapatnam – 530 013 - (AP)
- 2** AP Southern Power Distribution Company Ltd. (APSPDCL)  
Corporate Office  
Back Side Srinivasa Kalyana Mandapam  
Tiruchhanur Road, Kesavayana Gunta,  
Tirupathi – 517 503 (AP)
- 3** Telangana State Northern Power Distribution Company Ltd.  
(TSNPDCL)  
H.No. 2-5-31/2, Vidyut Bhavan  
Nakkalagutta, Hanamkonda  
Warangal – 506 001 (AP)
- 4** Telangana State Southern Power Distribution Company Ltd.  
(TSPDCL)  
Mint Compound  
Corporate Office  
Hyderabad (AP) – 500 063.

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. Simhadri Super Thermal Power Station Stage-I (1000 MW) Stage – I (2X500 MW) (hereinafter referred to as Simhadri-I) is one such station located in the State of Andhra Pradesh . The power generated from Simhadri-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*

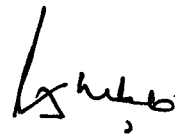


*with the true up petition for the period 2014-19 in accordance with the CERC (Terms and Conditions of Tariff) Regulations, 2014.”*

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 Simhadri-I for the period from 01.04.2019 to 31.03.2024 as per the Tariff Regulations 2019.

- 6) The tariff of the Simhadri-I for the tariff period 1.4.2014 to 31.3.2019 was determined by the Hon'ble Commission vide its order dated 27.06.16 in Petition No. 270/GT/2014 in accordance with the CERC (Terms & Conditions of Tariff) Regulations 2014. Further, Hon'ble Commission vide Review Order dated 27.01.17 has revised the tariff of the station. The petitioner vide affidavit dated 30.10.2019 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 27.06.16 in Petition no 270/GT/2014 has allowed a capital cost of Rs 3675.96 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. 3652.02 Crs based on the actual expenditure after truing up exercise for the period 2014-19. Accordingly, the Petitioner has adjusted an amount of Rs.(-) 23.94 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 3652.02 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 , 25 and 76 of the Tariff Regulations, 2019.

9) Simhadri – I being a coastal project was designed to use sea water for cooling. The NDCT originally envisaged is under operation since 2002 in Simhadri-I. In view of corrosive nature of sea water and coastal atmosphere, to protect and enhance the life of NDCT structure, 2000 micron PU coating was provided on the concrete surface which was coming in direct contact of sea water. However, despite all the protective measures taken by Petitioner, Spalling of concrete of shell structure was observed in NDCT. Due to deteriorating condition/health of the NDCTs , it was also very unsafe for the personnel working for the maintenance. To assess the condition further assessment study was awarded to Central Building Research Institute (CBRI) , Roorkee in October 2010 . CBRI carried out the study and submitted its report. In its report, CBRI recommended the following

A) Short term measures:

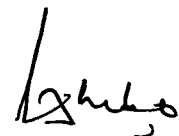
Civil repair and rehabilitation of Cooling Towers including associated Structures like columns, beams, Staircase etc;

B) Long term measures:

Electrochemical techniques such as cathodic protection ( CP) was recommended by CBRI as a long term measure.

However CBRI also mentioned its apprehension in the report about effectiveness, service life, high cost involved and availability of skilled manpower.

Based on CBRI recommendation and apprehensions of the cost effectiveness of corrective measures , and also for sustainable and safe operation of Simhadri-I units, it was decided to install new IDCT ( Fibre Reinforced Plastic based) in place of repairing NDCT. The IDCT has been awarded by Petitioner and it is expected that the same for one unit shall be capitalized and come in operation during 2020-21 and IDCT for second unit shall be under operation during 2021-22.

 5

Since the replacement of NDCT with IDCT is due to Force Majeure Condition, it is prayed that additional capitalization on account of IDCT may be allowed by Hon'ble Commission under Regulation 25(2)(b) - Force Majeure condition and Regulation 76 under Power to Relax.

- 10) 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 Based
Type of cooling water system	NDCT/ IDCT ( as per above para)
Consumption of Water	Sea water: 45.465 MCM Sweet water: 4.622 MCM
Rate of Water charges	Sea water: 5 Paisa/KL Sweet water: Rs. 16.60/KL for FY 2019-20 with escalation of 5 % every year Other charges may also be payable as per agreement
Total Water Charges	Yearly details as per Form-3A of Appendix-I

- 11) 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



12) The present petition is filed on the basis of norms specified in the Tariff Regulations 2019. It is submitted that the petitioner is in the process of installing the Emission Control Systems (ECS) in compliance of the Revised Emission Standards as notified by MOEF vide notification dated 07.12.2015 as amended. Completion of these schemes in compliance of revised emission norms will effect the station APC, Heat Rate , O&M expenses etc. In addition the availability of the unit/ station would be also effected due to shutdown of the units for installation of ECS. The petitioner would be filing the details of the same in a separate petition in terms of the Regulation 29 of Tariff Regulations 2019. The tariff of the instant petition would undergo changes consequent to the order of the Hon'ble Commission in the said ECS petition.

13) 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 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.*

*g. h. p 7*

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

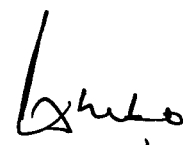
Petitioner has claimed the additional expenditure towards ash transportation charges for the period 2017-18 and 2018-19 in the true-up petition filed vide affidavit dated 30.10.19 in respect of the instant station.

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

- 14) Petitioner respectfully submits that Simhadri –I is a coastal power station and Sea water is being used for the purpose of cooling in condenser, Auxiliary cooling water and Ash handling system as per design instead of river water (sweet water). The Auxiliary energy consumption norm for 500 MW units is fixed at 5.75% (>85% Loading factor) as per Tariff norms for the period of 2019-24. This norm is applicable to all 500 MW stations with NDCTs for both coastal based and river water based power stations..

Due to usage of sea water APC of Simhadri-I is much higher than the norms provided by the Regulations. The following factors contribute in increasing APC for power plants using sea water over the river water based power plants.

- SP. Gravity of Seawater: (around 2.5% higher than that of River water) – Requires more pumping power
- Cycles of Concentration (COC) : 1.5 ( instead of 3.0 for river water based systems) : Requires more blow down and more make up



The system wise additional pumping power (with sea water) required for a 2X500MW Station at 85 % load in comparison to river water based stations is tabulated below:

	System	Additional Power (MW)
1	Cooling Water System	1.055
2	ASH HANDLING SYSTEM	0.0319
3	Auxiliary Cooling Water System	0.0102
	TOTAL	1.0971
	IMPACT ON APC (%) at 85% LF	0.13

It can be seen from the above table that the impact of using Sea water on Aux power Consumption for 1000 MW Station (2 X 500 MW) comes to 0.13% at 85% loading. This impact at part loads shall be much more than as calculated above. For which, adequate allowance to be provided in Tariff norms.

Further, the recent changes in regime of operation of power sector are influencing the actual AEC/APC of the power station due to .

- Partial loading and lowering of technical minimum load
- SCED implementation .

Under the above regime of Operation, Schedule Generation (SG) is being revised around 150 times in a day for Simhadri Station. Almost for the 50% of time Station is running at Tech min loads (55% to 65%). To cope up with the above changes in grid operation, it becomes necessary to keep all 4 CW pumps in operation per stage and also keep one additional mill in spinning at loads less than 85% to meet the immediate revisions of SG. The approximate impact comes to 0.1% in AEC/APC. This is more evident from the operating data during the FY 19-20 till August'19 as tabulated below:

FY	LF (%)	APC Actual (%) (A)	APC with Compensation (%) (B)	Gap from Tariff (%) A-B
19-20 till Aug	71.91	6.95	6.40	0.55

*Handwritten signature*

Para 14.4 of the Statement of Objects and Reasons (SOR) for CERC (terms and Condition of Tariff ) regulations 2019 provides as under:

Quote

**14.4 Auxiliary Energy Consumption [ Regulation 49(E) ]**

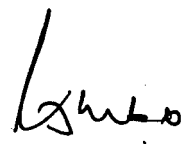
**14.4.1**

.....  
.....*The additional auxiliary consumption of coastal plants for usage of sea water have not been made part of tariff Regulation as the same would vary from station to station depending upon the equipment installed, configuration which will be considered separately on case to case basis.*  
.....

Unquote

In view of the above, the Petitioner prays to allow additional Auxiliary Power Consumption for Simhadri-I on actual APC. The Hon'ble Commission may be pleased to allow the same under Regulation 76 & 77.

- 15) It is submitted that the Petitioner has already paid the requisite filing fee vide UTR No. CMS 1106438370 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 recovery of filing fee and publication fee directly from the beneficiaries.
- 16) 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.

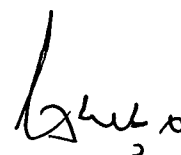


- 17) It is submitted the Petitioner has served the copy of the Petition on to the Respondents mentioned herein above and has posted the Petition on the company website i.e. [www.ntpc.co.in](http://www.ntpc.co.in)
- 18) It is submitted that the petitioner is filing this tariff petition subject to the outcome of its various appeals/ petitions pending before different courts. Besides, the petitions filed by NTPC for determination of capital base as on 31.3.2019 through true-up exercise are pending before the Hon'ble Commission and would take some time. The Petitioner, therefore, reserves its right to amend the tariff petition as per the outcome in such appeals/ petitions, if required.

### **Prayers**

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

- i) Approve tariff of Simhadri Super Thermal Power Station Stage-I (1000 MW) for the tariff period 01.04.2019 to 31.03.2024.
- ii) Allow the recovery of filing fees as & when paid to the Hon'ble Commission and publication expenses from the beneficiaries.
- iii) Allow reimbursement of Ash Transportation Charges directly from the beneficiaries quarterly on net basis.
- iv) Allow the relaxation in norms for Auxilliary Power Consumption
- v) Pass any other order as it may deem fit in the circumstances mentioned above.



**Petitioner**

**Place: New Delhi**

**Date: 28.01.2020**



**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 Simhadri 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. AP Eastern Power Distribution Company Ltd.  
(APEPDCL)  
Corporate Office  
P&T Colony, Seethammadhara,  
Visakhapatnam – 530 013 - (AP)

AND OTHERS

**Affidavit**

I, Rohit Chhabra, son of Sh. S M Chhabra, aged about 54 years, having office at NTPC Bhavan, SCOPE Complex, Lodhi Road, New Delhi do solemnly affirm and state as under:

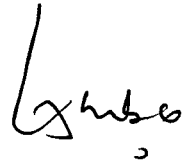
1. That I am the Addl. General Manager (Commercial) in Petitioner Corporation NTPC Ltd. and am well conversant with the facts of the case and am competent to swear the present affidavit.



*[Handwritten Signature]*

12

2. That I have read the contents of the accompanying Petition being filed by NTPC and have understood the same.
3. That the contents of the accompanying Petition being filed by NTPC are based on information available with the Petitioner in the normal course of business and believed by the deponent to be true.

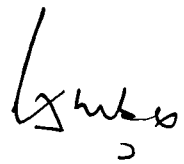


Deponent

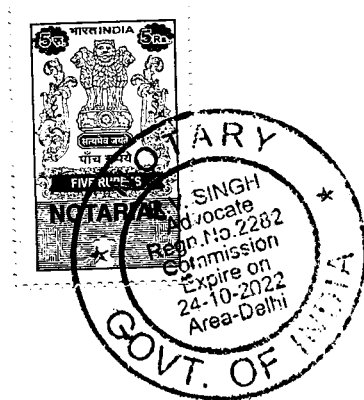
Verification

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

Verified at New Delhi on this day <sup>28<sup>th</sup></sup> January 2020.



Deponent



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

Notary Public, DELHI

28 JAN 2020

**TARIFF FILING FORMS (THERMAL)**

**FOR DETERMINATION OF TARIFF**

**FOR**

**Simhadri Super Thermal power Station Stage-I**

**(From 01.04.2019 to 31.03.2024)**

**PART-I**

**APPENDIX-I**

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

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

## Provided yearwise for the period 2019-24

\*\* Additional Forms

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

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	✓

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

*Signature*

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

16  
Lgheo

## Summary of Tariff

Name of the Petitioner:		NTPC Limited								
Name of the Generating Station:		Simhadri Super Thermal power Station Stage-I								
Place (Region/District/State):		Southern Region/ Visakhapatnam/ Andhra Pradesh								
		Amount in Rs. Lakhs								
S. No.	Particulars	Unit	Existing 2018-19	2019-20	2020-21	2021-22	2022-23	2023-24		
1	2	3	4	5	6	7	8	9		
1.1	Depreciation	Rs Lakh	11,441.32	11,498.93	12,172.28	13,389.85	14,329.29	14,859.27		
1.2	Interest on Loan	Rs Lakh	2,592.60	2,258.23	2,011.08	1,806.71	1,496.70	1,089.16		
1.3	Return on Equity	Rs Lakh	21,564.41	20,641.57	20,964.92	21,473.35	21,806.84	21,961.79		
1.4	Interest on Working Capital	Rs Lakh	11,991.76	8,088.39	8,147.15	8,216.62	8,279.47	8,330.26		
1.5	O&M Expenses	Rs Lakh	21,819.31	24735.36	25635.52	26571.05	27542.60	28539.86		
1.6	Special Allowance (If applicable)	Rs Lakh			NA					
1.7	Compensation Allowance (If applicable – relevant for column 4 only)	Rs. Lakh	500.00							
	<b>Total</b>	Rs Lakh	<b>69909.40</b>	<b>67222.49</b>	<b>68930.94</b>	<b>71457.59</b>	<b>73454.89</b>	<b>74780.33</b>		
2.1	Landed Fuel Cost (coal/gas/RLNG/ liquid)	Rs/Ton				3748				
	(%) of Fuel Quantity	(%)				100				
2.2	Landed Fuel Cost Imported Coal									
	(%) of Fuel Quantity									
2.3	Landed Fuel Cost ( coal/gas /RLNG/liquid) other than FSA	Rs/Ton				NA				
	(%) of Fuel Quantity	(%)								
2.4	Landed Fuel Cost Imported Coal other than FSA.					NA				
	(%) of Fuel Quantity									
2.5	Secondary fuel oil cost	Rs/Unit				0.021				
	Energy Charge Rate ex-bus (Paise/kWh)	Rs/Unit				2.868				

*Shri*

(Petitioner)

*Shri*

Name of the Petitioner: NTPC Limited

Name of the Generating Station: Simhadri Super Thermal power Station Stage-I

Amount in Rs. Lakhs

**Statement showing claimed capital cost – (A+B)**

S. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Opening Capital Cost	3,65,202.59	3,67,469.59	3,76,679.59	3,85,516.59	3,88,516.59
2	Add: Addition during the year/period	2,267.00	9,210.00	8,837.00	3,000.00	2,500.00
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	3,67,469.59	3,76,679.59	3,85,516.59	3,88,516.59	3,91,016.59
7	Average Capital Cost	3,66,336.09	3,72,074.59	3,81,098.09	3,87,016.59	3,89,766.59

**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	365202.59	367469.59	376679.59	385516.59	388516.59
2	Add: Addition during the year / period	2267.00	9210.00	8837.00	3000.00	2500.00
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	367469.59	376679.59	385516.59	388516.59	391016.59
7	Average Capital Cost	366336.09	372074.59	381098.09	387016.59	389766.59

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

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



(Petitioner)

**Name of the Petitioner:** NTPC Limited  
**Name of the Generating Station:** Simhadri Super Thermal power Station Stage-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
	<b>Return on Equity</b>					
1	Gross Opening Equity (Normal)	1,09,560.78	1,10,240.88	1,13,003.88	1,15,654.98	116554.98
2	Less: Adjustment in Opening Equity	-				
3	Adjustment during the year		0.00	0.00	0.00	0.00
4	Net Opening Equity (Normal)	1,09,560.78	1,10,240.88	1,13,003.88	1,15,654.98	1,16,554.98
5	Add: Increase in equity due to addition during the year / period	680.10	2763.00	2651.10	900.00	750.00
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)	1,10,240.88	1,13,003.88	1,15,654.98	1,16,554.98	1,17,304.98
11	Average Equity (Normal)	1,09,900.83	1,11,622.38	1,14,329.43	1,16,104.98	1,16,929.98
12	Rate of ROE (%)	18.782	18.782	18.782	18.782	18.782
13	Total ROE	20,641.57	20,964.92	21,473.35	21,806.84	21,961.79

  
(Petitioner)



Name of the Petitioner: NTPC Limited

Name of the Generating Station: Simhadri Super Thermal power Station Stage-I

Statement showing Return on Equity at *with avg. ROI*

Amount in Rs. Lakhs

S. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
<b>Return on Equity (beyond the original scope of work excluding additional capitalization due to Change in Law)</b>						
1	Gross Opening Equity (Normal)	0.00	0.00	0.00	0.00	0.00
2	Less: Adjustment in Opening Equity	0.00	0.00	0.00	0.00	0.00
3	Adjustment during the year	0.00	0.00	0.00	0.00	0.00
4	Net Opening Equity (Normal)	0.00	0.00	0.00	0.00	0.00
5	Add: Increase in equity due to addition during the year / period	0.00	0.00	0.00	0.00	0.00
7	Less: Decrease due to De-capitalisation during the year / period	0.00	0.00	0.00	0.00	0.00
8	Less: Decrease due to reversal during the year / period	0.00	0.00	0.00	0.00	0.00
9	Add: Increase due to discharges during the year / period	0.00	0.00	0.00	0.00	0.00
10	Net closing Equity (Normal)	0.00	0.00	0.00	0.00	0.00
11	Average Equity (Normal)	0.00	0.00	0.00	0.00	0.00
12	Rate of ROE (%)	3.836	3.836	3.836	3.837	3.806
13	Total ROE	0.00	0.00	0.00	0.00	0.00

  
(Petitioner)

Plant Characteristics

Name of the Petitioner	NTPC Ltd	
Name of the Generating Station	Simhadri Super Thermal power Project, Stage-I	
Unit(s)/Block(s)/Parameters	Unit-I	Unit-II
Installed Capacity ( MW)	500	500
Schedule COD as per Investment Approval	Oct'2002	July 2003
Actual COD /Date of Taken Over (as applicable)	01.09.2002	01.03.2003
Pit Head or Non Pit Head	Non pit Head	Non pit Head
Name of the Boiler Manufacture	BHEL	BHEL
Name of Turbine Generator Manufacture	BHEL	BHEL
Main Steams Pressure at Turbine inlet (kg/Cm2) abs1.		
Main Steam Temperature at Turbine inlet (oC) 1		
Reheat Steam Pressure at Turbine inlet (kg/Cm2) 1		
Reheat Steam Temperature at Turbine inlet (oC)		
Main Steam flow at Turbine inlet under MCR condition (tons /hr)		
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 HeatRate (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 (Cu.m/hr)		
Design Capacity of Inlet Cooling System (cu.m/hr)(cooling tower)		
Design Cooling Water Temperature (0C)		
Back Pressure		
Steam flow at super heater outlet under BMCR condition (tons/hr)		
Steam Pressure at super heater outlet under BMCR condition) (kg/Cm2)(abs)		
Steam Temperature at super heater outlet under BMCR condition (0C)		
Steam Temperature at Reheater outlet at BMCR condition (0C)		
Design / Guaranteed Boiler Efficiency (%)4		
Design Fuel with and without Blending of Domestic/Imported Coal TPH		
Type of Cooling Tower	NDCT/IDCT	
Type of cooling system 5	sea water cooled closed circuit cooling with make up	
Type of Boiler Feed Pump 6	2nos Steam Driven and 1no Motor driven in each unit	
Fuel Details7		
-Primary Fuel	Coal	
-Secondary Fuel	HFO	
-Alternate Fuels		
Special Features/Site Specific Features - 8	Vicinity to sea and sea water make up pump house on jetty at sea.	
Special Technological Features : 9	Sea water for Condenser cooling system	
Environmental Regulation related features 10	ESP FGD under implementation	
Any other special features		
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.,		

*[Signature]*  
(Petitioner)

## Normative parameters considered for tariff computations

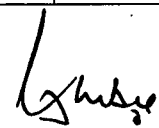
Name of the Petitioner:		NTPC Limited					
Name of the Generating Station:		Simhadri Super Thermal power Station Stage-I					
		(Year Ending March)					
Particulars	Unit	Existing 2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7	8
Base Rate of Return on Equity \$\$	%	15.50	15.50	15.50	15.50	15.50	15.50
Base Rate of Return on Equity on Add. Capitalization** \$\$	%	-	3.1652	3.1657	3.1657	3.1662	3.1409
Effective Tax Rate	%	21.4588	17.4720	17.4720	17.4720	17.4720	17.4720
Target Availability	%	85.00	85.00				
In High Demand Season	%	-	-	85.00	85.00	85.00	85.00
Peak Hours	%	-	-	85.00	85.00	85.00	85.00
Off-Peak Hours	%	-	-	85.00	85.00	85.00	85.00
In Low Demand Season(Off-Peak)	%	-	-	85.00	85.00	85.00	85.00
Peak Hours	%	-	-	85.00	85.00	85.00	85.00
Off-Peak Hours	%	-	-	85.00	85.00	85.00	85.00
Auxiliary Energy Consumption ***	%	5.25	6.300	6.425	6.675	6.800	6.800
Gross Station Heat Rate	kCal/kWh	2375.00	2390.00	2390.00	2390.00	2390.00	2390.00
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	60	50	50	50	50	50
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	825000	825000	825000	825000	825000	825000
SBI 1 Year MCLR plus 350 basis point3	%	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

\* storage capacity of Simhadri Stage-I &amp; II Combined

\*\*\* APC has been considered as per para 9 &amp; 14 of the Petition



Petitioner

**Calculation of O&M Expenses**

Name of the Company :	NTPC Limited
Name of the Power Station :	Simhadri Super Thermal power Station Stage-I

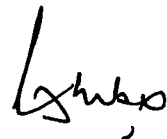
Amount in Rs. Lakhs

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	<b>O&amp;M expenses under Reg.35(1)</b>					
1a	Normative	22510.00	23300.00	24120.00	24970.00	25840.00
2	<b>O&amp;M expenses under Reg.35(6)</b>					
2a	Water Charges ## **	882.00	925.00	970.00	1017.50	1067.00
2b	Security expenses **	1343.36	1410.52	1481.05	1555.10	1632.86
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
	<b>Total O&amp;M Expenses</b>	<b>24735.36</b>	<b>25635.52</b>	<b>26571.05</b>	<b>27542.60</b>	<b>28539.86</b>

## Notification of water charges rate are Attached at Annex - XI

\*\* Subject to true up

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



Petitioner

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

Name of the company  
NTPC LIMITED  
Name of the Power Station  
Simhadri-1  
Exchange Rate as on  
USD = Rs. 69.77 EUR = Rs. 78.84 JPY = 0.6343

Financial Year (Starting from COD)	100% (Amount in Lacs)				100% (Amount in Lacs)				100% (Amount in Lacs)				100% (Amount in Lacs)			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<b>JICA-I (IDP-120)</b>																
Currency 1 JPY																
At the date of draw	20-02-2019	1,93,713.20	0.63	1,22,872.28	01-04-2020	1,93,713.20	0.63	1,22,872.28	01-04-2021	1,93,713.20	0.63	1,22,872.28	01-04-2022	1,93,713.20	0.63	1,22,872.28
Loan repayment upto previous period	01-04-2019	1,18,161.36	0.63	74,949.75	01-04-2020	1,18,161.36	0.63	74,949.75	01-04-2021	1,18,161.36	0.63	74,949.75	01-04-2022	1,18,161.36	0.63	74,949.75
Net loan at the Beginning of the period	01-04-2019	75,551.84	0.63	47,922.53	01-04-2020	66,551.84	0.63	41,973.22	01-04-2021	56,653.88	0.63	35,044.90	01-04-2022	47,219.99	0.63	31,775.92
Scheduled repayment date of principal	20-08-2019	2,995.16	0.63	2,995.16	20-08-2020	4,721.99	0.63	2,995.16	20-08-2021	6,462.28	0.63	4,721.99	20-08-2022	8,207.27	0.63	6,462.28
Scheduled payment date of interest	20-08-2019	861.70	0.63	546.58	20-08-2020	1,421.99	0.63	861.70	20-08-2021	2,163.98	0.63	1,421.99	20-08-2022	2,905.97	0.63	2,163.98
Withholding tax including surcharge on interest	20-08-2019		0.00		20-08-2020		0.00		20-08-2021		0.00		20-08-2022		0.00	
Schedule repayment date of principal	20-02-2020	4,721.99	0.63	2,995.16	20-02-2021	4,721.99	0.63	2,995.16	20-02-2022	4,721.99	0.63	2,995.16	20-02-2023	4,721.99	0.63	2,995.16
Scheduled payment date of interest	20-02-2020	832.64	0.63	528.15	20-02-2021	1,421.99	0.63	832.64	20-02-2022	2,163.98	0.63	1,421.99	20-02-2023	2,905.97	0.63	2,163.98
Withholding tax including surcharge on interest	20-02-2020		0.00		20-02-2021		0.00		20-02-2022		0.00		20-02-2023		0.00	
At the end of Financial Year	31-03-2020	66,107.86	0.63	41,932.22	31-03-2021	56,653.88	0.63	35,941.90	31-03-2022	47,219.99	0.63	29,951.58	31-03-2023	37,775.92	0.63	23,961.27

Financial Year (Starting from COD)	100% (Amount in Lacs)				100% (Amount in Lacs)				100% (Amount in Lacs)				100% (Amount in Lacs)			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<b>JICA-II (IDP-138)</b>																
Currency 1 JPY																
At the date of draw	20-02-2019	1,21,918.70	0.63	77,333.03	01-04-2020	1,21,918.70	0.63	77,333.03	01-04-2021	1,21,918.70	0.63	77,333.03	01-04-2022	1,21,918.70	0.63	77,333.03
Loan repayment upto previous period	01-04-2019	50,551.82	0.63	32,065.02	01-04-2020	56,449.06	0.63	35,837.35	01-04-2021	62,446.30	0.63	39,609.69	01-04-2022	68,343.54	0.63	47,154.36
Net loan at the Beginning of the period	01-04-2019	71,366.88	0.63	45,268.01	01-04-2020	65,469.64	0.63	41,495.68	01-04-2021	59,472.40	0.63	37,723.34	01-04-2022	53,525.16	0.63	33,951.01
Scheduled repayment date of principal	20-09-2019	2,973.62	0.63	1,886.17	20-09-2020	2,973.62	0.63	1,886.17	20-09-2021	2,973.62	0.63	1,886.17	20-09-2022	2,973.62	0.63	1,886.17
Scheduled payment date of interest	20-09-2019	647.56	0.63	410.76	20-09-2020	992.62	0.63	623.38	20-09-2021	1,339.18	0.63	864.52	20-09-2022	1,685.69	0.63	1,339.18
Withholding tax including surcharge on interest	20-09-2019		0.00		20-09-2020		0.00		20-09-2021		0.00		20-09-2022		0.00	
Schedule repayment date of principal	20-03-2020	2,973.62	0.63	1,886.17	20-03-2021	2,973.62	0.63	1,886.17	20-03-2022	2,973.62	0.63	1,886.17	20-03-2023	2,973.62	0.63	1,886.17
Scheduled payment date of interest	20-03-2020	622.38	0.63	384.77	20-03-2021	957.39	0.63	593.36	20-03-2022	1,304.78	0.63	864.52	20-03-2023	1,652.15	0.63	1,304.78
Withholding tax including surcharge on interest	20-03-2020		0.00		20-03-2021		0.00		20-03-2022		0.00		20-03-2023		0.00	
At the end of Financial Year	31-03-2020	65,419.64	0.63	41,495.68	31-03-2021	59,472.40	0.63	37,723.34	31-03-2022	53,525.16	0.63	33,951.01	31-03-2023	47,577.92	0.63	30,178.67

Financial Year (Starting from COD)	100% (Amount in Lacs)				100% (Amount in Lacs)				100% (Amount in Lacs)				100% (Amount in Lacs)			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<b>JICA-III (IDP-140)</b>																
Currency 1 JPY																
At the date of draw	20-02-2019	2,72,946.40	0.63	1,73,129.90	01-04-2020	2,72,946.40	0.63	1,73,129.90	01-04-2021	2,72,946.40	0.63	1,73,129.90	01-04-2022	2,72,946.40	0.63	1,73,129.90
Loan repayment upto previous period	01-04-2019	1,26,487.56	0.63	80,231.06	01-04-2020	1,39,000.00	0.63	88,676.41	01-04-2021	1,53,116.44	0.63	97,151.74	01-04-2022	1,68,246.63	0.63	1,09,697.10
Net loan at the Beginning of the period	01-04-2019	1,46,458.84	0.63	92,898.84	01-04-2020	1,33,944.40	0.63	84,453.49	01-04-2021	1,19,829.96	0.63	76,005.14	01-04-2022	1,04,557.22	0.63	69,201.98
Scheduled repayment date of principal	20-08-2019	6,657.22	0.63	4,222.67	20-08-2020	6,657.22	0.63	4,222.67	20-08-2021	6,657.22	0.63	4,222.67	20-08-2022	6,657.22	0.63	4,222.67
Scheduled payment date of interest	20-08-2019	1,307.30	0.63	829.22	20-08-2020	1,985.02	0.63	1,263.45	20-08-2021	2,667.22	0.63	1,741.45	20-08-2022	3,352.44	0.63	2,222.67
Withholding tax including surcharge on interest	20-08-2019		0.00		20-08-2020		0.00		20-08-2021		0.00		20-08-2022		0.00	
Schedule repayment date of principal	20-02-2020	6,657.22	0.63	4,222.67	20-02-2021	6,657.22	0.63	4,222.67	20-02-2022	6,657.22	0.63	4,222.67	20-02-2023	6,657.22	0.63	4,222.67
Scheduled payment date of interest	20-02-2020	1,268.17	0.63	815.92	20-02-2021	1,847.74	0.63	1,171.74	20-02-2022	2,426.93	0.63	1,574.75	20-02-2023	3,006.11	0.63	2,000.00
Withholding tax including surcharge on interest	20-02-2020		0.00		20-02-2021		0.00		20-02-2022		0.00		20-02-2023		0.00	
At the end of Financial Year	31-03-2020	1,33,144.40	0.63	84,453.49	31-03-2021	1,19,829.96	0.63	76,005.14	31-03-2022	1,06,515.52	0.63	67,562.79	31-03-2023	83,201.08	0.63	58,117.45

Financial Year (Starting from COD)	100% (Amount in Lacs)				100% (Amount in Lacs)				100% (Amount in Lacs)				100% (Amount in Lacs)			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<b>JICA-IV (IDP-144)</b>																
Currency 1 JPY																
At the date of draw	20-02-2019	12,514.40	0.63	7,937.88	01-04-2020	12,514.40	0.63	7,937.88	01-04-2021	12,514.40	0.63	7,937.88	01-04-2022	12,514.40	0.63	7,937.88
Loan repayment upto previous period	01-04-2019	7,937.88	0.63	5,033.67	01-04-2020	8,546.54	0.63	5,421.07	01-04-2021	9,156.98	0.63	5,809.27	01-04-2022	9,767.42	0.63	6,195.47
Net loan at the Beginning of the period	01-04-2019	4,576.52	0.63	2,904.21	01-04-2020	3,988.86	0.63	2,516.81	01-04-2021	3,357.42	0.63	2,129.61	01-04-2022	2,746.98	0.63	1,742.41
Scheduled repayment date of principal	20-09-2019	305.22	0.63	193.60	20-09-2020	305.22	0.63	193.60	20-09-2021	305.22	0.63	193.60	20-09-2022	305.22	0.63	193.60
Scheduled payment date of interest	20-09-2019	41.54	0.63	26.35	20-09-2020	46.00	0.63	28.84	20-09-2021	51.46	0.63	32.47	20-09-2022	56.92	0.63	37.93
Withholding tax including surcharge on interest	20-09-2019		0.00		20-09-2020		0.00		20-09-2021		0.00		20-09-2022		0.00	
Schedule repayment date of principal	20-03-2020	305.22	0.63	193.60	20-03-2021	305.22	0.63	193.60	20-03-2022	305.22	0.63	193.60	20-03-2023	305.22	0.63	193.60
Scheduled payment date of interest	20-03-2020	38.60	0.63	24.66	20-03-2021	46.00	0.63	29.69	20-03-2022	53.92	0.63	34.72	20-03-2023	61.84	0.63	40.69
Withholding tax including surcharge on interest	20-03-2020		0.00		20-03-2021		0.00		20-03-2022		0.00		20-03-2023		0.00	
At the end of Financial Year	31-03-2020	3,967.86	0.63	2,516.81	31-03-2021	3,357.42	0.63	2,129.61	31-03-2022	2,746.98	0.63	1,742.41	31-03-2023	2,136.54	0.63	1,355.21

*Exhibit*

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

<b>Name of the Company :</b>	NTPC Limited	
<b>Name of the Power Station :</b>	Simhadri Super Thermal power Station Stage-I	
<b>Last date of order of Commission for the project</b>	<b>Date (DD-MM-YYYY)</b>	27-06-2016
<b>Reference of petition no. in which the above order was passed</b>	<b>Petition no.</b>	270/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:		
<b>Capital cost</b>	<b>(Rs. in lakh)</b>	367596.58
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)		5642.06
Gross Normative Debt		257317.606
Cumulative Repayment		180219.55
Net Normative Debt		77098.056
Normative Equity		110278.974
Cumulative Depreciation		223225.33
Freehold land		7675.47

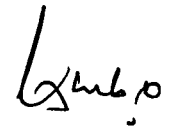


(Petitioner)



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

<b>Name of the Company :</b>	NTPC Limited	
<b>Name of the Power Station :</b>	Simhadri Super Thermal power Station Stage-I	
Reference of Final True-up Tariff Petition	<b>Affidavit dated</b>	
Capital Cost as on 31.03.2019 as per Hon'ble Commission's Order dated 27.06.16 In Pet. No. 270/GT/2014	<b>Rs. Lakhs</b>	367596.58
Adjustment as per Para (7) of this petition		2393.99
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 01.04.02019	<b>(Rs. in lakh)</b>	365202.59
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)		1784.97
Gross Normative Debt		255641.81
Cumulative Repayment		179340.08
Net Normative Debt		76301.73
Normative Equity		109560.777
Cumulative Depreciation		222983.71
Freehold land		7803.42



(Petitioner)



Name of the Company		NTPC Ltd			
Name of the Power Station		Simhadri STPS stage-I			
Particulars	Package 2	Package 3	Package 4	Package 5	
1	3	4	5	6	
Source of Loan	JBIC - I	JBIC - II	JBIC - III	JBIC - IV	
Currency	JPY	JPY	JPY	JPY	
Amount of loan sanctioned	19,37,13,20,418	12,19,18,69,630	27,29,46,37,571	1,25,14,35,867	
Amount of Gross Loan drawn	19,37,13,20,418	12,19,18,69,630	27,29,46,37,571	1,25,14,35,867	
Interest Type	Fixed	Fixed	Fixed	Fixed	
Fixed Interest Rate, if applicable	2.30%	1.80%	1.80%	1.80%	
Govt. Guarantee Fee	1.20%	1.20%	1.20%	1.20%	
Base Rate, if floating interest	-	-	-	-	
Margin, if floating interest rate	-	-	-	-	
Are there any Caps / Floor	NO	NO	NO	NO	
If above is Yes, specify Caps / Floor	-	-	-	-	
Moratorium Period	10 Years	10 Years	10 Years	10 Years	
Moratorium effective from	25-02-1997	30-03-2001	13-02-2002	31-03-2003	
Repayment period	20 Years	20 Years	18 Years	13.5 Years	
Repayment effective from	20-02-2007	20-03-2011	20-02-2012	20-03-2013	
Repayment frequency	Semi Annual	Semi Annual	Semi Annual	Semi Annual	
Repayment installment	41 Instalments	41 Instalments	37 Instalments	28 Instalments	
Base Exchange Rate (31.03.2014)	0.5915	0.5915	0.5915	0.5915	
Base Exchange Rate (COD)	0.4238	0.4238	0.4238	0.4238	
Name of the Projects	Simhadri I	Simhadri I	Simhadri I	Simhadri I	

## Notes:-

	JBIC - I	JBIC - II	JBIC - III	JBIC - IV
	JPY	JPY	JPY	JPY
Loan Sanctioned (Original)	19,81,70,00,000.00	12,19,40,00,000.00	27,47,30,00,000.00	5,68,40,00,000.00
Loan Sanctioned (Revised)	19,37,13,20,418.00	12,19,18,69,630.00	27,29,46,37,571.00	1,25,14,35,867.00
Pre-payment			2,66,28,88,000.00	39,67,86,000.00



<b>Form 8- Domestic Bonds- Details of Allocation of corporate loans to various projects during the FY 2014-19</b>	
<b>Particulars</b>	<b>54</b>
Source of Loan <sup>1</sup>	BONDS
Currency <sup>2</sup>	INR
Amount of Loan sanctioned	1030683
Interest Type <sup>6</sup>	Fixed
Fixed Interest Rate, if applicable	8.49%
Base Rate, if Floating Interest <sup>7</sup>	N/A
Margin, if Floating Interest <sup>8</sup>	N/A
Are there any Caps/Floor <sup>9</sup>	No
If above is yes,specify caps/floor	N/A
Moratorium Period <sup>10</sup>	8
Moratorium effective from #	25-03-2015
Repayment Period <sup>11</sup>	Installments Due on 25/03/2023, 25/03/2024 & 25/03/2025
Repayment effective from	25-03-2023
Repayment Frequency <sup>12</sup>	Installments Due on 25/03/2023, 25/03/2024 & 25/03/2025
Repayment Instalment <sup>13,14</sup>	Installments 1st - 206,136.61 2nd - 412,273.22 3rd - 412,273.22
Base Exchange Rate <sup>16</sup>	N/A
Door to Door Maturity	10

<b>Name of the Projects</b>	
Simhadari R & M	900

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Year-wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTPC Limited			
Name of the Generating Station	Simhadri Super Thermal power Station Stage-I			
COD	01-03-2003			
For Financial Year	2019-24 (Summary)			

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Protected)				Justification	Amount in Rs Lakh Admitted Cost by the Commission, if any
		2019-20	2020-21	2021-22	2022-23		
1	Ash related works	0.00					
2	DAES Augmentation work	1000.00	100.00				
3	Augmentation of Fire Fighting system in CHP	260.00					
4	CCTV system for security of MP & township area	200.00					
5	Development of sprinkler grid system to reuse the treated water	0.00	35.00				
6	Waste mangement related works	11.00	35.00				
7	Online Coal Analyser	373.00					
8	400Kv Trans. Line differential protection implementation ( Simhadri-Gajuwaka and Simhadri-Kapaka)	44.00	52.00				
9	Township Boundarywall height raising On security requirement			150	30.00		
10	Fire wall for Lub oil store shed			30			
11	Other capital works in ash disposal (Laying of east bassalt	379.00		252			
12	FRP-IDCT			8000	8,685.00		
13	Electrochlorination /CLO2 for replacement of Chlorine dosing System	0.00		523	122.00		
<b>Total (A)</b>		<b>2,267.00</b>	<b>9,210.00</b>	<b>8,837.00</b>	<b>3,000.00</b>	<b>2,500.00</b>	
<b>B. Works beyond Original scope estduing add-cap due to Change in Law etc. eligible for RoE at Wtd. Average rate of Interest</b>							
<b>Total (B)</b>							
<b>Total Add. Cap. Claimed (A+B)</b>		<b>2,267.00</b>	<b>9,210.00</b>	<b>8,837.00</b>	<b>3,000.00</b>	<b>2,500.00</b>	

Please refer respective year Form 9

*Signature*  
(Petitioner)

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner		NTPC Limited		Name of the Generating Station		Simhadri Super Thermal power Station Stage-I		COD		01-05-2003		For Financial Year		2015-20		Amount in Rs Lakh		
Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	ACE Claimed (Actual / Protected) Cash basis	IDC included in col. 3	Regulations under which claimed	Justification	Admitted Cost by the Commission, if any										
1	2	3	4	5-(B-4)	6	7	8	9										
<b>A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate</b>																		
1	DAES Augmentation work	1,000.00		1,000.00		26(1)(b) & 26(1)(e)	Augmentation of DAES work was allowed by Hon'ble Commission vide order dated 27.06.16 in petition no 270/GT/2014 under change in law. However due to severe cyclone HUD- HUD during 2014-19 work was severely affected. Further as the units are running continuously, based on the opportunity to execute the work. Part work was capitalised during 2014-19 and Balance work is expected to be capitalised during 2019-24. Augmentation of the Dry ash Evacuation System is as per the MOEF directive dated 03.11.2009 for utilisation of ash. Hence the Hon'ble Commission may please be allowed the same.											
2	Augmentation of Fire Fighting system in CHP	260.00		260.00		26(1)(b) & 26(1)(d)	The same was already allowed by CERC vide order dated 27.01.2017 in Petition No 36/REP/2016 in Pet No 270/GT/2014 for recovery in 2014-19. However due to delay in finalisation of technical specifications and poor response from agency work could not be capitalised during 2014-19. The "augmentation of fire fighting" is in compliance to CISE (Ministry of Home Affairs) recommendation dated 15.07.14 ( attached at annex-I ). The same has been reiterated through communication dated 03.10.19 ( attached at Annex-II). The Hon'ble Commission may be pleased to allow the same.											
3	CCTV system for security of Main Plant & township area	200.00		200.00		26(1)(b) & 26(1)(d)	Central Industrial Security Force, Ministry of Home Affairs, Govt. of India vide letter dated 15.10.18 (Placed at Annex- III), has directed Petitioner to install CCTV system for enhanced security & safety of the station. Hence Hon'ble Commission may please allow the work to be capitalised under Regulations 26(1)(b) i.e compliance of existing law and 26(1)(d) i.e. security and safety of the plant.											
4	Waste management related works	11.00		11.00		26(1)(b)	These works are necessarily required for waste management in compliance of Solid Waste Management Rules 2016 notified by Ministry of Environment, Forests and Climate Change (MoEF&CC). As per the new rules, it has been advised that the bio-degradable waste should be processed, treated and disposed of through composting or bio-methanation within the premises. These works are related to organic waste compostor, horticulture waste etc. These rules are now applicable beyond municipal areas and have included industrial townships also. Hence Hon'ble Commission may please allow the work to be capitalised under Regulations 26(1)(b). Solid Waste Management Rules 2016 are enclosed at annexure- IV.											
5	Online Coal Analyser	373.00		373.00		26(1)(b)	Vide OM dated 26.08.2015 (copy attached at Annexure -V ). MOEF had mandated all coal based thermal power plants with installed capacity of 100 MW and above located at a distance of 500 kms and above from coal source for sampling and analysis of coal and reporting of compliance in respect of use and supply of raw or blended coal with ash content not exceeding 34% as content in coal. It is also directed that real time monitoring using auto mechanical sampling (online) from moving stream of coal to be used for sampling fuels . As the present station is located at a distance of about 600-700 kms from the linked mine and also source coal from other mines under flexible coal utilization scheme, the petitioner has to necessarily incur the expenditure for installation of online coal analyser to comply with the direction of MOEF, GoI. Accordingly Hon'ble Commission may be pleased to allow the same under change in law.											

*Signature*

*Signature*

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner		NTPC Limited		Simhadri Super Thermal power Station Stage-I		2019-20		Amount in Rs Lakh	
Name of the Generating Station		Simhadri Super Thermal power Station Stage-I		2019-20		2019-20		Admitted Cost by the Commission, if any	
COD		01-03-2003		2019-20		2019-20		Admitted Cost by the Commission, if any	
For Financial Year		2019-20		2019-20		2019-20		Admitted Cost by the Commission, if any	
Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed (Actual / Projected) Un-discharged Liability included in col. 3	Regulations under which claimed	Justification	Regulations under which claimed	ADIC included in col. 3	Amount in Rs Lakh	Admitted Cost by the Commission, if any
1	2	3	4	5	6	7	8	9	9
6	400Kv Trans. Line differential protection implementation ( Simhadri-Gajuwaka and Simhadri-Kalpaka)	44.00	5- (3-4) 44.00	26(1)(b)	In view of grid disturbance in Gujwaka-Simhadri-Kalpaka corridor, to enhance security of the Grid, Southern Region Power Committee (SRPC) has given direction for installation of the protection scheme for safe and reliable operation of the grid. Minutes of SRPC Meeting held on 04.05.16 are attached in this regard at Annex- VI. Since the scheme is being implemented as per direction of SRPC which has been established by Government of India, under the provision of Section 2, Subsection 55 of the Electricity Act 2003, Hon'ble Commission may please allow the work to be capitalised under Regulations 25(1)(b) i.e change in law.	26(1)(b)			
7	Other capital works in ash disposal (Laying of cast bassalt pipe)	379	379.00	25(1)(c)	The projected Add. Cap. is for procurement & erection of cast bassalt pipe. These works are for disposal of ash through cast bassalt which are having very less leakage/rupturing/maintenance. As the ash disposal lines are passing through nearby villages/ agriculture area works are necessary for the safety of the villagers and the crops. The disposal lines are also passing near to 33 KV line and tripping incidences has taken place due to rupturing/leakage of ash disposal lines. With the erection of cast bassalt pipe, 33 KV line shall be operated safely. The works claimed are beyond original scope, hence it may please be allowed by the Hon'ble Commission under regulation 25(1)(c)	25(1)(c)			
Total (A)		2,267.00	2,267.00						
B. Works beyond Original scope excluding add-cap due to Change in Law, eligible for RoE at Wtd. Average rate of interest.									
Total (B)		2,267.00	2,267.00						
Total Add. Cap. Claimed (A+B)		2,267.00	2,267.00						

*Signature*  
(Petitioner)

## Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTPC Limited		
Name of the Generating Station	Simhadri Super Thermal power Station Stage-I		
COD	01-03-2003		
For Financial Year	2020-21		

Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed Un-discharged Liability included in col. 3	ACE Claimed (Actual / Projected)			Regulations under which claimed	Justification	Admitted Cost by the Commission, if any
				Cash basis	IDC included in col. 3	5-(3-4)			
1	2	3	4	5	6	7	8	9	
<b>A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate</b>									
1	DAES Augmentation work	100		100			26(1)(b) & 26(1)(e)	Please refer form-9 for FY 2019-20	
2	Augmentation of Fire Fighting system in CHP	33		33			26(1)(b) & 26(1)(d)	Please refer form-9 for FY 2019-20	
3	Development of sprinkler grid system to reuse the treated water	35		35			26(1)(b)	Andhra Pradesh Pollution Control Board has directed to use treated water of STP for the purpose of gardening. This work is to install the grid of sprinklers to use the STP treated water for the purpose of gardening. Hence Hon'ble Commission may please allow the work to be capitalised under Regulations 26(1)(b). Letter of APPCB is enclosed at Annex- VII.	
4	Waste management related works	35		35			26(1)(b)	Please refer form-9 for FY 2019-20	
5	400Kv Trans. Line differential protection implementation ( Simhadri-Gajuwaka and Simhadri-Kalpaka)	52		52			26(1)(b)	Please refer form-9 for FY 2019-20	
6	Township Boundary wall height raising On security requirement	150		150			26(1)(b) & 26(1)(d)	In view of militants attack at URL, J & K rany base, Central Industrial Security Force, Ministry of Home Affairs, Govt. of India vide letter dated 22.09.16 ( enclosed at Annex-VIII ), has directed for to increase the Boundary wall height in residential are of CISF Personnel to improve the security & safety concerns Hence the Hence Hon'ble Commission may please allow the work to be capitalised under Regulations 26(1)(b) i.e change of law and 26(1)(d) i.e. security and safety of the plant.	
7	Fire wall for Lub oil store area at central store	30		30			26(1)(b) & 26(1)(d)	The work of "fire wall for Lub oil store area at central store" is in compliance to CISF (Ministry of Home Affairs) recommendation dated 03.10.19 ( enclosed at anex- II ). As per communication from CISF, it is statutory to provide fire walls at Lub oil drum storage area Govt. of India vide vide communication dated 23.10.19 ( enclosed at Annex- IX) has also directed to review the security of vital installation. Hence Hon'ble Commission may please allow the work to be capitalised under Regulations 26(1)(b) i.e change of law and 26(1)(d) i.e. security and safety of the plant.	
8	Other capital works in ash disposal (Laying of cast bassalt pipe)	252		252.00			25 ( 1 ) ( c )	Please refer form-9 for FY 2019-20	
9	FRP-IDCT	8000		8,000.00			25(2)(b)	Please refer para 9 of Petition	

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Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner		NTPC Limited		Amount in Rs Lakh		
Name of the Generating Station		Simhadri Super Thermal power Station Stage-1				
COD		01-03-2003				
For Financial Year		2020-21				
Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed Un-discharged Liability included in col. 3	Regulations under which claimed	Justification	Admitted Cost by the Commission, if any
	2	3	4	7	8	9
10	Electrochlorination /CLO2 for replacement of Chlorine dosing System	523		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 asked NTPC to replace highly hazardous gas chlorination system with ClO2 system. SPCB, Odisha while issuing consent to establish in case of Daripalli Station has asked NTPC to explore the possibility of installing ClO2 system instead of Chlorine gas system (Relevant documents is attached at Annexure-X). 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 Regulations 26(1)(b) i.e change of law and 26(1)(d) i.e. safety of the plant.	
<b>Total (A)</b>		<b>9,210.00</b>	<b>-</b>	<b>9,210.00</b>		
<b>B. Works beyond Original scope excluding add-cap due to Change in Law eligible for RoE at Wtd. Average rate of Interest</b>						
<b>Total Add. Cap. Claimed (A+B)</b>		<b>9,210.00</b>	<b>-</b>	<b>9,210.00</b>		

*[Signature]*  
(Petitioner)

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

Name of the Petitioner	NTPC Limited		
Name of the Generating Station	Simhadri Super Thermal power Station Stage-I		
COD	01-03-2003		
For Financial Year	2021-22		

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)				Regulations under which claimed	Justification	Amount in Rs Lakh
		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
<b>A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate</b>								
1	Township Boundary wall height raising	30.00		30.00		26(1)(b) & 26(1)(d)	Please refer form-9 for FY 2020-21	
2	FRP-IDCT	8,685.00		8,685.00		25(2)(b)	Please refer para 9 of Petition	
3	Electrochlorination /CLO2 for replacement of Chlorine dosing System	122.00		122.00		26(1)(b) & 26(1)(d)	Please refer form-9 for FY 2020-21	
	<b>Total (A)</b>	<b>8,837.00</b>	<b>-</b>	<b>8,837.00</b>	<b>-</b>			
<b>B. Works beyond Original scope excluding add-cap due to Change in Law eligible for RoE at Wtd. Average rate of Interest</b>								
	<b>Total Add. Cap. Claimed (A+B)</b>	<b>8,837.00</b>	<b>-</b>	<b>8,837.00</b>	<b>-</b>			

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(Petitioner)

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Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTPC Limited	
Name of the Generating Station	Simhadri Super Thermal power Station Stage-I	
COD	01-03-2003	
For Financial Year	2022-23	

Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed Un-discharged Liability included in col. 3	Cash basis included in col. 3	Regulations under which claimed	Justification	Amount in Rs Lakh Admitted Cost by the Commission, if any	
1	2	3	4	5= (3-4)	6	7	8	9
<b>A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate</b>								
1	Ash related works	3,000.00		3,000.00	25(1)(c) & 25(1)(e)	The projected expenditure is for planned works related to Ash handling/ ash related works , which are of continuous nature during the operational life of the generating station. Provision for ash related works has been kept in 2022-23/ 2023-24 . The claimed works are as per the approved scheme under original scope of work and are planned in phased manner based on the expected quantum of works during 2019-24. Hence it may please be allowed by the Hon'ble Commission.		
<b>Total (A)</b>		3,000.00	-	3,000.00				
<b>B. Works beyond Original scope excluding add-cap due to Change in Law eligible for RoE at Wtd. Average rate of Interest</b>								
1		-	-	-				
<b>Total (B)</b>		-	-	-				
<b>Total Add. Cap. Claimed (A+B)</b>		3,000.00	-	3,000.00				

*Shub p*  
(Petitioner)



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

Name of the Petitioner	NTPC Limited		
Name of the Generating Station	Simhadri Super Thermal power Station Stage-I		
COD	01-03-2003		
For Financial Year	2023-24		

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)				Regulations under which claimed	Justification	Amount in Rs Lakh
		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
<b>A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate</b>								
1	Ash related works	2,500.00		2,500.00		25(1)(c) & 25(1)(g)	Please refer Form -9 for FY 2022-23	
	<b>Total (A)</b>	<b>2,500.00</b>	-	<b>2,500.00</b>	-			
<b>B. Works beyond Original scope excluding add-cap due to Change in Law, eligible for RoE at Wtd. Average rate of Interest</b>								
	<b>Total (B)</b>	-	-	-	-			
	<b>Total Add. Cap. Claimed (A+B)</b>	<b>2,500.00</b>	-	<b>2,500.00</b>	-			

*Signature*  
(Petitioner)

**PART-I  
FORM-10**

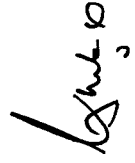
**Name of the Petitioner** NTPC Limited  
**Name of the Generating Station** Simhadri Super Thermal power Station Stage-I  
**Date of Commercial Operation** 01-03-2003

Financial Year (Starting from COD)1	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	2023-24
1		3	4	5	6	7	8	9	10		11

Amount capitalised in Work/ Equipment

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

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




(Petitioner)

## Statement of Depreciation

Name of the Company :		NTPC Limited							
Name of the Power Station :		Simhadri Super Thermal power Station Stage-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	Opening Capital Cost	36439.51	3,65,202.59	3,67,469.59	3,76,679.59	3,85,516.59	3,88,516.59		
2	Closing Capital Cost	365135.37	3,67,469.59	3,76,679.59	3,85,516.59	3,88,516.59	3,91,016.59		
3	Average Capital Cost	364787.44	3,66,336.09	3,72,074.59	3,81,098.09	3,87,016.59	3,89,766.59		
1a	Cost of IT Equipments & Software included in (1) above ^^		-	-	-	-	-		
2a	Cost of IT Equipments & Software included in (2) above		-	-	-	-	-		
3a	Average Cost of IT Equipments & Software		-	-	-	-	-		
4	Freehold land	7,803.42	7,803.42	7,803.42	7,803.42	7,803.42	7,803.42		
5	Rate of depreciation								
6	Depreciable value	3,21,359.44	3,22,679.40	3,27,844.05	3,35,965.20	3,41,291.85	3,43,766.85		
7.	Balance useful life at the beginning of the period	9.67	8.67	7.67	6.67	5.67	4.67		
8	Remaining depreciable value	1,10,637.60	99,695.69	93,361.42	89,310.28	81,247.09	69,392.79		
9	Depreciation (for the period)	11,441.93	11,498.93	12,172.28	13,389.85	14,329.29	14,859.27		
10	Depreciation (annualised)	11,441.32	11,498.93	12,172.28	13,389.85	14,329.29	14,859.27		
11	Cumulative depreciation at the end of the period		2,34,482.64	2,46,654.92	2,60,044.77	2,74,374.06	2,89,233.33		
12	Less: Cumulative depreciation adjustment on account of un-discharged liabilities deducted as on 01.04.2009	0.00	-	-	-	-	-		
13	Add: Cumulative depreciation adjustment on account of liability Discharge	947.52	-	-	-	-	-		
14	Less: Cumulative depreciation adjustment on account of de-capitalisation	126.97	-	-	-	-	-		
15	Net Cumulative depreciation at the end of the period after adjustments	2,22,983.71	2,34,482.64	2,46,654.92	2,60,044.77	2,74,374.06	2,89,233.33		

^^ Shall be provided at the time of true up


  
(Petitioner)

**Calculation of Weighted average rate of interest on actual loans****Part I  
Form 13**

Name of the Company: NTPC Ltd

Name of the Station: Simhadri STPS stage-I

(All figures in Rs Lacs)

Loan	2019-20	2020-21	2021-22	2022-23	2023-24
<b>1 JBIC I</b>					
Gross Loan	82095.66	82095.66	82095.66	82095.66	82095.66
Cum Rep	50058.37	54063.04	58067.71	62072.38	66077.05
OP Bal	32037.29	28032.62	24027.95	20023.28	16018.61
Addition	0.00	0.00	0.00	0.00	0.00
Repayment	4004.67	4004.67	4004.67	4004.67	4004.67
CI Bal	28032.62	24027.95	20023.28	16018.61	12013.94
Avg Loan	30034.95	26030.28	22025.61	18020.94	14016.27
Int Rate	3.5000	3.5000	3.5000	3.5000	3.5000
Interest	1051.22	911.06	770.90	630.73	490.57
<b>2 JBIC II</b>					
Gross Loan	51669.14	51669.14	51669.14	51669.14	51669.14
Cum Rep	21423.86	23944.30	26464.74	28985.18	31505.62
OP Bal	30245.28	27724.84	25204.40	22683.96	20163.52
Addition	0.00	0.00	0.00	0.00	0.00
Repayment	2520.44	2520.44	2520.44	2520.44	2520.44
CI Bal	27724.84	25204.40	22683.96	20163.52	17643.08
Avg Loan	28985.06	26464.62	23944.18	21423.74	18903.30
Int Rate	3.0000	3.0000	3.0000	3.0000	3.0000
Interest	869.55	793.94	718.33	642.71	567.10
<b>3 JBIC III</b>					
Gross Loan*	104389.35	104389.35	104389.35	104389.35	104389.35
Cum Rep	42320.10	47962.76	53605.42	59248.08	64890.74
OP Bal*	62069.25	56426.59	50783.93	45141.27	39498.61
Addition	0.00	0.00	0.00	0.00	0.00
Repayment	5642.66	5642.66	5642.66	5642.66	5642.66
CI Bal	56426.59	50783.93	45141.27	39498.61	33855.95
Avg Loan	59247.92	53605.26	47962.60	42319.94	36677.28
Int Rate	3.0000	3.0000	3.0000	3.0000	3.0000
Interest	1777.44	1608.16	1438.88	1269.60	1100.32
<b>4 JBIC IV</b>					
Gross Loan*	3622.01	3622.01	3622.01	3622.01	3622.01
Cum Rep	1681.70	1940.40	2199.10	2457.80	2716.50
OP Bal*	1940.31	1681.61	1422.91	1164.21	905.51
Addition	0.00	0.00	0.00	0.00	0.00
Repayment	258.70	258.70	258.70	258.70	258.70
CI Bal	1681.61	1422.91	1164.21	905.51	646.81
Avg Loan	1810.96	1552.26	1293.56	1034.86	776.16
Int Rate	3.0000	3.0000	3.0000	3.0000	3.0000
Interest	54.33	46.57	38.81	31.05	23.28

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39

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**Calculation of Weighted average rate of interest on actual loans****Part I  
Form 13**

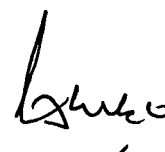
Name of the Company: NTPC Ltd

Name of the Station: Simhadri STPS stage-I

(All figures in Rs Lacs)

Loan	2019-20	2020-21	2021-22	2022-23	2023-24
<b>5 Bonds 54th Series</b>					
Gross Loan*	900.00	900.00	900.00	900.00	900.00
Cum Rep	0.00	0.00	0.00	0.00	180.00
OP Bal*	900.00	900.00	900.00	900.00	720.00
Addition	0.00	0.00	0.00	0.00	0.00
Repayment	0.00	0.00	0.00	180.00	360.00
CI Bal	900.00	900.00	900.00	720.00	360.00
Avg Loan	900.00	900.00	900.00	810.00	540.00
Int Rate	8.5200	8.5200	8.5200	8.5200	8.5200
Interest	76.68	76.68	76.68	69.01	46.01
<b>Total</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Gross Loan	242676	242676	242676	242676	242676
Cum Rep	115484	127911	140337	152763	165370
OP Bal	127192.13	114765.66	102339.19	89912.72	77306.25
Addition	0.00	0.00	0.00	0.00	0.00
Repayment	12426.47	12426.47	12426.47	12606.47	12786.47
CI Bal	114765.66	102339.19	89912.72	77306.25	64519.78
Avg Loan	120978.89	108552.42	96125.95	83609.48	70913.01
Int Rate	3.1652%	3.1657%	3.1662%	3.1612%	3.1409%
Interest	3829.22	3436.40	3043.59	2643.10	2227.28

\* Loan balance of JBIC III &amp; IV reduced through renegotiation



40

## FORM-15

Details/Information to be provided to beneficiaries under Clause (7) of Regulation 30 of CERC (Terms & Conditions of Tariff) Regulations, 2014

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

Name of the Company:- NTPC Ltd.

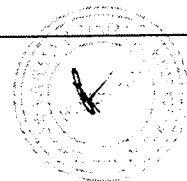
Name of Power Station:- Simhadri Super Thermal Power Station

Month:- October - 2018

Stage-I

S.No.	Particulars	Unit	Domestic Coal			Imported Coal
			Supplied by MGR	Supplied by Rail	E-Auction coal	
			(i)	(ii)	(iii)	(iv)
1	Quantity of coal supplied by the coal Company inclusive of opening stock of coal	(MT)		748178.51	7,158.62	0.00
2	Adjustment (+/-) in quantity supplied by the coal Company	(MT)		0.00	-	0.00
3	Coal supplied by the Coal Company inclusive of opening stock of coal (1+2)	(MT)		748178.51	7158.62	0.00
4	Normative transit & handling losses (for coal based projects)	(MT)		5527.56	29.39	0.00
5	Net coal supplied inclusive of opening stock of coal (3-4)	(MT)		742650.95	7129.23	0.00
	Amount charged by the coal company inclusive of value of opening stock of coal	(Rs.)		1510921276	31732806	0
7	Adjustment (+/-) in amount charged by the coal Company	(Rs.)		0	0	0
8	Total amount charged inclusive of opening stock of coal (6+7)	(Rs.)		1510921276	31732806	0
9	Transportation charges by Rail / Ship / Road Transport	(Rs.)		1039914126	4813780	0
10	Adjustment (+/-) in amount charged by Railways / transport Company	(Rs.)		0	0	0
11	Demurrage charges, if any	(Rs.)		0	0	0
12	Cost of diesel in transporting coal through MGR system	(Rs.)		-	-	-
13	Total Transportation Charges (9+/-10-11+12)	(Rs.)		1039914126	4813780	0
13A	Others (Stone picking charges, Loco driver's salary, Sampling Charges etc)	(Rs.)		15015342	1,16,538	-
14	Total amount charged for coal supplied including transportation (8+13+13A)	(Rs.)		2565850743	36663124	0
	Landed cost of coal	(Rs./MT)		3,454.99	5,142.65	-
16	Blending ratio			100.00%		0.00%
17	Weighted average cost of coal	(Rs./MT)		3471.04		
18	GCV of Domestic Coal as per bill of Coal Company on Equilibrated basis (except washery coal)*	(kCal/Kg)		3812		
19	GCV of Imported Coal as per bill of Coal Company on Air dried basis	(kCal/Kg)				NA
20	Weighted average GCV of coal as Billed except washed coal*	(kCal/Kg)		3812		
21	GCV of Domestic Coal as received at Station on total moisture basis	(kCal/Kg)		3346		
22	GCV of Imported Coal as received at Station, on total moisture basis	(kCal/Kg)				0
23	Weighted average GCV of coal as received at station	(kCal/Kg)		3346		

श्री. रामा राव / B. RAMA RAO  
 महाप्रबंधक (वित्त) / General Manager (Finance)  
 एच एच सी (एच सी), इन्फोर्मेशन / SSC (SR) - Adma Building  
 सुनदीवीली विभिन्नेड / NTPC Limited - Simhadri  
 विशाखपट्टणम - VISAKHAPATNAM - 531 020



## Statement No 1

## FORM-15

Details/Information to be provided to beneficiaries under Clause (7) of Regulation 30 of CERC (Terms & Conditions of Tariff) Regulations, 2014

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

Name of the Company:- NTPC Ltd.

Name of Power Station:- Simhadri Super Thermal Power Station

Month:- November - 2018

S.No.	Particulars	Unit	Domestic Coal			Imported Coal
			Supplied by MGR	Supplied by Rail	E-Auction coal	
1	Quantity of coal supplied by the coal Company inclusive of opening stock of coal	(MT)	(i)	(ii)	(iii)	(iv)
2	Adjustment (+/-) in quantity supplied by the coal Company	(MT)		726469.60	-	0.00
3	Coal supplied by the Coal Company inclusive of opening stock of coal (1+2)	(MT)		0.00	-	0.00
4	Normative transit & handling losses (for coal based projects)	(MT)		726469.60	0.00	0.00
5	Net coal supplied inclusive of opening stock of coal (3-4)	(MT)		5803.39	-	0.00
6	Amount charged by the coal company inclusive of value of opening stock of coal	(Rs.)		720666.22	0.00	0.00
7	Adjustment (+/-) in amount charged by the coal Company	(Rs.)		1568666441	0	0
8	Total amount charged inclusive of opening stock of coal (6+7)	(Rs.)		0	0	0
9	Transportation charges by Rail / Ship / Road Transport	(Rs.)		1568666441	0	0
10	Adjustment (+/-) in amount charged by Railways / transport Company	(Rs.)		1098622176	0	0
11	Demurrage charges, if any	(Rs.)		0	0	0
12	Cost of diesel in transporting coal through MGR system	(Rs.)		0	0	0
13	Total Transportation Charges (9+/-10-11+12)	(Rs.)		1098622176	0	0
13A	Others (Stone picking charges, Loco driver's salary, Sampling Charges etc)	(Rs.)		17109672	0	-
14	Total amount charged for coal supplied including transportation (8+13+13A)	(Rs.)		2684398288	0	0
15	Landed cost of coal	(Rs./MT)		3,724.88	-	-
16	Blending ratio			100.00%		0.00%
17	Weighted average cost of coal	(Rs./MT)		3724.88		
18	GCV of Domestic Coal as per bill of Coal Company on Equilibrated basis (except washery coal)*	(kCal/Kg)		3765		
19	GCV of Imported Coal as per bill of Coal Company on Air dried basis	(kCal/Kg)			NA	
20	Weighted average GCV of coal as Billed except washed coal*	(kCal/Kg)		3765		
21	GCV of Domestic Coal as received at Station on total moisture basis	(kCal/Kg)		3437		
22	GCV of Imported Coal as received at Station, on total moisture basis	(kCal/Kg)				0
23	Weighted average GCV of coal as received at station	(kCal/Kg)		3437		

बी. रामा राव / B. RAMA RAO  
 महाप्रबंधक (वित्त) / General Manager (Finance)  
 एच एच सी (एच आर), प्रबन्धन भवन / SSC (SR) - Admn Building  
 रानदीपीसी लिमिटेड - सिम्हाद्री / NTPC Limited - Simhadri  
 विशाखपट्टणम - VISAKHAPATNAM - 531 020



42

## FORM-15

Details/Information to be provided to beneficiaries under Clause (7) of Regulation 30 of CERC (Terms & Conditions of Tariff) Regulations, 2014

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

Name of the Company:- NTPC Ltd.

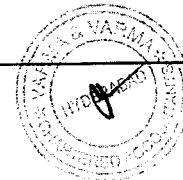
Name of Power Station:- Simhadri Super Thermal Power Station

Month:- December - 2018

Stage-I

S.No.	Particulars	Unit	Domestic Coal			Imported Coal
			Supplied by MGR	Supplied by Rail	E-Auction coal	
			(i)	(ii)	(iii)	(iv)
1	Quantity of coal supplied by the coal Company inclusive of opening stock of coal	(MT)		844778.94	10,215.59	0.00
2	Adjustment (+/-) in quantity supplied by the coal Company	(MT)		0.00	-	0.00
3	Coal supplied by the Coal Company inclusive of opening stock of coal (1+2)	(MT)		844778.94	10215.59	0.00
4	Normative transit & handling losses (for coal based projects)	(MT)		6367.51	81.72	0.00
5	Net coal supplied inclusive of opening stock of coal (3-4)	(MT)		838411.42	10133.87	0.00
	Amount charged by the coal company inclusive of value of opening stock of coal	(Rs.)		2038325372	61890125	0
7	Adjustment (+/-) in amount charged by the coal Company	(Rs.)		0	0	0
8	Total amount charged inclusive of opening stock of coal (6+7)	(Rs.)		2038325372	61890125	0
9	Transportation charges by Rail / Ship / Road Transport	(Rs.)		1258686481	20416501	0
10	Adjustment (+/-) in amount charged by Railways / transport Company	(Rs.)		0	0	0
11	Demurrage charges, if any	(Rs.)		0	0	0
12	Cost of diesel in transporting coal through MGR system	(Rs.)		-	-	-
13	Total Transportation Charges (9+/-10-11+12)	(Rs.)		1258686481	20416501	0
13A	Others (Stone picking charges, Loco driver's salary, Sampling Charges etc)	(Rs.)		25486541	1,88,750	-
14	Total amount charged for coal supplied including transportation (8+13+13A)	(Rs.)		3322498394	82495376	0
	Landed cost of coal	(Rs./MT)		3,962.85	8,140.56	-
16	Blending ratio			100.00%		0.00%
17	Weighted average cost of coal	(Rs./MT)		4012.74		
18	GCV of Domestic Coal as per bill of Coal Company on Equilibrated basis (except washery coal)*	(kCal/Kg)		3984		
19	GCV of Imported Coal as per bill of Coal Company on Air dried basis	(kCal/Kg)				NA
20	Weighted average GCV of coal as Billed except washed coal*	(kCal/Kg)		3984		
21	GCV of Domestic Coal as received at Station on total moisture basis	(kCal/Kg)		3585		
22	GCV of Imported Coal as received at Station, on total moisture basis	(kCal/Kg)				0
23	Weighted average GCV of coal as received at station	(kCal/Kg)		3585		

*B. Rama Rao*  
**श्री रामा राव / B. RAMA RAO**  
 महाप्रबंधक (वित्त) / General Manager (Finance)  
 एन एच सी (एन सी), थर्मल प्लांट / SSC (SR) - Admn. Building  
 एनटीपीसी लिमिटेड - सिम्हाद्री / NTPC Limited - Simhadri  
 विशाखपट्टणम - VISAKHAPATNAM - 531 020





Statement No 2.

**FORM-15 A**

Details/Information to be provided to beneficiaries under Clause (7) of Regulation 30 of CERC (Terms & Conditions of Tariff) Regulations, 2014

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

Name of the Company:- NTPC Ltd.

Name of Power Station:- Simhadri Super Thermal Power Station

Month: October- 2018

S.No.	Particulars	Unit	Stage-I	
			HFO	LDO
			(ii)	(iv)
1	Quantity of oil supplied by the oil Company inclusive of opening stock of oil	(MT)	1945.02	632.67
2	Adjustment (+/-) in quantity supplied by the oil Company	(MT)	0.00	0.00
3	Oil supplied by the oil Company inclusive of opening stock of oil (1+2)	(MT)	1945.02	632.67
4	Normative transit & handling losses	(MT)	0.00	0.00
5	Net oil supplied inclusive of opening stock of oil (3-4)	(MT)	1945.02	632.67
6	Amount charged by the oil company inclusive of value of opening stock of oil	(Rs.)	81899119	34409331
7	Adjustment (+/-) in amount charged by the oil Company	(Rs.)	0	0
8	Total amount charged inclusive of opening stock of oil (6+7)	(Rs.)	81899119	34409331
9	Transportation charges by Rail / Ship / Road Transport	(Rs.)	160135	53999
10	Adjustment (+/-) in amount charged by Railways / transport Company	(Rs.)	0	0
11	Demurrage charges, if any	(Rs.)	0	0
12	Cost of diesel in transporting oil through MGR system	(Rs.)	0	0
13	Total Transportation Charges (9+/-10-11+12)	(Rs.)	160135	53999
14	Total amount charged for oil supplied including transportation (8+13)	(Rs.)	82059254	34463330
15	Landed cost of oil	(Rs./KL)	42,189	54,472
16	Blending ratio		66.99%	33.01%
17	Weighted average cost of oil	(Rs./KL)	46244.13	
21	Weighted average GCV of HFO as received at 60 C	(Kcal/L)	9850	
22	Weighted average GCV of LDO as received at 30 C	(Kcal/L)	9216	
23	Weighted average GCV of oil as received at station (on consumption basis of GCVs from SI No. 21 and SI No.22 above)	(kCal/Kg)	9641	

*B. Rama Rao*  
**बी. रामा राव / B. RAMA RAO**  
 महाप्रबंधक (वित्त) / General Manager (Finance)  
 एन एच सी (एचओ), सहायक सदन / SSC (SR) - Admn. Building  
 बन्दरीपोली लिफ्टेड - लिफ्टेड / NTPC Limited - Simhadri  
 विशाखपट्टणम - VISAKHAPATNAM - 531 020



Statement No 2 .

**FORM-15 A**

Details/Information to be provided to beneficiaries under Clause (7) of Regulation 30 of CERC (Terms & Conditions of Tariff) Regulations, 2014

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

Name of the Company:- NTPC Ltd.

Name of Power Station:- Simhadri Super Thermal Power Station

Month:- November- 2018

Stage-I

S.No.	Particulars	Unit	HFO	LDO
			(ii)	(iv)
1	Quantity of oil supplied by the oil Company inclusive of opening stock of oil	(MT)	1309.16	429.61
2	Adjustment (+/-) in quantity supplied by the oil Company	(MT)	0.00	0.00
3	Oil supplied by the oil Company inclusive of opening stock of oil (1+2)	(MT)	1309.16	429.61
4	Normative transit & handling losses	(MT)	0.00	0.00
5	Net oil supplied inclusive of opening stock of oil (3-4)	(MT)	1309.16	429.61
6	Amount charged by the oil company inclusive of value of opening stock of oil	(Rs.)	55232821	23402145
7	Adjustment (+/-) in amount charged by the oil Company	(Rs.)	0	0
8	Total amount charged inclusive of opening stock of oil (6+7)	(Rs.)	55232821	23402145
9	Transportation charges by Rail / Ship / Road Transport	(Rs.)	0	0
10	Adjustment (+/-) in amount charged by Railways / transport Company	(Rs.)	0	0
11	Demurrage charges, if any	(Rs.)	0	0
12	Cost of diesel in transporting oil through MGR system	(Rs.)	0	0
13	Total Transportation Charges (9+/-10-11+12)	(Rs.)	0	0
14	Total amount charged for oil supplied including transportation (8+13)	(Rs.)	55232821	23402145
15	Landed cost of oil	(Rs./KL)	42,189	54,472
16	Blending ratio		82.98%	17.02%
17	Weighted average cost of oil	(Rs./KL)	44280.48	
21	Weighted average GCV of HFO as received at 60 C	(Kcal/L)	9854	
22	Weighted average GCV of LDO as received at 30 C	(Kcal/L)	9220	
23	Weighted average GCV of oil as received at station (on consumption basis of GCVs from SI No. 21 and SI No.22 above)	(kCal/Kg)	9746	

*Balku*

बी. रामा राव / B. RAMA RAO  
 महाप्रबंधक (वित्त) / General Manager (Finance)  
 एस एच सी (एस आर), प्रशासनिक भवन / SSC (SR) - Admn. Building  
 सुनहरीश्री लिमिटेड - सिमहाद्री / NTPC Limited - Simhadri  
 विशाखपट्टणम - VISAKHAPATNAM - 531 020



Statement No 2.

**FORM-15 A**

Details/Information to be provided to beneficiaries under Clause (7) of Regulation 30 of CERC (Terms & Conditions of Tariff) Regulations, 2014

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

Name of the Company:- NTPC Ltd.

Name of Power Station:- Simhadri Super Thermal Power Station

Month: December- 2018

S.No.	Particulars	Unit	Stage-I	
			HFO	LDO
			(ii)	(iv)
1	Quantity of oil supplied by the oil Company inclusive of opening stock of oil	(MT)	1105.05	386.34
2	Adjustment (+/-) in quantity supplied by the oil Company	(MT)	0.00	0.00
3	Oil supplied by the oil Company inclusive of opening stock of oil (1+2)	(MT)	1105.05	386.34
4	Normative transit & handling losses	(MT)	0.00	0.00
5	Net oil supplied inclusive of opening stock of oil (3-4)	(MT)	1105.05	386.34
6	Amount charged by the oil company inclusive of value of opening stock of oil	(Rs.)	46621273	21044848
7	Adjustment (+/-) in amount charged by the oil Company	(Rs.)	0	0
8	Total amount charged inclusive of opening stock of oil (6+7)	(Rs.)	46621273	21044848
9	Transportation charges by Rail / Ship / Road Transport	(Rs.)	0	0
10	Adjustment (+/-) in amount charged by Railways / transport Company	(Rs.)	0	0
11	Demurrage charges, if any	(Rs.)	0	0
12	Cost of diesel in transporting oil through MGR system	(Rs.)	0	0
13	Total Transportation Charges (9+/-10-11+12)	(Rs.)	0	0
14	Total amount charged for oil supplied including transportation (8+13)	(Rs.)	46621273	21044848
15	Landed cost of oil	(Rs./KL)	42,189	54,472
16	Blending ratio		76.75%	23.25%
17	Weighted average cost of oil	(Rs./KL)	45045.40	
21	Weighted average GCV of HFO as received at 60 C	(Kcal/L)	9847	
22	Weighted average GCV of LDO as received at 30 C	(Kcal/L)	9189	
23	Weighted average GCV of oil as received at station (on consumption basis of GCVs from SI No. 21 and SI No.22 above)	(kCal/Kg)	9694	

*B. Rama Rao*  
**श्री. रामा राव / B. RAMA RAO**  
 महाप्रबंधक (वित्त) / General Manager (Finance)  
 एच एच बी (एच डी), आरएमएस / SSC (SR) - Admn. Building  
 सन्दीपनी लिमिटेड - सिम्हाद्री / NTPC Limited - Simhadri  
 विशाखपट्टणम - VISAKHAPATNAM - 531 020



46

**Computation of Energy Charges**

Form-15B  
ADDITIONAL FORM

Name of the Company	NTPC Limited
Name of the Power Station	Simhadri Super Thermal power Station Stage-I

	2019-20	2020-21	2021-22	2022-23	2023-24
No of Days in the year	366	365	365	365	366
Sp. Oil consumption ml/kwh	0.5	0.5	0.5	0.5	0.5
Auxiliary consumption %	6.300	6.425	6.675	6.800	6.800
Heat Rate Kcal/Kwh	2,390.00	2,390.00	2,390.00	2,390.00	2,390

**Computation of Variable Charges**

Variable Charge (Coal) p/kwh	283.022	283.400	284.159	284.540	284.540
Variable Charge (Oil) p/kwh	2.251	2.254	2.260	2.263	2.263
<b>Total</b> p/kwh	285.273	285.654	286.419	286.803	286.803

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

Coal Cost (Rs./MT)	3748.14	3748.14	3748.14	3748.14	3748.14
Oil Cost (Rs./KL)	42185.15	42185.15	42185.15	42185.15	42185.15

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

ESO in a year (MUs)	6996.02	6967.59	6948.98	6939.67	6958.685
ESO for 50 days (MUs)	955.740	954.465	951.92	950.64	950.640
Cost of coal for 50 Days (Rs. Lakh)	27049.50	27049.50	27049.50	27049.50	27049.50
Cost of oil for 2 months (Rs. Lakh)	262.48	261.76	261.76	261.76	262.48
Energy Expenses for 45 days (Rs. Lakh)	24538.18	24538.18	24538.18	24538.18	24538.18

**Computation of Energy Charges**

1 Rate of Energy Charge from Sec. Fuel Oil/ Alternate Fuel (p/kwh)  $= (Q_s)_n \times P_s$  = 2.109

2 Heat Contribution from SFO / Alternate Fuel  $(H_s)$   $= (Q_s)_n \times (GCV)_s$  = 4.925

3 Heat Contribution from coal  $(H_p)_s$   $= GHR \cdot H_s$  = 2385.07

4 Specific Primary Fuel Consumption  $(Q_p)_n$   $= H_p / (GCV)_p$  = 0.708

5 Rate of Energy charge from Primary Fuel (p/kwh)  $(REC)_p$  = 265.191

6 Rate of Energy charge ex-bus (p/kWh)  $= ((REC)_s + (REC)_p) / (1 - (AUX))$  = 286.803 for 2023-24

Coal	3rd month	2nd month	1st month	Wtd. Avg.
Wtd. Avg. Price of Coal Rs./MT	3471.04	3724.88	4012.74	3748.14
Wtd. Avg. GCV of Coal as received kCal/Kg	3346	3437	3585	3456.00
Wtd. Avg. GCV of Coal as received after adjustment of 85 kcal/kg				
Sec. Oil				3371.00
Wtd. Avg. Price of Secondary Fuel Rs/KL	42189.00	42189.00	42189.00	42185.15
Wtd. Avg. GCV of Secondary Fuel kCal/L	9850.00	9854.00	9847.00	9850.33

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47

*Amie*

PETITIONER

Statement of Additional Capitalisation during five year before the end of useful life of the Project

Name of the Company :	NTPC Limited
Name of the Power Station :	Simhadri Super Thermal power Station Stage-I
COD	01-03-2003

S. No.	Year	Work / Equipment added during last five years of useful life of each Unit/Station	ACE Claimed (Actual / Projected)				Regulations under which claimed	Justification	Impact on life extension
			Accrual basis	Un-discharged Liability included in col. 4	Cash basis	IDC included in col. 4			
1	2	3	4	5	(6 = 4 - 5)	7	8	9	10
	1 2023-24	Ash related work	2500		2500		25(1)(c) & 25(1)(g)	The projected expenditure is for planned works related to Ash handling/ ash related works , which are of continuous nature during the operational life of the generating station. Provision for ash related works has been kept in 2022-23/ 2023-24 . The claimed works are as per the approved scheme under original scope of work and are planned in phased manner based on the expected quantum of works during 2019-24. Hence it may please be allowed by the Hon'ble Commission.	

*Shubho*  
(Petitioner)

Name of the Petitioner  
Name of the Generating Station

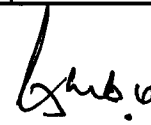
NTPC Ltd  
Simhadri Super Thermal power Station Stage-I

**Statement of Capital cost**

(To be given for relevant dates and year wise)

(Amount in Rs. Lakh)

S. No.	Particulars	As on 31.03.2019		
		Accrual Basis	Un-discharged Liabilities	Cash Basis
A	a) Opening Gross Block Amount as per books	424851.59	1973.63	422877.96
	b) Amount of IDC in A(a) above			
	c) Amount of FC in A(a) above			
	d) Amount of FERV in A(a) above	36458.15		
	e) Amount of Hedging Cost in A(a) above	-166.87		
	f) Amount of IEDC in A(a) above			
B	a) Addition in Gross Block Amount during the period (Direct purchases)			
	b) Amount of IDC in B(a) above			
	c) Amount of FC in B(a) above			
	d) Amount of FERV in B(a) above			
	e) Amount of Hedging Cost in B(a) above			
	f) Amount of IEDC in B(a) above			
C	a) Addition in Gross Block Amount during the period (Transferred from CWIP)			
	b) Amount of IDC in C(a) above			
	c) Amount of FC in C(a) above			
	d) Amount of FERV in C(a) above			
	e) Amount of Hedging Cost in C(a) above			
	f) Amount of IEDC in C(a) above			
D	a) Deletion in Gross Block Amount during the period			
	b) Amount of IDC in D(a) above			
	c) Amount of FC in D(a) above			
	d) Amount of FERV in D(a) above			
	e) Amount of Hedging Cost in D(a) above			
	f) Amount of IEDC in D(a) above			
E	a) Closing Gross Block Amount as per books			
	b) Amount of IDC in E(a) above			
	c) Amount of FC in E(a) above			
	d) Amount of FERV in E(a) above			
	e) Amount of Hedging Cost in E(a) above			
	f) Amount of IEDC in E(a) above			

  
(Petitioner)



Name of the Petitioner  
Name of the Generating Station

NTPC Ltd  
Simhadri Super Thermal power Station Stage-I

Statement of Capital Woks in Progress

(Amount in Rs. Lakh)

S. No.	Particulars	As on 31.03.19		
		Accrual Basis	Un-discharged Liabilities	Cash Basis
A	a) Opening CWIP as per books	1874.66	855.99	1018.67
	b) Amount of IDC in A(a) above			
	c) Amount of FC in A(a) above			
	d) Amount of FERV in A(a) above			
	e) Amount of Hedging Cost in A(a) above			
	f) Amount of IEDC in A(a) above			
B	a) Addition in CWIP during the period			
	b) Amount of IDC in B(a) above			
	c) Amount of FC in B(a) above			
	d) Amount of FERV in B(a) above			
	e) Amount of Hedging Cost in B(a) above			
	f) Amount of IEDC in B(a) above			
C	a) Transferred to Gross Block Amount during the period			
	b) Amount of IDC in C(a) above			
	c) Amount of FC in C(a) above			
	d) Amount of FERV in C(a) above			
	e) Amount of Hedging Cost in C(a) above			
	f) Amount of IEDC in C(a) above			
D	a) Deletion in CWIP during the period			
	b) Amount of IDC in D(a) above			
	c) Amount of FC in D(a) above			
	d) Amount of FERV in D(a) above			
	e) Amount of Hedging Cost in D(a) above			
	f) Amount of IEDC in D(a) above			
E	a) Closing CWIP as per books			
	b) Amount of IDC in E(a) above			
	c) Amount of FC in E(a) above			
	d) Amount of FERV in E(a) above			
	e) Amount of Hedging Cost in E(a) above			
	f) Amount of IEDC in E(a) above			

  
(Petitioner)

## Calculation of Interest on Normative Loan

Name of the Company :		NTPC Limited							
Name of the Power Station :		Simhadri Super Thermal power Station Stage-I							
		(Amount in Rs Lakh)							
S. No.	Particulars	Existing 2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
1	2	3	4	5	6	7	8		
1	Gross Normative loan – Opening	2,55,175.44	2,55,641.81	2,57,228.71	2,63,675.71	2,69,861.61	2,71,961.61		
2	Cumulative repayment of Normative loan up to previous year	1,67,637.32	1,79,340.08	1,90,839.01	2,03,011.29	2,16,401.14	2,30,730.43		
3	<b>Net Normative loan – Opening</b>	87,538.12	76,301.73	66,389.70	60,664.42	53,460.47	41,231.18		
4	Add: Increase due to addition during the year / period	466.38	1,586.90	6,447.00	6,185.90	2,100.00	1,750.00		
5	Less: Decrease due to de-capitalisation during the year / period	0.00	0.00	0.00	0.00	0.00	0.00		
6	Less: Decrease due to reversal during the year / period								
7	Add: Increase due to discharges during the year / period	0.00	0.00	0.00	0.00	0.00	0.00		
8	Less: Repayment of Loan	11702.76	11,498.93	12,172.28	13,389.85	14,329.29	14,859.27		
9	<b>Net Normative loan - Closing</b>	76,301.74	66,389.70	60,664.42	53,460.47	41,231.18	28,121.91		
10	<b>Average Normative loan</b>	81,919.93	71,345.72	63,527.06	57,062.45	47,345.83	34,676.55		
11	Weighted average rate of interest	3.1648	3.1652	3.1657	3.1662	3.1612	3.1409		
12	<b>Interest on Loan</b>	<b>2592.60</b>	<b>2258.23</b>	<b>2011.08</b>	<b>1806.71</b>	<b>1496.70</b>	<b>1089.16</b>		

(Petitioner)



Calculation of Interest on Working Capital

Name of the Company :		NTPC Limited							
Name of the Power Station :		Simhadri Super Thermal power Station Stage-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	34,943.60	27049.50	27049.50	27049.50	27049.50	27049.50		
2	Cost of Main Secondary Fuel Oil	355.33	262.48	261.76	261.76	261.76	262.48		
3	Fuel Cost								
4	Liquid Fuel Stock								
5	O & M Expenses	1,818.28	2061.28	2136.29	2214.25	2295.22	2378.32		
6	Maintenance Spares	4,363.86	4947.07	5127.10	5314.21	5508.52	5707.97		
7	Receivables	47,346.77	32803.24	33036.52	33348.02	33594.26	33732.48		
8	Total Working Capital	88827.83	67123.57	67611.17	68187.74	68709.26	69130.75		
9	Rate of Interest	13.5000	12.0500	12.0500	12.0500	12.0500	12.0500		
10	Interest on Working Capital	11991.76	8088.39	8147.15	8216.62	8279.47	8330.26		



Petitioner

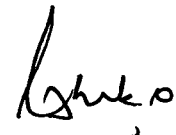


Liability as on 31.03.2019 ( Rs.)			
Name of the Party	Name of the work	Year of creation of liability capitalised in Gross Block	Undischarged liabilities relating to GB 31.03.2019
BRINDAVAN PROJECTS LTD	Cosnt of C type Quarters	2000-01	98,000
B C BIYANI	Civil works for starter ash dyke	2003-04	5,98,434
NATIONAL BUILDINGS CONSTRUCTION CORPORATION	flood diversion drain scheme of nallahs package - 1	2003-04	3,88,567
SRI SAI SRINIVASA CONSTRUCTIONS	Providing false ceilingfor cold room in store no-3	2003-04	19,103
SP.DY.COLLECTOR NTPC UNIT	Land conversion charges	2003-04	43,38,725
NPCC Ltd	Club Building	2004-05	2,57,999
FA & CAO,EAST COASTRAILWAY BHUBANESWAR	Augmentation of railway infrastruture	2005-06	1,07,99,850
HINDUSTAN STEELWORKS CONSTRUCTIONLTD	Transformer Oil Filter Machine Storage Shed	2006-07	4,351
SRI SAI LAKSHMI CONSTRUCTIONS	Underground water tank	2006-07	17,21,551
KLG Systel Limited	PRIMAVERA PLANR &SCHDLR S/W,3 USER,LIC	2008-09	8,235
BHEL	Various Packages(ERV Reinstatement)	2008-09	0
S.V. NETWORK TECHNOLOGIES	GIGABET UPGRADATION OF SANKALP BUILDING	2009-10	19,000
MUKUND ENGINEERING SERVICES	ELECT.ACTUATOR WITH GEAR BOX	2010-11	82,320
Sub Registrar	REGISTRATION OF WAQF BOARD LAND	2012-13	3,60,14,400
ANANDSHEEL HYDRAULICS PVT LTD	M5522706076 LUFF CYLINDER °	2012-13	47
ASST.DIRECTOR OF MIN	CIVIL WORKS FOR STARTER ASH DYKE	2012-13	29,64,896
Tyco Fire&Security India(P) Ltd.	FIRE PROTECTION SYSTEM IN ADMIN BUILDING	2012-13	3,190
SAAGRR INFRA & Others	ADMINISTRATIVE BUILDING	2013-14	2,09,721
RATNA INFRASTRUCTURE PROJECTS	CIVIL WORKS FOR STARTER ASH DYKE (STAGE 1)	2013-14	1,00,16,679
JARVIS SYSTEMS	M8612604086 MOTOR,110KW,1485RPM,ND315S	2013-14	8,577
SAAGRR INFRA/ BLUESTAR & Others	ADMINISTRATIVE BUILDING	2014-15	1,49,152
RATNA INFRASTRUCTURE PROJECTS	CIVIL WORKS FOR STARTER ASH DYKE (STAGE 1)	2014-15	1,56,91,524
APT ENGINEERING	CABLE LINE IN PLANT AREA	2014-15	67,631
STOCK REDLER INDIA PVT LTD/ BHARAT HEAVY ELECTRICALS LTD	M4725010287 DRUM SAFETY VALVE ASSEMBLY BHEL 1740WB	2014-15	4,000
CLEVELAND GEAR	M4761056332 WORM GEAR & SHAFT SET OF COAL MILL	2014-15	3,42,108
HAWA ENGINEERS LTD	M5615306018 B/F VLV;200NB,KEYSTONE,WAFFER,G/BOX OP	2014-15	60
TECPRO SYSTEMS LTD	M5602400001 CLINKER GRINDER COMPLETE ASSEMBLY	2014-15	1,60,290
JOSTS ENGG COMPANY LTD	M4726136001 ELECT.ACTUATOR WITH GEAR BOX	2014-15	71,635
AMCO SAFT INDIA LTD	M9222184228 IS:10918-N:184AH-1.2V:POCKET-P:DISCH-M	2014-15	3,50,026
AMCO SAFT INDIA LTD	M9222180235 IS:10918-N:P80AH-1.2V:POCKET-P:DISCH-H	2014-15	3,33,520
GLOBAL SOLAR ENERGY SOLUTIONS	SOLAR WATER HEATING SYSTEM 1	2015-16	25,950
GLOBAL SOLAR ENERGY SOLUTIONS	SOLAR WATER HEATING SYSTEM 2	2015-16	52,080
POWER BUILD PVT LTD/1112243	M5505240007 DRIVE HEAD PULLEY WIDTH 1400MM	2015-16	9,223

Liability as on 31.03.2019 ( Rs.)			
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
BARCO ELECTRONICS SYSTEMS PVT LTD	M9470486081 ACTR FOR HFO PR CONTROL VALVE VA3D	2015-16	1,15,495
MARVEL ENGINEERING CO/1006452 SARTECH INTL	M9470486081 ACTR FOR HFO PR CONTROL VALVE VA3D	2015-16	60,325
BHARAT HEAVY ELECTRICALS LTD	M9222184228 IS:10918-N:184AH-1.2V:POCKET-P:DISCH-M	2015-16	5,828
ANALYSER INSTRUMENT CO PVT LTD	CONTINUOUS EMISSION MONITORING SYSTEM	2015-16	2,07,145
FUJI ELECTRIC CO., LTD	CONTINUOUS EMISSION MONITORING SYSTEM	2015-16	1,06,964
BHARAT HEAVY ELECTRICALS LTD	Capital Spares	2016-17	5,97,383
ELBE ENGINEERING SERVICES	DAES	2016-17	3,29,000
ARCOY INDUSTRIES (INDIA) PVT LTD	DAES	2016-17	2,37,173
APT ENGINEERING	DAES	2016-17	47,500
SATYAM CONSTRUCTIONS	DAES	2016-17	5,78,783
SUMMITS HYGRONICS (P) LTD	DAES	2016-17	60,071
RAMADEVI CONSTRUCTION COMPANY	DAES	2016-17	4,84,005
TECPRO SYSTEMS LTD	DAES	2016-17	1,32,64,155
THERMOSYSTEMS PVT LTD	CIVIL WORKS FOR STARTER ASH DYKE	2016-17	3,37,777
GE T&D INDIA LTD	Capital Spares	2016-17	4,89,675
WILO MATHER AND PLATT PUMPS PRIVATE/1126316	Capital Spares	2016-17	33,702
BENTLY NEVADA INC	Capital Spares	2016-17	7,281
DHR HOLDING INDIA PVT LTD/1125080	Capital Spares	2016-17	9,220
BHARAT HEAVY ELECTRICALS LTD	Capital Spares	2017-18	11,33,403
BENTLY NEVADA INC	Capital Spares	2017-18	7,004
LOTUS CONSTRUCTION COMPANY	CIVIL WORKS FOR STARTER ASH DYKE (STAGE 1)	2017-18	2,61,000
SIEMENS LTD	Capital Spares	2017-18	34,79,971
ATLAS COPCO INDIA LTD	Capital Spares	2018-19	25,20,081
FLUIDOMAT LTD	Capital Spares	2018-19	14,795
HBL Power Systems Limited	DAES	2018-19	22,500
MULTI VISTA GLOBAL PRIVATE LIMITED	DAES	2018-19	5,720
MAHINDRA STILLER AUTO TRUCKS LTD	BATTERY OPERATED TRUCK	2018-19	95,680
MARUTHI ENGINEERING INDIA LLP	Capital Spares	2018-19	92,086
SAM SYSTEMS	LAPTOPS	2018-19	6,55,136
ENERGY EFFICIENCY SERVICES LTD	LED Lighting systems	2018-19	42,72,426
PRESTIGE SERVICES	Installation LED Lighting systems	2018-19	85,451
HIRAL TEKTRONIX PVT LTD.	CLIMS(PLANT ACCESS CONTROL SYSTEM)	2018-19	1,84,400
RAINBOW TECHNOLOGIES	CONDUCTIVITY METER:COMP ASSY	2018-19	4,67,723

## FORM-S

Liability as on 31.03.2019 ( Rs.)			
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
SRI CHANDRA SEKHARA ENGINEERING AND	DAES	2018-19	19,06,495
DCL BULK TECHNOLOGIES PVT LTD	Capital Spares	2018-19	49,21,780
MICROCARE COMPUTERS PVT. LTD.,	NAS BASED STORAGE: SAS - 16TB	2018-19	71,726
R.V.V.NAGESH	CIVIL WORKS FOR STARTER ASH DYKE	2018-19	80,732
PAHARPUR COOLING TOWERS LTD	DAES	2018-19	1,36,880
SCHNEIDER ELECTRIC INDIA PVT	DAES	2018-19	15,950
RATNA INFRASTRUCTURE PROJECTS	CIVIL WORKS FOR STARTER ASH DYKE	2018-19	79,77,958
BHARAT HEAVY ELECTRICALS LTD	Capital Spares	2018-19	16,76,518
ELBE ENGINEERING SERVICES	DAES	2018-19	54,472
RAMADEVI CONSTRUCTION COMPANY	DAES	2018-19	1,29,213
TECPRO SYSTEMS LTD	DAES	2018-19	6,46,45,395
LOTUS CONSTRUCTION COMPANY	CIVIL WORKS FOR STARTER ASH DYKE	2018-19	6,66,363
<b>Total</b>			<b>19,73,63,184</b>




**Summary of issue involved in the petition**

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

*Signature*

*Signature*

ANNEX-1

Office of the Deputy Commandant  
Central industrial security force  
(Ministry of Home Affairs)

CISF Unit STPP Simhadri  
Dated: 15/07/2014.

No.E-42099/56/CISF/Mgt/Misc/2014-

To

The AGM (HR)  
STPP Simhadri

Sub: Fire Fighting system regarding. Reg.

Kindly refer your e-mail message dated 15.07.2014 received from Manager(HR).

02. In the above context, it is informed that the following fire fighting systems are required to meet any fire emergency in the plant.

- a) Install booster pumps with motor driven and diesel driven and all accessories at Pump house for hydrant line.
- b) Internal Hydrant system for all high rise conveyers' 6A/B, 7A/B, 8A/B, 9A/B and 10 A/B.
- c) LHSC & MVW System for bunker conveyers 9A/B and 10 A/B.
- a) Fire hydrant system for yard conveyers 11 A/B
- b) HWW Spray system of transformers of AHP and CHP area.

Therefore, it is, requested that necessary action may please be taken to provide above fire fighting systems for better fire safety coverage of the plant.

  
Dy. Commandant  
CISF Unit STPP Simhadri

**PRESENT STATUS OF FIRE FIGHTING SYSTEMS MENTIONED IN LETTER NO.E-42099/56/CISF/MGT/MISC/2014 DATED 15.07.2014**

SI NO	PARTICULARS OF FIRE FIGHTING SYSTEM SUGGESTED	PRESENT STATUS
1.	Install Booster Pumps with Motor driven and diesel driven and all accessories at Pump House for hydrant Line	Not available and to be provided.
2.	Internal Hydrant system for all high rise conveyors 6A/B,7A/B,8A/B/9A/B & 10A/B	Not available and to be provided considering the height and importance of Boiler feeding TP'S
3.	LHSC & MVW system for Bunker conveyors 9A/A and 10A/B	Not available and to be provided considering the height and importance of Boiler feeding conveyors
4.	Fire Hydrant System for yard conveyors 11A/B	Not available and to be provided for the Fire Safety of 11 A/B Conveyors
5.	Fire Wall for Lub Oil storage area at Central Store	Not available. It is statutory to provide Fire Walls at lube oil drums storage area.

ASSISTANT COMMANDANT/FIRE  
CISF UNIT STAFF/NTPC SIMHADRI  
dc P  
5/10/19

एसटीपीपी/एनटीपीसी सिम्हाद्री  
जिला : विशाखपटनम (आ०प्र०)  
दिनांक 15.10.2018

सं ई-42099/एसटीपीपी(एस)/ Mgt Corres /PA/2018 /405

To

The AGM(HR),  
NTPC Simhadri

**Subject : Rectification of security observations raised by IG/SS HQr.  
Chennai during formal inspection/visit of the unit : Reg.**

Please refer to the earlier correspondences made by this office on the subject cited above.

02. The security observations raised by Dr. K. Jayanth Murali, IPS, IG/SS Hqrs. Chennai and Shri Anand Mohan, IPS, IG/SS Hqrs Chennai during formal inspection/visit of the unit on 13.06.2016 and 07.11.2017 respectively are still pending for rectification as per the details mentioned below :-

**Observation raised by Shri Anand Mohan, IPS, IG/SS HQrs. Chennai during formal inspection of the Unit on 13.06.2016**

- (i) Repairing/replacement of unserviceable security gadgets like Boom Barrier, X-BIS, Night vision devise and HHMDs.
- (ii) Procurement of Night Vision devices

**Observation raised by Shri Anand Mohan, IPS, IG/SS HQrs. Chennai during formal visit of the Unit on 07.11.2017**

- (i) The only X-BIS Machine kept at the Control Room is not working.
- (ii) Night vision devices are required for Ash dyke area patrolling and Sea water Pump House duty post for effective surveillance over the area.
- (iii) CCTV should be installed in the Kote to keep a check on the movements as well as handing/taking over of arms.

03. It is further submitted that frequent correspondences have been made with your good office for rectification of the observations mentioned above raised by the IG/SS during inspection/visit of the Unit but in spite of elapsing of a considerable period, there is no tangible progress on these points have been observed by the higher formation and the same are pending for quite a long time.

04. Hence, it is requested to kindly look into the matter on priority basis and do the needful action for early rectification of these essential security observations raised by the IG/SS HQrs. Chennai during the formal inspection of the unit on 13.06.2016 & 07.11.2017 please.

05. An early action to this effect is solicited please.

(धनंजय कुमार)  
उप कमाण्डेंट

के.ओ.सुब इकाई एसटीपीपी सिम्हाद्री

Copy to :-

Asstt. Commandant/SW - You are directed to liaise with the management for & I/C CIW, CISF Unit STPP (S) early rectification of the observation raised by the IG/SS HQr Chennai and report compliance.



नगरपालिकाओं की कुल संख्या:

प्रस्तुत की गई कार्य योजना की संख्या:

**प्ररूप-VI**

**[नियम 25 देखें]**

**दुर्घटना का प्रतिवेदन**

1.	दुर्घटना की तारीख और समय	:	
2.	दुर्घटना के लिए कारकों का अनुक्रम	:	
3.	दुर्घटना में शामिल अपशिष्ट	:	
4.	मानव स्वास्थ्य और पर्यावरण पर दुर्घटनाओं के प्रभावों का मूल्यांकन	:	
5.	किए गए आपातकालीन उपाय	:	
6.	दुर्घटनाओं के प्रभावों को कम करने के लिए उठाए गए कदम	:	
7.	ऐसी किसी दुर्घटना की पुनरावृत्ति को रोकने के लिए उठाए गए कदम	:	
तारीख .....		हस्ताक्षर .....	
स्थान .....		पदनाम .....	

[फा. सं. 18-3/2004-एचएसएमडी]

विश्वनाथ सिन्हा, संयुक्त सचिव

**MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE**

**NOTIFICATION**

New Delhi, the 8th April, 2016

**S.O. 1357(E).**—Whereas the draft of the Solid Waste Management Rules, 2015 were published under the notification of the Government of India in the Ministry of Environment, Forest and Climate Change number G.S.R. 451 (E), dated the 3<sup>rd</sup> June, 2015 in the Gazette of India, part II, Section 3, sub-section (i) of the same date inviting objections or suggestions from the persons likely to be affected thereby, before the expiry of the period of sixty days from the publication of the said notification on the Solid Waste Management Rules, 2015 in supersession of the Municipal Solid Waste (Management and Handling) Rules, 2000;

And whereas, copies of the said Gazette were made available to the public on the 3<sup>rd</sup> June, 2015;

And whereas, the objections or comments received within the stipulated period were duly considered by the Central Government;

Now, therefore, in exercise of the powers conferred by sections 3, 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986) and in supersession of the Municipal Solid Waste (Management and Handling) Rules, 2000, except as respect things done or omitted to be done before such supersession, the Central Government hereby makes the following rules for management of Solid Waste, namely:-

1. **Short title and commencement.-**

- (1) These rules may be called the Solid Waste Management Rules, 2016.
- (2) They shall come into force on the date of their publication in the Official Gazette.

2. **Application.-** These rules shall apply to every urban local body, outgrowths in urban agglomerations, census towns as declared by the Registrar General and Census Commissioner of India, notified areas, notified industrial townships, areas under the control of Indian Railways, airports, airbases, Ports and harbours, defence establishments, special economic zones, State and Central government organisations, places of pilgrims, religious and historical importance as may be notified by respective State government from time to time and to every domestic, institutional, commercial and any other non residential solid waste generator situated in the areas except industrial waste, hazardous waste, hazardous chemicals, bio medical wastes, e-waste, lead acid batteries and radio-active waste, that are covered under separate rules framed under the Environment (Protection) Act, 1986.

3. **Definitions**—(1) In these rules, unless the context otherwise requires,— (1) **“aerobic composting”** means a controlled process involving microbial decomposition of organic matter in the presence of oxygen;

2. **“anaerobic digestion”** means a controlled process involving microbial decomposition of organic matter in absence of oxygen;
3. **“authorisation”** means the permission given by the State Pollution Control Board or Pollution Control Committee, as the case may be, to the operator of a facility or urban local authority, or any other agency responsible for processing and disposal of solid waste;
4. **“biodegradable waste”** means any organic material that can be degraded by micro-organisms into simpler stable compounds;
5. **“bio-methanation”** means a process which entails enzymatic decomposition of the organic matter by microbial action to produce methane rich biogas;
6. **“brand owner”** means a person or company who sells any commodity under a registered brand label.
7. **“buffer zone”** means zone of no development to be maintained around solid waste processing and disposal facility, exceeding 5 TPD of installed capacity. This will be maintained within total area allotted for the solid waste processing and disposal facility.
8. **“bulk waste generator”** means and includes buildings occupied by the Central government departments or undertakings, State government departments or undertakings, local bodies, public sector undertakings or private companies, hospitals, nursing homes, schools, colleges, universities, other educational institutions, hostels, hotels, commercial establishments, markets, places of worship, stadia and sports complexes having an average waste generation rate exceeding 100kg per day;
9. **“bye-laws”** means regulatory framework notified by local body, census town and notified area townships for facilitating the implementation of these rules effectively in their jurisdiction.
10. **“census town”** means an urban area as defined by the Registrar General and Census Commissioner of India;
11. **“combustible waste”** means non-biodegradable, non-recyclable, non-reusable, non hazardous solid waste having minimum calorific value exceeding 1500 kcal/kg and excluding chlorinated materials like plastic, wood pulp, etc;
12. **“composting”** means a controlled process involving microbial decomposition of organic matter;
13. **“contractor”** means a person or firm that undertakes a contract to provide materials or labour to perform a service or do a job for service providing authority;
14. **“co-processing”** means use of non-biodegradable and non recyclable solid waste having calorific value exceeding 1500k/cal as raw material or as a source of energy or both to replace or supplement the natural mineral resources and fossil fuels in industrial processes;
15. **“decentralised processing”** means establishment of dispersed facilities for maximizing the processing of biodegradable waste and recovery of recyclables closest to the source of generation so as to minimize transportation of waste for processing or disposal;
16. **“disposal”** means the final and safe disposal of post processed residual solid waste and inert street sweepings and silt from surface drains on land as specified in Schedule I to prevent contamination of ground water, surface water, ambient air and attraction of animals or birds;
17. **“domestic hazardous waste”** means discarded paint drums, pesticide cans, CFL bulbs, tube lights, expired medicines, broken mercury thermometers, used batteries, used needles and syringes and contaminated gauge, etc., generated at the household level;

18. **"door to door collection"** means collection of solid waste from the door step of households, shops, commercial establishments, offices, institutional or any other non residential premises and includes collection of such waste from entry gate or a designated location on the ground floor in a housing society, multi storied building or apartments, large residential, commercial or institutional complex or premises;
19. **"dry waste"** means waste other than bio-degradable waste and inert street sweepings and includes recyclable and non recyclable waste, combustible waste and sanitary napkin and diapers, etc;
20. **"dump sites"** means a land utilised by local body for disposal of solid waste without following the principles of sanitary land filling;
21. **"extended producer responsibility" (EPR)** means responsibility of any producer of packaging products such as plastic, tin, glass and corrugated boxes, etc., for environmentally sound management, till end-of-life of the packaging products;
22. **"facility"** means any establishment wherein the solid waste management processes namely segregation, recovery, storage, collection, recycling, processing, treatment or safe disposal are carried out;
23. **"fine"** means penalty imposed on waste generators or operators of waste processing and disposal facilities under the bye-laws for non-compliance of the directions contained in these rules and/or bye- laws
24. **"Form"** means a Form appended to these rules;
25. **"handling"** includes all activities relating to sorting, segregation, material recovery, collection, secondary storage, shredding, baling, crushing, loading, unloading, transportation, processing and disposal of solid wastes;
26. **"inerts"** means wastes which are not bio-degradable, recyclable or combustible street sweeping or dust and silt removed from the surface drains;
27. **"incineration"** means an engineered process involving burning or combustion of solid waste to thermally degrade waste materials at high temperatures;
28. **"informal waste collector"** includes individuals, associations or waste traders who are involved in sorting, sale and purchase of recyclable materials;
29. **"leachate"** means the liquid that seeps through solid waste or other medium and has extracts of dissolved or suspended material from it;
30. **"local body"** for the purpose of these rules means and includes the municipal corporation, nagar nigam, municipal council, nagarpalika, nagar Palikaparishad, municipal board, nagar panchayat and town panchayat, census towns, notified areas and notified industrial townships with whatever name they are called in different States and union territories in India;
31. **"materials recovery facility" (MRF)** means a facility where non-compostable solid waste can be temporarily stored by the local body or any other entity mentioned in rule 2 or any person or agency authorised by any of them to facilitate segregation, sorting and recovery of recyclables from various components of waste by authorised informal sector of waste pickers, informal recyclers or any other work force engaged by the local body or entity mentioned in rule 2 for the purpose before the waste is delivered or taken up for its processing or disposal;
32. **"non-biodegradable waste"** means any waste that cannot be degraded by micro organisms into simpler stable compounds;
33. **"operator of a facility"** means a person or entity, who owns or operates a facility for handling solid waste which includes the local body and any other entity or agency appointed by the local body;
34. **primary collection"** means collecting, lifting and removal of segregated solid waste from source of its generation including households, shops, offices and any other non-residential premises or from any collection points or any other location specified by the local body;
35. **"processing"** means any scientific process by which segregated solid waste is handled for the purpose of reuse, recycling or transformation into new products;
36. **"recycling"** means the process of transforming segregated non-biodegradable solid waste into new material or product or as raw material for producing new products which may or may not be similar to the original products;
37. **"redevelopment"** means rebuilding of old residential or commercial buildings at the same site, where the existing buildings and other infrastructures have become dilapidated;

38. "**refused derived fuel**"(RDF) means fuel derived from combustible waste fraction of solid waste like plastic, wood, pulp or organic waste, other than chlorinated materials, in the form of pellets or fluff produced by drying, shredding, dehydrating and compacting of solid waste ;
39. "**residual solid waste**" means and includes the waste and rejects from the solid waste processing facilities which are not suitable for recycling or further processing;
40. "**sanitary land filling** " means the final and safe disposal of residual solid waste and inert wastes on land in a facility designed with protective measures against pollution of ground water, surface water and fugitive air dust, wind-blown litter, bad odour, fire hazard, animal menace, bird menace, pests or rodents, greenhouse gas emissions, persistent organic pollutants slope instability and erosion;
41. "**sanitary waste**" means wastes comprising of used diapers, sanitary towels or napkins, tampons, condoms, incontinence sheets and any other similar waste;
42. "**Schedule**" means the Schedule appended to these rules;
43. "**secondary storage**" means the temporary containment of solid waste after collection at secondary waste storage depots or MRFs or bins for onward transportation of the waste to the processing or disposal facility;
44. "**segregation**" means sorting and separate storage of various components of solid waste namely biodegradable wastes including agriculture and dairy waste, non biodegradable wastes including recyclable waste, non-recyclable combustible waste, sanitary waste and non recyclable inert waste, domestic hazardous wastes, and construction and demolition wastes;
45. "**service provider**" means an authority providing public utility services like water, sewerage, electricity, telephone, roads, drainage, etc;
46. "**solid waste**" means and includes solid or semi-solid domestic waste, sanitary waste, commercial waste, institutional waste, catering and market waste and other non residential wastes, street sweepings, silt removed or collected from the surface drains, horticulture waste, agriculture and dairy waste, treated bio-medical waste excluding industrial waste, bio-medical waste and e-waste, battery waste, radio-active waste generated in the area under the local authorities and other entities mentioned in rule 2;
47. "**sorting**" means separating various components and categories of recyclables such as paper, plastic, cardboards, metal, glass, etc., from mixed waste as may be appropriate to facilitate recycling;
48. "**stabilising**" means the biological decomposition of biodegradable wastes to a stable state where it generates no leachate or offensive odours and is fit for application to farm land ,soil erosion control and soil remediation;
49. "**street vendor**" means any person engaged in vending of articles, goods, wares, food items or merchandise of everyday use or offering services to the general public, in a street, lane, side walk, footpath, pavement, public park or any other public place or private area, from a temporary built up structure or by moving from place to place and includes hawker, peddler, squatter and all other synonymous terms which may be local or region specific; and the words "street vending" with their grammatical variations and cognate expressions, shall be construed accordingly;
50. "**tipping fee**" means a fee or support price determined by the local authorities or any state agency authorised by the State government to be paid to the concessionaire or operator of waste processing facility or for disposal of residual solid waste at the landfill;
51. "**transfer station**" means a facility created to receive solid waste from collection areas and transport in bulk in covered vehicles or containers to waste processing and, or, disposal facilities;
52. "**transportation**" means conveyance of solid waste, either treated, partly treated or untreated from a location to another location in an environmentally sound manner through specially designed and covered transport system so as to prevent the foul odour, littering and unsightly conditions;
53. "**treatment**" means the method, technique or process designed to modify physical, chemical or biological characteristics or composition of any waste so as to reduce its volume and potential to cause harm;
54. "**user fee**" means a fee imposed by the local body and any entity mentioned in rule 2 on the waste generator to cover full or part cost of providing solid waste collection, transportation, processing and disposal services.
55. "**vermi composting**" means the process of conversion of bio-degradable waste into compost using earth worms;
56. "**waste generator**" means and includes every person or group of persons, every residential premises and non residential establishments including Indian Railways, defense establishments, which generate solid waste;
57. "**waste hierarchy**" means the priority order in which the solid waste is to should be managed by giving

emphasis to prevention, reduction, reuse, recycling, recovery and disposal, with prevention being the most preferred option and the disposal at the landfill being the least;

58. "waste picker" means a person or groups of persons informally engaged in collection and recovery of reusable and recyclable solid waste from the source of waste generation the streets, bins, material recovery facilities, processing and waste disposal facilities for sale to recyclers directly or through intermediaries to earn their livelihood.

(2) Words and expressions used herein but not defined, but defined in the Environment (Protection) Act, 1986, the Water (Prevention and Control of Pollution) Act, 1974, Water (Prevention and Control of Pollution) Cess Act, 1977 and the Air (prevention and Control of Pollution) Act, 1981 shall have the same meaning as assigned to them in the respective Acts.

**4 Duties of waste generators.-** (1) Every waste generator shall,-

(a) segregate and store the waste generated by them in three separate streams namely bio-degradable, non bio-degradable and domestic hazardous wastes in suitable bins and handover segregated wastes to authorised waste pickers or waste collectors as per the direction or notification by the local authorities from time to time;

(b) wrap securely the used sanitary waste like diapers, sanitary pads etc., in the pouches provided by the manufacturers or brand owners of these products or in a suitable wrapping material as instructed by the local authorities and shall place the same in the bin meant for dry waste or non- bio-degradable waste;

(c) store separately construction and demolition waste, as and when generated, in his own premises and shall dispose off as per the Construction and Demolition Waste Management Rules, 2016; and

(d) store horticulture waste and garden waste generated from his premises separately in his own premises and dispose of as per the directions of the local body from time to time.

(2) No waste generator shall throw, burn or bury the solid waste generated by him, on streets, open public spaces outside his premises or in the drain or water bodies.

(3) All waste generators shall pay such user fee for solid waste management, as specified in the bye-laws of the local bodies.

(4) No person shall organise an event or gathering of more than one hundred persons at any unlicensed place without intimating the local body, at least three working days in advance and such person or the organiser of such event shall ensure segregation of waste at source and handing over of segregated waste to waste collector or agency as specified by the local body.

(5) Every street vendor shall keep suitable containers for storage of waste generated during the course of his activity such as food waste, disposable plates, cups, cans, wrappers, coconut shells, leftover food, vegetables, fruits, etc., and shall deposit such waste at waste storage depot or container or vehicle as notified by the local body.

(6) All resident welfare and market associations shall, within one year from the date of notification of these rules and in partnership with the local body ensure segregation of waste at source by the generators as prescribed in these rules, facilitate collection of segregated waste in separate streams, handover recyclable material to either the authorised waste pickers or the authorised recyclers. The bio-degradable waste shall be processed, treated and disposed off through composting or bio-methanation within the premises as far as possible. The residual waste shall be given to the waste collectors or agency as directed by the local body.

(7) All gated communities and institutions with more than 5,000 sqm area shall, within one year from the date of notification of these rules and in partnership with the local body, ensure segregation of waste at source by the generators as prescribed in these rules, facilitate collection of segregated waste in separate streams, handover recyclable material to either the authorised waste pickers or the authorized recyclers. The bio-degradable waste shall be processed, treated and disposed off through composting or bio-methanation within the premises as far as possible. The residual waste shall be given to the waste collectors or agency as directed by the local body.

(8) All hotels and restaurants shall, within one year from the date of notification of these rules and in partnership with the local body ensure segregation of waste at source as prescribed in these rules, facilitate collection of segregated waste in separate streams, handover recyclable material to either the authorised waste pickers or the authorised recyclers. The bio-degradable waste shall be processed, treated and disposed off through composting or bio-methanation within the premises as far as possible. The residual waste shall be given to the waste collectors or agency as directed by the local body.

**5. Duties of Ministry of Environment, Forest and Climate Change.-** (1) The Ministry of Environment, Forest and Climate Change shall be responsible for over all monitoring the implementation of these rules in the country. It shall constitute a Central Monitoring Committee under the Chairmanship of Secretary, Ministry of Environment, Forest and Climate Change comprising officer not below the rank of Joint Secretary or Advisor from the following namely,-

- 1) Ministry of Urban Development
- 2) Ministry of Rural Development
- 3) Ministry of Chemicals and Fertilizers
- 4) Ministry of Agriculture
- 5) Central Pollution Control Board
- 6) Three State Pollution Control Boards or Pollution Control Committees by rotation
- 7) Urban Development Departments of three State Governments by rotation
- 8) Rural Development Departments from two State Governments by rotation
- 9) Three Urban Local bodies by rotation
- 10) Two census towns by rotation
- 11) FICCI, CII
- 12) Two subject experts

2. This Central Monitoring Committee shall meet at least once in a year to monitor and review the implementation of these rules. The Ministry of Environment, Forest and Climate Change may co-opt other experts, if needed. The Committee shall be renewed every three years.

**6. Duties of Ministry of Urban Development.-** (1) The Ministry of Urban Development shall coordinate with State Governments and Union territory Administrations to,-

- (a) take periodic review of the measures taken by the states and local bodies for improving solid waste management practices and execution of solid waste management projects funded by the Ministry and external agencies at least once in a year and give advice on taking corrective measures;
- (b) formulate national policy and strategy on solid waste management including policy on waste to energy in consultation with stakeholders within six months from the date of notification of these rules;
- (c) facilitate States and Union Territories in formulation of state policy and strategy on solid management based on national solid waste management policy and national urban sanitation policy;
- (d) promote research and development in solid waste management sector and disseminate information to States and local bodies;
- (e) undertake training and capacity building of local bodies and other stakeholders; and
- (f) provide technical guidelines and project finance to states, Union territories and local bodies on solid waste management to facilitate meeting timelines and standards.

**7. Duties of Department of Fertilisers, Ministry of Chemicals and Fertilisers.-** (1) The Department of Fertilisers through appropriate mechanisms shall,-

- (a) provide market development assistance on city compost; and
- (b) ensure promotion of co-marketing of compost with chemical fertilisers in the ratio of 3 to 4 bags: 6 to 7 bags by the fertiliser companies to the extent compost is made available for marketing to the companies.

**8. Duties of Ministry of Agriculture, Government of India.-** The Ministry of Agriculture through appropriate mechanisms shall,-

- (a) provide flexibility in Fertiliser Control Order for manufacturing and sale of compost;
- (b) propagate utilisation of compost on farm land;
- (c) set up laboratories to test quality of compost produced by local authorities or their authorised agencies; and
- (d) issue suitable guidelines for maintaining the quality of compost and ratio of use of compost vis-a-vis chemical fertilizers while applying compost to farmland.

**9. Duties of the Ministry of Power.-** The Ministry of Power through appropriate mechanisms shall,-

- (a) decide tariff or charges for the power generated from the waste to energy plants based on solid waste.
- (b) compulsory purchase power generated from such waste to energy plants by distribution company.

**10. Duties of Ministry of New and Renewable Energy Sources-** The Ministry of New and Renewable Energy Sources through appropriate mechanisms shall,-

- (a) facilitate infrastructure creation for waste to energy plants; and
- (b) provide appropriate subsidy or incentives for such waste to energy plants.

**11. Duties of the Secretary-in-charge, Urban Development in the States and Union territories.-** (1) The Secretary, Urban Development Department in the State or Union territory through the Commissioner or Director of Municipal Administration or Director of local bodies shall,-

- (a) prepare a state policy and solid waste management strategy for the state or the union territory in consultation with stakeholders including representative of waste pickers, self help group and similar groups working in the field of waste management consistent with these rules, national policy on solid waste management and national urban sanitation policy of the ministry of urban development, in a period not later than one year from the date of notification of these rules;
- (b) while preparing State policy and strategy on solid waste management, lay emphasis on waste reduction, reuse, recycling, recovery and optimum utilisation of various components of solid waste to ensure minimisation of waste going to the landfill and minimise impact of solid waste on human health and environment;
- (c) state policies and strategies should acknowledge the primary role played by the informal sector of waste pickers, waste collectors and recycling industry in reducing waste and provide broad guidelines regarding integration of waste picker or informal waste collectors in the waste management system.
- (d) ensure implementation of provisions of these rules by all local authorities;
- (e) direct the town planning department of the State to ensure that master plan of every city in the State or Union territory provisions for setting up of solid waste processing and disposal facilities except for the cities who are members of common waste processing facility or regional sanitary landfill for a group of cities; and
- (f) ensure identification and allocation of suitable land to the local bodies within one year for setting up of processing and disposal facilities for solid wastes and incorporate them in the master plans (land use plan) of the State or as the case may be, cities through metropolitan and district planning committees or town and country planning department;
- (h) direct the town planning department of the State and local bodies to ensure that a separate space for segregation, storage, decentralised processing of solid waste is demarcated in the development plan for group housing or commercial, institutional or any other non-residential complex exceeding 200 dwelling or having a plot area exceeding 5,000 square meters;
- (i) direct the developers of Special Economic Zone, Industrial Estate, Industrial Park to earmark at least five percent of the total area of the plot or minimum five plots or sheds for recovery and recycling facility.
- (j) facilitate establishment of common regional sanitary land fill for a group of cities and towns falling within a distance of 50 km (or more) from the regional facility on a cost sharing basis and ensure professional management of such sanitary landfills;
- (k) arrange for capacity building of local bodies in managing solid waste, segregation and transportation or processing of such waste at source;
- (l) notify buffer zone for the solid waste processing and disposal facilities of more than five tons per day in consultation with the State Pollution Control Board; and
- (m) start a scheme on registration of waste pickers and waste dealers.

**12. Duties of District Magistrate or District Collector or Deputy Commissioner.-** The District Magistrate or District Collector or as the case may be, the Deputy Commissioner shall, -

- (a) facilitate identification and allocation of suitable land as per clause (f) of rules 11 for setting up solid waste processing and disposal facilities to local authorities in his district in close coordination with the Secretary-in-charge of State Urban Development Department within one year from the date of notification of these rules;
- (b) review the performance of local bodies, at least once in a quarter on waste segregation, processing, treatment and disposal and take corrective measures in consultation with the Commissioner or Director of Municipal Administration or Director of local bodies and secretary-in-charge of the State Urban Development.

**13. Duties of the Secretary-in-charge of Village Panchayats or Rural Development Department in the State and Union territory.-** (1) The Secretary-in-charge of Village Panchayats or Rural Development Department in the State and Union territory shall have the same duties as the Secretary-in-charge, Urban Development in the States and Union territories, for the areas which are covered under these rules and are under their jurisdictions.

**14. Duties of Central Pollution Control Board.-**The Central Pollution Control Board shall, -

- (a) co-ordinate with the State Pollution Control Boards and the Pollution Control Committees for implementation of these rules and adherence to the prescribed standards by local authorities;
- (b) formulate the standards for ground water, ambient air, noise pollution, leachate in respect of all solid waste processing and disposal facilities;
- (c) review environmental standards and norms prescribed for solid waste processing facilities or treatment technologies and update them as and when required;
- (d) review through State Pollution Control Boards or Pollution Control Committees, at least once in a year, the implementation of prescribed environmental standards for solid waste processing facilities or treatment technologies and compile the data monitored by them;
- (e) review the proposals of State Pollution Control Boards or Pollution Control Committees on use of any new technologies for processing, recycling and treatment of solid waste and prescribe performance standards, emission norms for the same within 6 months;
- (f) monitor through State Pollution Control Boards or Pollution Control Committees the implementation of these rules by local bodies;
- (g) prepare an annual report on implementation of these rules on the basis of reports received from State Pollution Control Boards and Committees and submit to the Ministry of Environment, Forest and Climate Change and the report shall also be put in public domain;
- (h) publish guidelines for maintaining buffer zone restricting any residential, commercial or any other construction activity from the outer boundary of the waste processing and disposal facilities for different sizes of facilities handling more than five tons per day of solid waste;
- (i) publish guidelines, from time to time, on environmental aspects of processing and disposal of solid waste to enable local bodies to comply with the provisions of these rules; and
- (j) provide guidance to States or Union territories on inter-state movement of waste.

**15. Duties and responsibilities of local authorities and village Panchayats of census towns and urban agglomerations.-** The local authorities and Panchayats shall,-

- (a) prepare a solid waste management plan as per state policy and strategy on solid waste management within six months from the date of notification of state policy and strategy and submit a copy to respective departments of State Government or Union territory Administration or agency authorised by the State Government or Union territory Administration;
- (b) arrange for door to door collection of segregated solid waste from all households including slums and informal settlements, commercial, institutional and other non residential premises. From multi-storage buildings, large commercial complexes, malls, housing complexes, etc., this may be collected from the entry gate or any other designated location;
- (c) establish a system to recognise organisations of waste pickers or informal waste collectors and promote and establish a system for integration of these authorised waste-pickers and waste collectors to facilitate their participation in solid waste management including door to door collection of waste;
- (d) facilitate formation of Self Help Groups, provide identity cards and thereafter encourage integration in solid waste management including door to door collection of waste;
- (e) frame bye-laws incorporating the provisions of these rules within one year from the date of notification of these rules and ensure timely implementation;
- (f) prescribe from time to time user fee as deemed appropriate and collect the fee from the waste generators on its own or through authorised agency;
- (g) direct waste generators not to litter i.e throw or dispose of any waste such as paper, water bottles, liquor bottles, soft drink cans, tetra packs, fruit peel, wrappers, etc., or burn or bury waste on streets, open public spaces, drains, waste bodies and to segregate the waste at source as prescribed under these rules and hand over the segregated waste to authorised the waste pickers or waste collectors authorised by the local body;
- (h) setup material recovery facilities or secondary storage facilities with sufficient space for sorting of recyclable materials to enable informal or authorised waste pickers and waste collectors to separate recyclables from the waste and provide easy access to waste pickers and recyclers for collection of segregated recyclable waste such as paper, plastic, metal, glass, textile from the source of generation or from material recovery facilities; Bins for storage of bio-degradable wastes shall be painted green, those for storage of recyclable wastes shall be printed white and those for storage of other wastes shall be printed black;



For info PL

Signature

No. Q-15017-40/2607-CPW

Government of India

Ministry of Environment, Forest & Climate Change

C P Division

142

AGM/EMG

1. Pl for a meeting with GM (FM) / AGM (EMG) who is the member of the committee

Indira Paryavaran Bhawan,  
Jor Bagh Road,  
New Delhi-110003  
Dated 26<sup>th</sup> August, 2015

Office Memorandum

Subject: Protocol for sampling, analysis of coal and reporting of compliance in respect of implementation of the Gazette notification on use & supply of raw or blended or beneficiated coal with ash content not exceeding 34% ash content in coal based thermal power plants

1.0 Purpose:

This protocol presents the protocol for sampling, analysis of coal and reporting of compliance on quarterly basis with respect to ash content in coal to be supplied and used by the thermal power plants covered under the provisions of the Gazette notification GSR 02 (E) dated January 02, 2014 on supply and use of raw or blended or beneficiated coal in thermal power plants. The objective is to ensure compliance of the quality of coal with respect to ash content, supplied and used by thermal power plants in keeping with applicable extant Notification of the Ministry in this regard. The data generated shall help in evaluation of compliance level of the notification.

2.0 The Notification:

In exercise of the powers conferred by Section 3, Section 6 and Section 25 of the Environment (Protection) Act, 1986 (29 of 1986) read with rule 5 of the Environment (Protection) Rules, 1986, the Ministry of Environment, Forest & Climate Change, Government of India made the following rules vide notification No GSR 2 (E) dated January 02, 2014 under the Environment (Protection) Rules, 1986, namely:—

With effect from the date specified hereunder, the following coal based thermal power plants shall be supplied with, and shall use, raw or blended or beneficiated coal with ash content not exceeding thirty-four per cent, on quarterly average basis, namely:—

- (a) a stand-alone thermal power plant (of any capacity), or a captive thermal power plant of installed capacity of 100 MW or above, located beyond 1000 kilometres from the pit-head or, in an urban area or an ecologically sensitive area or a critically polluted industrial area, irrespective of its distance from the pit-head, except a pit-head power plant, with immediate effect;
- (b) a stand-alone thermal power plant (of any capacity), or a captive thermal power plant of installed capacity of 100 MW or above, located between 750 – 1000 kilometres from the pit-head, with effect from the 1st day of January, 2015;

Q

Signature

141

(c) a stand-alone thermal power plant (of any capacity), or a captive thermal power plant of installed capacity of 100 MW or above, located between 500-749 kilometres from the pit-head, with effect from the 5th day of June, 2016:

Provided that in respect of a thermal power plant using Circulating Fluidised Bed Combustion or Atmosphere Fluidised Bed Combustion or Pressurized Fluidised Bed Combustion or Integrated Gasification Combined Cycle technologies or any other clean technologies as may be notified by the Central Government in the Official Gazette, the provisions of clauses (a), (b) and (c) shall not be applicable.

### 3.0 Statutory Compliance Requirement and Reporting:

As per the notification, power plants located 750 kilometres from pit head (500 kilometres from June 05, 2016) shall be supplied with, and shall use, raw or blended or beneficiated coal with ash content not exceeding thirty-four per cent, on quarterly average basis. Hence, coal mine or company, as applicable, supplying coal to thermal power plants as well as thermal power plants covered under provisions of the notification shall require to submit compliance report for each quarter with respect to average ash content in coal used by them to respective State Pollution Control Boards (SPCBs), Regional office of the Ministry of Environment, Forest & Climate Change (MoEF&CC) and Central Pollution Control Board (CPCB).

### 4.0 Amendment in Consent under Air (Prevention and Control of Pollution) Act, 1981 & conditions in Environmental Clearance issued under Environment (Protection) Act, 1986:

In order to implement the provisions made in the notification, the State Pollution Control Board concerned and Ministry of Environment, Forest & Climate Change shall include a condition with respect to specifying ash content in raw or blended or beneficiated coal to be supplied by the coal mine or company, as applicable, and used by thermal power plants, in the existing consent orders issued under Air (Prevention and control of pollution) Act, 1981 and in Environmental Clearance issued under Environment (Protection) Act, 1986 to thermal power plant and coal mine or company, as applicable, under the purview of the notification on supply and use of raw or blended or beneficiated coal and shall invariably prescribe to all new thermal power plant and coal mine or company, as applicable, which may otherwise fall under the purview of the said notification.

### 5.0 Ash content monitoring (sampling and analysis) technique of coal:

Coal is highly heterogeneous in nature consisting of particles of various shapes and sizes each having different physical characteristics, chemical properties and residual ash content. Sampling is further complicated by the sampling equipment available, the quantity to be represented by the sample mass, and the degree of precision required. In addition, the coal to be sampled may be a blend of different coal types and how the coal is blended has a profound effect on the way a representative sample is obtained. National and international standards have been developed to provide guidelines for coal sampling procedures under different conditions, sample preparation and bias test procedures for the purpose of obtaining unbiased samples.

Real Time monitoring using auto mechanical sampling (online, from moving streams shall be used for sampling fuels. This shall be effective from a date not later

from 01 September, 2016 in order to enable the Coal Companies and thermal power plants to install and operationalise the real time monitoring system. Manual sampling and analysis may be done so as to verify the online monitoring results.

140

In case of manual monitoring, coal samples may be taken from a moving conveyor belt since sampling from stationary coal such as a coal storage pile or railcars may be problematic. The analysis of samples shall be carried out by third party appointed by the respective thermal power plant/coal mine or company, as applicable, as per the guidelines of Coal Controller.

#### 6.0 Calibration of auto-mechanical sampler:

It should be ensured that the online ash monitoring instrument is properly calibrated. Measurements should be accepted as valid only if the calibration level shows variation in ash content is 1.0-2%. The online monitor and calibrator will hold a current calibration certificate traceable to national standards.

#### 7.0 Location of Real-Time monitor:

The best location of real-time monitor for sampling from a moving stream is at the coal discharge point of a conveyor belt to bunker where the complete stream can be intersected at regular intervals.

8A/8B 7  
9A/9B 9

#### 8.0 Sampling frequency:

The continuous sampling of ash content in coal shall be carried out using real-time coal quality monitoring devices. In case of manual monitoring, minimum one sample from moving conveyor belt leading to bunker at each filling shall be collected. The data generated shall be computed and average for each quarter shall be calculated for reporting to concerned agencies as specified in the para 3.0 of this Office Memorandum.

#### 9.0 Monitoring:

The following criteria will be observed when undertaking the sampling and analysis of coal samples with respect to ash content:

#### 9.1 In case of manual monitoring:

- i. Collection of coal samples shall strictly be collected as per the guidelines of Coal Controller/ Bureau of Indian Standards (BIS).
- ii. Coal samples shall be collected by the third party appointed by the respective thermal power plant, coal mine or company, as applicable. However, in case of legal sampling a representative of concerned SPCB, thermal power plant, coal mine or company, as applicable shall also be present during sampling.
- iii. Preparation of samples and analysis shall be carried out by using standard methodology as given by Coal Controller/ Bureau of Indian Standards (BIS) at the NABL accredited laboratory of either coal company/power plant or third party engaged.

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199

9.2 In case of Real Time monitoring:

Data generated through real time online monitors shall be computed on daily basis an average of 3 months shall be calculated for reporting of compliance.

10.0 Monitoring records:

All power plants and coal mine or company, as applicable shall maintain records of the data generated and reported to SPCBs concerned, CPCB & Regional Office of MoEF&CC in compliance to the provisions of the notification for every quarter.

11.0 Compliance Reporting:

All thermal power plants covered under provisions of the notification shall submit compliance Report for each quarter with respect to average ash content in coal used by them to respective SPCBs. Regional office of the MoEF&CC and CPCB on or before 10<sup>th</sup> day of next month of each quarter ending on 31<sup>st</sup> day of March, 30<sup>th</sup> day of June, 30<sup>th</sup> day of September and 31<sup>st</sup> day of December every year. Similarly, all coal mine or company, as applicable, supplying coal to power plants shall also submit the same to agencies as mentioned in para 3 of this Office Memorandum.

In order to improve compliance reporting, the thermal power plants and connected coal mine or company, as applicable, should explore possibility of reporting of compliance on continuous basis (online) by making suitable arrangements with respect to ash content in coal being supplied and used by thermal power plants.


12.0 Verification of data & Compliance:


The SPCB concerned shall verify the sampling and analysis process and calibration of real time monitoring devices at least once a year at each thermal power plant and coal mine. Besides, random sampling and analysis of coal used by the power plant and supplied by coal mine shall also be conducted once in a year to ensure compliance and quality of data reporting by the thermal power plants and coal mines.

  
(Dr. Manoranjan Hota)  
Director

To

- 1 PS to MEF&CC
- 2 PPS to Secretary (EF&CC)
- 3 Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
- 4 Secretary, Ministry of Power, Shram Shakti Bhawan New Delhi
- 5 Secretary, Ministry of Steel, Udyog Bhawan, New Delhi
- 6 PPS to Addl. Secretary (HKP)/AS (SK)/AS (MMK);
- 7 JS (MKS), JS (BS)
- 8 Chairman, CPCB/Member Secretary, CPCB
- 9 Member Secretary, All the SPCBs/PCCs
- ✓ 10 IT Division, MoEFCC to upload into the website

 71

भारत सरकार केंद्रीय विद्युत प्राधिकरण दक्षिण क्षेत्रीय विद्युत समिति 29 रेस कोर्स क्रॉस रोड बेंगलुरु-560009 ISO:9001:2008	 सत्यमेव जयते	Government of India Central Electricity Authority Southern Regional Power Committee No 29, Race Course Cross Road BENGALURU- 560 009 ISO:9001:2008
Email: mssrpc@yahoo.com	Phone : 080-22282516	FAX : 080-22259343, 22352616
सं./No: SRPC/SE-III/SPM/2016/ 2870-76	दिनांक / Date: 09.05.2016	

To

1. General Manager (O&M), SRTS-I, PGCIL, Secunderabad
2. General Manager (OS), NTPC SRHQ, Secunderabad
3. General Manager (O&M), Simhadri Super Thermal Power Project, NTPC Simhadri, Visakhapatnam -531020 (Fax:08924-243092)
4. Chief Engineer (Power System), APTRANSCO, Hyderabad
5. Chief General Manager (Operations), APEPDCL, Visakhapatnam
6. Sh. P. Arun Kumar, GM, Hinduja NPCL, Palavalasa Village, T. Devada Post, Steel Plant, Pedagantyada Mandal, Visakhapatnam - 530031

**Sub: Minutes of the Special Meeting on issues relating to recent Grid Disturbances in Gajuwaka-Simhadri-Kalpaka corridor - reg.**

Ref: SRPC letter no: SRPC/SE-III/SPM/2016/2581-86 dated 26.04.2016

Sir/ Madam,

With reference to the letter cited above, a special meeting was held on 04.05.2016 at SRPC Secretariat, Bengaluru to deliberate on the issues/ factors that led to recent Grid Disturbances that occurred in Gajuwaka – Simhadri – Kalpaka corridor during the period 24-26 April, 2016. The minutes of the meeting including the remedial actions taken/ proposed along with certain general recommendations to avert such disturbances in future are enclosed for kind reference and further necessary action.

The action/steps taken by PGCIL (SRTS-I), NTPC, APTRANSCO, APEPDCL & HNPCL in implementing the above proposed remedial actions/ recommendations may please be reported to SRPC Secretariat (Email: [srpc.protection@gmail.com](mailto:srpc.protection@gmail.com)) latest by **23.05.2016**.

**Encl:** as above

Yours faithfully,



(S. R. BHAT)

Member Secretary

Copy to: Executive Director, SRLDC, POSOCO, Bengaluru

## **SOUTHERN REGIONAL POWER COMMITTEE BENGALURU**

### **Minutes of the Special Meeting on issues relating to recent Grid Disturbances in Gajuwaka – Simhadri - Kalpaka corridor**

A Special Meeting was held on 4<sup>th</sup> May, 2016 at SRPC Secretariat, Bengaluru to deliberate on the issues/ factors that led to recent disturbances in Gajuwaka – Simhadri - Kalpaka corridor which resulted in trippings of various 400 kV interconnected lines, and finally culminated in Grid Disturbances at Gajuwaka SS (PGCIL-SRTS1), Vizag SS (APTRANSCO), and Kalpaka SS (APTRANSCO) during 24-26 April, 2016. The list of participants is enclosed at **Annexure - I**.

Superintending Engineer (Operations), SRPC welcomed the Members & Participants to the meeting, and informed that the present meeting had been convened to deliberate on all operational & protection issues that led to above disturbances, and to finalize on suitable measures needed to be undertaken to prevent recurrence of such incidents.

Setting the tone for the meeting, he stated that as *Insulators' Tracking* appears to be the basic cause behind adverted disturbances, the need for preventive maintenance measures to ensure healthiness of power system equipment and transmission lines all times could not be more emphasized. He brought to members' attention that in compliance of Hon'ble CERC Order dated 20.02.2014 in respect of Petition No. 146/MP/2013 with IA 36/2013, Patrolling Protocol/ Guidelines (**Annexure - II**) for Over Head Transmission Lines had been formulated by SRPC Secretariat in due consultation with all stake holders and the same had been communicated to Hon'ble CERC and all Transmission Utilities (Central/State) vide SRPC letter dated 21.05.2014 with a request to strictly follow the guidelines.

He requested members to help chalk out actionable measures to tackle the core issues that rattled North Coastal Andhra Pradesh during 24-26 April, 2016 in the ensuing discussions.

#### **A. Operational Issues relating to recent Disturbances in Gajuwaka – Simhadri - Kalpaka corridor**

##### **A.1 Line patrolling protocol & maintenance procedures**

SE (Operations), SRPC mentioned that the line trippings on account of insulator failures in saline & pollution-prone areas had been on the rise, and brought to members' attention the specific cases of NTECL, Vallur and NTPL, Tuticorin that had experienced such trippings in April, 2014 and March, 2016 respectively. The transmission & generation entities involved were able to bring down trippings rate by undertaking hot-line washing of insulators, putting concerted efforts in keeping the switchyards healthy, and even going for complete replacement of insulators with CLR polymer type for lines up to 70 km, etc. In this regard, the applicable patrolling protocol and maintenance procedures for the Gajuwaka – Simhadri – Kalpaka - HNPCL corridor which falls in the most vulnerable terrain (coastal & pollution & generating) category were briefed, and requested all involved entities to strictly adhere to them. He also reminded members that as per the Guidelines, each transmission utility would furnish (i) the Annual Schedule of Patrolling to SRPC/SRLDC along with Annual Outage data by October each year, and (ii) Compliance report of the patrolling/

		<ul style="list-style-type: none"> <li>• The above incident also led to blocking of HVDC Pole-1</li> <li>• As Pole-2 has been under shutdown since 19:29 hrs, 25.04.2016, this event ultimately resulted Grid Disturbance (GD) at 400 kV Gajuwaka SS of PGCIL (SRTS-1)</li> </ul>
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**Analysis:** The tripping analysis of the above events is given at **Annexure – V**.

## B.6 Recommendations

- (i) **Provision of Line differential Protection on all 400 kV transmission lines interconnecting Gajuwaka SS (PGCIL-STRS1), Simhadri STPP (NTPC), Kalpaka SS (APTRANSCO), and Hinduja TPS (HNPCCL):**

It is noted that all these stations are connected with OPGW/ fibre optic cables. Considering the criticality and vulnerability of the corridor (this corridor, which is located in coastal & highly pollution prone area, is being used to (i) import power to the extent of 1000 MW from the eastern region, and to evacuate power from Simhadri and Hinduja power plants), and the very short lengths of the inter-connecting transmission lines, Unit-protection such as line differential protection is generally preferable to conventional distance protection in those lines to avoid associated over-reach problems. ***It is therefore recommended that PGCIL (SRTS-I), APTRANSCO, NTPC, and Hinduja take steps to provide line (current) differential protection as outlined below on all 400 kV transmission lines inter-connecting Gajuwaka SS, Kalpaka SS, Simhadri STPP, and Hinduja TPS.***

***“Line differential protection is to be provided as both Main-I & Main-II protection with distance protection as backup (built-in feature of Main relay or standalone relay). The Zone-1 of such back-up distance protection would be normally in disabled condition, and would get automatically activated/enabled in the event of communication link failure (i.e., when line differential protection goes off) to offer primary protection. The Zone-2 & Zone-3 & Zone-4 (reverse) of the back-up distance protection will always be kept enabled to offer back-up protection.”***

- (ii) **Protection Settings:**

When enquired about the incorrect relay settings found during the protection audit of Gajuwaka SS of PGCIL for the Kalpaka bound lines, APTRANSCO informed that even though the relays in Gajuwaka SS of PGCIL for Kalpaka lines belonged to them, maintenance of the same lies with PGCIL (SRTS-I). As such, they had communicated the revised set points to PGCIL (SRTS-I) for implementation, and it needed to be confirmed whether the revised setting had been implemented or not. PGCIL (SRTS-I), in this regard, confirmed that the relays were being maintained by them and settings communicated by APTRANSCO had been implemented. ***It is suggested that protection settings at Gajuwaka, Kalpakka, Simhadri & HNPCCL shall be got checked jointly/ in coordination by the respective entities, and ensure that they are kept properly.***



**RED CATEGORY**  
**RENEWAL OF CONSENT & AUTHORISATION ORDER**  
**BY REGISTERED POST WITH ACKNOWLEDGEMENT DUE**

**ANNEX-VII**

**Consent Order No : APPCB/VSP/VSP/12334/HO/CFO/2017-**

**Date: 31.07.2017**

CONSENT is hereby granted for Operation under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof and Authorisation under Rule 6 of the Hazardous & Other Wastes (Management and Transboundary, Movement) Rules, 2016 and the rules and orders made there under (hereinafter referred to as 'the Acts', 'the Rules') to:

**M/s. Simhadri Super Thermal Power Project (Stage-I&II),**  
**NTPC Limited, Parawada,**  
**Visakhapatnam District - 531 020**  
**E-mail: ssrao01@ntpc.co.in / jithinabraham@ntpc.co.in**

(Hereinafter referred to as 'the Applicant') authorizing to operate the industrial plant to discharge the effluents from the outlets and the quantity of emissions per hour from the chimneys as detailed below:

**i) Out lets for discharge of effluents:**  
**Stage - I (Unit -1&2)- 1000 MW.**

Outlet No.	Outlet Description	Max Daily Discharge (KLD)	Point of disposal
1.	D.M. Plant Regeneration effluent	3400	Reused for Ash Slurry preparation
2.	Boiler Blow Down and once through Cooling Water after treatment	1,03,900	Into Sea
3.	Ash Pond Effluent	9600	Reused for Ash Pumping
4.	Domestic	1790	After treatment in STP, onland for Plantation / Gardening.
Total		1,18,690	

**Stage - II (Unit -3&4)- 1000 MW**

Existing Outlet No.	Outlet Description	Max Daily Discharge (KLD)	Point of disposal
1.	Filter Back wash	240	Recycled to clarifier inlet
	CHP effluent	4800	Sedimentation, Treatment & Recycle
2.	DM Plant Regeneration Waste	240	Neutralization and disposal through Central Monitoring Basin (CMB) and excess treated effluents to Sea.
	Cooling Tower blow down	106320	Partial use and disposal through CMB and excess treated effluents to Sea.
	Boiler Blow down	1080	Disposal through CMB and excess treated effluents to Sea.
	Ash water Blow down	34320	Disposal through CMB and excess treated effluents to Sea.
3.	Clarifier Sludge	720	Disposed in ash pond
4.	Domestic	2400	Biological treatment & Onland for Plantation / Gardening
Total		1,50,120 (6255 m <sup>3</sup> /hr)	

**ii) Emissions from chimneys:**

Chimney No.	Description of Chimney	Quantity of Emissions in m3/hr. at peak flow
1.	Attached to 2 x1,675 TPH Coal Fired Boilers (Stage-I: 1000 MW)	28,51,560
2.	Attached to 2 x1,675 TPH Coal Fired Boilers	28,99,800



	(Stage-II: 1000 MW)	
3.	Attached to 6 x 1500 KVA D.G Sets	--

iii) **HAZARDOUS WASTE AUTHORISATION (FORM - II) [See Rule 6 (2)]:**

M/s. Simhadri Super Thermal Power Project, NTPC Limited, Stage-I&II, Parawada, Visakhapatnam District., is hereby granted an authorization to operate a facility for collection, reception, storage, treatment, transport and disposal of Hazardous Wastes namely:

• **HAZARDOUS WASTES WITH RECYCLING OPTION:**

S.No	Name of the Hazardous waste	Stream	Quantity of Hazardous waste	Disposal Option
1.	Used / Waste Lubricating oil	5.1 of Schedule - I	90 KL/Annum	Authorized Re-processors / Recyclers.

This consent order is valid for power generation with quantities indicated below:

S.No.	Product	Quantity
1	Electricity (Coal with maximum sulphur content of 0.6% and ash content of 45%)	2000 MW (Existing: Stage - I(Unit-1&2) - 1000 MW, Existing: Stage - II(Unit-3&4) - 1000 MW)

This order is subject to the provisions of 'the Acts' and the Rules' and orders made thereunder and further subject to the terms and conditions incorporated in the schedule A, B & C enclosed to this order.

This combined order of consent & Hazardous Waste Authorization shall be valid for a period ending with the 31<sup>st</sup> day of August, 2022.

Sd/-  
MEMBER SECRETARY

To  
M/s. Simhadri Super Thermal Power Project (Stage-I & II),  
NTPC Limited, Parawada,  
Visakhapatnam District - 531 020

// T.C.F.B.O. //

*Wao 1/8/17*  
Joint Chief Environmental Engineer  
Unit Head-IV

**SCHEDULE - A**

- Any up-set condition in any industrial plant / activity of the industry, which result in, increased effluent / emission discharge and/ or violation of standards stipulated in this order shall be informed to this Board, under intimation to the Collector and District Magistrate and take immediate action to bring down the discharge / emission below the limits.
- The industry should carryout analysis of waste water discharges or emissions through chimneys for the parameters mentioned in this order on quarterly basis and submit to the Board.
- All the rules & regulations notified by Ministry of Law and Justice, Government of India regarding Public Liability Insurance Act, 1991 should be followed as applicable.
- The industry should put up two sign boards (6x4 ft. each) at publicly visible places at the main gate indicating the products, effluent discharge standards, air emission standards, hazardous waste quantities and validity of CFO and exhibit the CFO order at a prominent place in the factory premises.
- Notwithstanding anything contained in this consent order, the Board hereby reserves the right and powers to review / revoke any and/or all the conditions imposed herein above and to make such variations as deemed fit for the purpose of the Acts by the Board.
- The industry shall file the water cess returns in Form-I as required under section (5) of Water (Prevention and Control of Pollution) Cess Act, 1977 on or before the 5th of every calendar month, showing the quantity of water consumed in the previous month along

with water meter readings. The industry shall remit water cess as per the assessment orders as and when issued by Board.

7. The applicant shall submit Environment statement in Form V before 30th September every year as per Rule No.14 of E(P) Rules, 1986 & amendments thereof.
8. The applicant should make applications through Online for renewal of Consent (under Water and Air Acts) and Authorization under HWM Rules at least 120 days before the date of expiry of this order, along with prescribed fee under Water and Air Acts and detailed compliance of CFO conditions for obtaining Consent & HW Authorization of the Board. The industry should immediately submit the revised application for consent to this Board in the event of any change in the raw material used, processes employed, quantity of trade effluents & quantity of emissions. Any change in the management shall be informed to the Board. The person authorized should not let out the premises / lend / sell / transfer their industrial premises without obtaining prior permission of the State Pollution Control Board.
9. Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules 1982, to Appellate authority constituted under Section 28 of the Water(Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air(Prevention and Control of Pollution) Act, 1981.

#### SCHEDULE - B

#### **WATER POLLUTION:**

1. The effluent discharged shall not contain constituents in excess of the tolerance limits mentioned below.

Outlet	Parameter	Limiting Standards
2.	pH	6.50 - 8.50
	Temperature not more than 5°C higher than intake water.	
	Total Suspended Solids (at 103 - 105° C)	100 mg/l
	Oil and Grease	20 mg/l
	Free chlorine	0.5 mg/l
	Phosphate as PO4	20 mg/l
	Chromium (Total)	0.2 mg/l
	Copper (Total)	1mg/l
	Iron	1 mg/l
	Zinc	1 mg/l
4.	pH	5.5 - 9.0
	Total Suspended Solids (at 103 - 105° C)	200 mg/l
	Bio Chemical Oxygen Demand (BOD 3 at 27 °C)	100 mg/l
	Total Dissolved Solids	2100 mg/l

2. The industry shall take steps to reduce water consumption to the extent possible and consumption shall NOT exceed the quantities mentioned below:

#### **Stage - I (Unit -1&2)- 1000 MW**

S. No.	Purpose	Quantity in KLD
1.	Industrial Cooling (Makeup) - Sea water	2,16,000 KLD
2.	DM Plant	4,320 KLD
3.	Domestic (including Gardening / Irrigation)	4,080 KLD
<b>Total</b>		<b>2,24,400 KLD</b>

#### **Stage - II (Unit -3&4)- 1000 MW**

S. No.	Purpose	Quantity in KLD
1.	Industrial Cooling (Makeup) - Sea water	2,13,240 KLD
2.	DM Plant	13,200 KLD
3.	Domestic (including Gardening / Irrigation)	
<b>Total</b>		<b>2,26,440 KLD</b>

The industry shall maintain separate water meters for the above areas and maintain records. The source of water is Sea water (8885 cum/hr) from Bay of Bengal and 550 cum/hr from Yeleru left bank canal.

#### **AIR POLLUTION:**

3. The emissions shall not contain constituents in excess of the prescribed limits mentioned below.

Chimney No.	Parameter	Emission Standards
1	Particulate matter	115 mg/Nm <sup>3</sup>
2	Particulate matter	100 mg/Nm <sup>3</sup>

4. The industry shall comply with emission limits for DG sets of capacity upto 800 KW as per the Notification G.S.R.520 (E), dated 01.07.2003 under the Environment (Protection) Amendment Rules, 2003 and G.S.R.448(E), dated 12.07.2004 under the Environment (Protection) Second Amendment Rules, 2004. In case of DG sets of capacity more than 800 KW shall comply with emission limits as per the Notification G.S.R.489 (E), dated 09.07.2002 at serial No.96, under the Environment (Protection) Act, 1986.
5. The industry shall comply with ambient air quality standards of PM<sub>10</sub> (Particulate Matter size less than 10µm) - 100 µg/ m<sup>3</sup>; PM<sub>2.5</sub> (Particulate Matter size less than 2.5 µm) - 60 µg/ m<sup>3</sup>; SO<sub>2</sub> - 80 µg/ m<sup>3</sup>; NO<sub>x</sub> - 80 µg/m<sup>3</sup> outside the factory premises at the periphery of the industry.  
Standards for other parameters as mentioned in the National Ambient Air Quality Standards CPCB Notification No.B-29016/20/90/PCI-I, dated 18.11.2009  
Noise Levels: Day time (6 AM to 10 PM) - 75 dB (A)  
Night time (10 PM to 6 AM) - 70 dB (A).

**GENERAL:**

6. The industry shall not increase the capacity beyond the permitted capacity mentioned in this order without obtaining CFE & CFO of the Board.
7. The industry shall submit detailed action plan within one month for fly ash utilization as per the Fly Ash Notification on MoEF to the Board to achieve 100% utilisation of fly ash.
8. The industry shall explore possibilities for disposal of 100 % fly ash generated to outside parties instead of dyke wall rising.
9. The industry shall maintain proper water curtains in the Ash ponds to avoid dust nuisance to the nearby villagers.
10. The industry shall maintain permanent mechanical sprinklers for suppression of dust on the haul roads in between the villages and report the compliance to RO-Visakhapatnam.
11. Refurbished Environment Management Team with dedicated man power shall be maintained for continuous monitoring of Plant environment to ensure compliance of CFO conditions.
12. The industry shall maintain 3 CAAQM stations connected to APPCB website and report the compliance to RO-Visakhapatnam.
13. The industry shall maintain online Stack and ambient monitoring systems with connection to the Board's website.
14. The industry shall maintain duly compacted soil cover of requisite thickness as per norms for the ash ponds to avoid dust pollution and report the compliance to RO-Visakhapatnam.
15. The industry shall submit Isotopic study final report of M/s. NEERI on impacts on ground water due to ash ponds and report the compliance to RO-Visakhapatnam. Continuous monitoring of the ground water quality in all sides of the plant shall be carried out.
16. The industry shall take necessary measures like Ammonia dosing to maintain ESPs attached to the Boilers so as to meet SPM standards all the time.
17. The industry maintain the data logging facility provided for storing online stack emission data properly, for retrieval as and when necessary. Industry shall submit monthly report to the RO Visakhapatnam.
18. The industry shall maintain water meters for recording consumption of Sea water / water from Yeleru canal and maintain proper records for daily water consumption and shall submit monthly reports to the RO, Visakhapatnam.
19. The industry shall maintain proper arrangements for collection of seepage from ash pond and pumped back into the ash water system, so as to avoid ground water pollution in the surrounding area.
20. The industry shall maintain water cover in the ash pond area to prevent fly ash from getting air borne and air pollution in the surrounding area especially to the residents of Pittavanipalem.
21. Efforts shall be taken to dispose all fly ash in dry form as much as possible instead of diverting it to wet ash pond due to paucity of land available and due to lack of secured landfill arrangement in the ash pond. Dry ash collection systems of Stage-I & Stage - II shall be maintained properly.
22. The industry shall monitor all ground water peizo wells and submit report to RO-Visakhapatnam every three months indicating trends.

23. Garland canal shall be maintained around the fly ash pond to collect water that is expected to leach out and monitoring of such leachates shall be carried out.
24. After increase in the bund level and increase in the storage capacities due to the lateral pressures, the aquifer may be influenced due to the leachates. The industry shall maintain sufficient fresh water in the borrow pits to counter the lateral pressures and contain the leachates if any percolate into strata.
25. The industry shall act on pollution problems that arise out of the ash pond and shall take measures to contain by taking time to time action to dispel apprehensions by the residents of the villagers. If it is required, the industry shall take up the corrective measures like introducing geo-textiles vertically in the sub-surface levels in the detected areas of leaching.
26. The industry shall not use any fuels other than those permitted in this order without prior consent from the Board. They shall maintain log registers on type of fuels & daily consumption, ash content, sulphur content etc., and shall furnish consolidated records to R.O., Visakhapatnam for every three months.
27. The industry shall maintain interlocking facility between APC equipment (ESP) and fuel feeding system for all the units, so that the feeding of the fuel will be stopped automatically, in case, the ESP fails/ tripping's are occurred.
28. The industry shall maintain separate water meters to assess the quantity of water consumed at various sections. The industry shall provide separate water meters with necessary pipeline for assessing the quantity of water used for each of the purposes mentioned below:
  - a. Industrial cooling, boiler feed.
  - b. Domestic purposes.
  - c. Processing, whereby water gets polluted and pollutants are easily biodegradable.
  - d. Processing, whereby water gets polluted and pollutants are not easily biodegradable.
29. The industry shall maintain the following records and the same shall be made available to the Board Officials during the inspection.
  - a. Daily power generation details.
  - b. Quantity of Effluents generated and disposed.
  - c. Log Books for pollution control systems.
  - d. Daily Fly ash generated and disposed.
30. Green belt of adequate width and density shall be maintained along the boundary of the industry and around ash ponds with minimum area of 33% of total area and to protect surrounding Villages from fugitive dust.
31. The industry shall comply with directions issued by Board from time to time.
32. The industry shall comply with the MoEF, Gol notification dt.14.09.1999 and other directions issued time to time with regard to utilization of ash.
33. The industry shall take measures around the ash pond area to avoid entry of animals in order to prevent accidents, breakage of emergency ponds and protection of greenbelt.

**SCHEDULE - C**

**[ see rule 6(2) ]**

**[ CONDITIONS OF AUTHORISATION FOR OCCUPIER OR OPERATOR HANDLING HAZARDOUS WASTES ]**

1. All the rules and regulations notified by Ministry of Environment and Forests, Government of India under the E(P) Act, 1986 in respect of management, handling, transportation and storage of the Hazardous wastes should be followed.
2. The industry shall not store hazardous waste for more than 90 days as per the Hazardous & Other Wastes (Management and Transboundary Movement) Rules, 2016.
3. The industry shall store Used / Waste Oil and Used Lead Acid Batteries in a secured way in their premises till its disposal to the manufacturers / dealers on buyback basis.
4. The industry shall maintain 6 copy manifest system for transportation of waste generated and a copy shall be submitted to concerned Regional Office of APPCB. The driver who transports Hazardous Waste should be well acquainted about the procedure to be followed in case of an emergency during transit. The transporter should carry a Transport Emergency (TREM) Card.
5. The industry shall maintain proper records for Hazardous & other wastes stated in Authorization in FORM-3 i.e., quantity of Incinerable waste, land disposal waste, recyclable waste etc., and file annual returns in Form- 4 as per Rule 6 (5) of the

Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016 and amendments thereof.

6. The industry shall submit the condition wise compliance report of the conditions stipulated in Schedule A, B & C of this Order on half yearly basis to Board Office, Hyderabad and concerned Regional Office.

Sd/-  
MEMBER SECRETARY

To  
M/s. Simhadri Super Thermal Power Project,  
NTPC Limited, Parawada,  
Visakhapatnam District - 531 020

// T.C.F.B.O. //

11/09/17

Joint Chief Environmental Engineer  
Unit Head-IV

केओसुबइकाईएसटीपीपी सिम्हाद्री  
जिला : विशाखपटनम ( आ.प्र. )

सं0आई0सी / 42012 / केओसुब / सीआईडब्लू / 2016/1144 दिनांक 22.09.2016

To

The Group General Manager  
NTPC, Simhadri

Family  
for read p. 11.  
22/9

Subject: - **DAILY SITUATION REPORT.**

The Daily Situation report in respect of CISF Unit, STPP Simhadri for the period from 1000 hours on 21.09.2016 to 1000 hours on 22.09.2016 is as mentioned below :-

1. Threat/General Situation : Nil
2. Trade Union/Political activities : Nil
3. Theft/Pilferage : Nil
4. Communal activities : Nil
5. General Situation : Normal
6. Miscellaneous : It is intimated that a alert letter has been

received from IG South Sector HQRs Chennai regarding terrorist attack at URI, J & K (Alert Message Copy Enclosed).

In Deepanjali Nagar Township employees/families and CISF personnel are staying in the premises as well as Tadi Out post. The boundary walls in these areas are very short and some part of boundary walls are damaged in different locations so unauthorized people might be entered through that damaged boundary wall or cross easily and create nuisance activity, untoward incidents, etc. All are aware that recently some militants attack was occurred at URI, J&k Army Base Camp by entering through the damaged boundary wall.

There fore it is, requested that necessary arrangements may please be taken to increase the boundary walls height and concertina wire fixed on the above said areas because the force personnel/employees and their families are staying in these areas to avoid any untoward incidents.

2. The Honable' Chief Minister of AP visit on 23.09.2016 at about 1230 to 1430 hrs at Paravada (vizg).

General Situation of STPP (S) Plant and its surrounding area is normal and is under close watch.

Submitted for kind information please.

उप कमाण्डेंट

केओसुब इकाई एसटीपीपी सिम्हाद्री

COPY TO:-

The AGM (HR)  
NTPC , SIMHADRI

:-

FOR KIND INFORMATION PLEASE.

1326  
3/10/11

ANNEX - IX

SECRET

F.No.1/6/2011/IT (E-22-Part-1) (246867)  
Government of India  
Ministry of Power

Shram Shakti Bhavan, Rafi Marg,  
New Delhi, Dated: 23<sup>rd</sup> October, 2019

To

1. Chairperson-CEA
2. CMD-NTPC/NHPC/POWERGRID/PFC/REC/NEEPCO/THDC/POSOCO/SJVNL
3. Chairman-DVC/BBMB
4. DG-BEE/NPTI/CPRI
5. Secretary-CERC/ATE
6. MD-EESL
7. CISO-MoP [Kind.Attn. Shri MAKP Singh, CE(IT), CEA]
8. CERT-Thermal/Hydro/Transmission/Distribution
9. Sr.Tech.Dir. (NIC)-MoP

*All directors*

Sir,

I am directed to inform that reliable inputs indicate that Pak based anti-India agencies have prepared a blue print to hack/exploit computer/cyber systems in India and are exploring capabilities towards implementing the same immediately.

2. This new strategy aims to concentrate efforts towards disrupting important Indian economic hubs and vital installations, through cyber attacks and disrupting the computer systems as an alternative to trans-border terrorism. Such attacks, especially on our power, transport, financial and energy related systems, can potentially damage economic activities in the country and cause large scale disruption in affected areas/sectors.

3. Keeping in view of the prevailing security scenario in the country, it is requested to urgently review and strengthen the cyber/computer and physical security of vital installations and critical infrastructure.

4. The matter may be accorded top priority.

Yours Faithfully,

(Praveen Kumar)

Under Secretary to the Govt. of India  
Tel.No.23715507 ext. 281

pr@mop@nic.in



## STATE POLLUTION CONTROL BOARD, ODISHA

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

A NNEY - X  
BY REGD. POST

No. 2755 /

Ind-II-NOC-5592

Date 28-02-14

### OFFICE MEMORANDUM

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

### GENERAL CONDITIONS.

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

[1]

83



**SPECIAL CONDITIONS :-**

1. The proponent shall obtain environmental clearance for the proposal as per EIA notification, 2006 and the construction activity for the proposal shall commence after obtaining environmental clearance. ✓
2. The proponent shall carry out the construction activity as per the approved lay out map. Any deviation in approved layout map during construction activity shall be treated as violation of consent condition and appropriate action (including revocation of consent to establish) shall be taken as per law. If the proponent desires to change the approved plant layout map, they can submit a modified plant layout map surrendering the previous one before going for physical construction. ✓
3. The unit shall not use 390 acres land ear-marked for green belt development for other purpose. ✓
4. The industry shall set up its own fly ash brick manufacturing unit along with establishment of unit-I so that fly ash generated from the unit-I can be utilized for fly ash brick making and which will be used for civil construction of unit-II. ✓
5. The industry has proposed to use 30% imported high GCV coal. They shall keep adequate space for installation of flue gas de-sulphurization unit in case substantial increase in GLC concentration of SO<sub>2</sub> is observed.
6. The industry shall construct ash pond over 400 acres of area as earmarked in the revised land use break-up. Under no circumstance land earmarked for ash pond shall be used for any other purpose. Consent to operate for power plant shall only be considered when ash pond will be ready for ash disposal.
2. The unit shall suitably divert all the public roads passing through the proposed project. ✓
3. The unit shall develop thick green belt with high boundary wall along the boundary of the project as human habitations are close to the proposed site. ✓
4. The unit shall include rain water harvesting proposal during execution of the project. ✓
5. The unit shall submit year wise along with percentage wise fly ash utilisation plan to the Board in the end of the year. ✓
6. The unit shall be based on zero discharge concepts and in no case any effluents shall be discharge to any water body. ✓
7. The unit shall obtain necessary clearances such as forest clearance, wild life clearance, clearance from water resources department etc. from the appropriate authorities as applicable. ✓
8. The unit shall adopt adequate safety measures in construction of ash dyke and detail constructional feature shall be submitted to the Board within one month from the date of issue of consent to establish. ✓
9. The height of each stack of power plant boiler shall not be less than 275 meters from the ground. The power plant shall have two stacks for flue gas emission. ✓
10. The unit shall install ESP in the stack attached to power plant boiler such that particulate matter emission shall not exceed 50 mg/Nm<sup>3</sup>. They should make provision for one spare field during the design of ESP. If more than one field of ESP fails, the plant should trip automatically through an interlocking system. ✓

11. The unit shall provide port hole and platform at suitable location with safe approach to conduct emission monitoring at the stack.
12. The unit shall provide dust extraction system at crusher house, boiler bunker to control dust emission. CHP shall be installed in a shed and coal carrying conveyor belts shall be covered.
13. Separate energy meter shall be installed for all the pollution control equipments and the records shall be maintained for verification of the Board from time to time.
14. Necessary preventive measures shall be taken during construction phase so that the ambient air quality including noise shall conform to National Ambient Air Quality standards and standards for noise in industrial area as per Annexure-I. The unit shall install adequate dust extraction as well as dust suppression system at all potential dust generating points to control fugitive dust emission and the ambient air quality inside the factory premises shall conform to the standard with reference to National Ambient Air Quality Standard prescribed by MoEF, Govt. of India dtd 16.11.2009 enclosed as Annexure - II.
15. The construction material which has potential to be air borne, shall be transported in covered trucks.
16. The roads inside the plant premises shall be black topped. Permanent high pressure water sprinkling system shall be installed for regular spraying of water on roads to minimize fugitive dust emission.
17. The unit shall take adequate measures for controlling of fugitive dust emission during transportation of fly ash for utilisation. Good housekeeping practices shall be followed to improve the work environment. All roads and shop floors shall be cleaned regularly.
18. At least 6 continuous ambient air quality monitoring stations around the industry shall be set up to monitor PM-10, PM-2.5, SO2, NOx, CO and other important parameters as given in as per Annexure - II above within at least to the distance in down wind direction and where maximum ground level concentration is anticipated. The exact location of the monitoring stations shall be finalized in consultation with the State Pollution Control Board. The proponent shall install continuous online ambient air quality monitoring and stack monitoring system with display facility at the gate. A detail proposal to this effect shall be submitted.
19. Pneumatic conveyor system shall be provided as dust collection system for ESP dust. Silos shall be provided for collection of bottom ash and fly ash. Conveyor belt shall be closed and bag filter shall be provided at transfer points of conveyor system to control fugitive emission.
20. Air pollution Control devices shall be maintained properly. Fabric bags and cages in bag house shall be checked regularly and replaced whenever required. Adequate availability of spares shall be ensured for immediate replacement.
21. All the wastewater generated shall be discharged to a common monitoring basin before it is reused in the plant for various process.
22. The Blow down shall meet the following standards before it is discharged to the common basin.

**Boiler Blow Down :**

Suspended solids	-	100.0mg/l (max)
Oil & Grease	-	20.0 mg/l (max)
Copper (Total)	-	1.0 mg/l (max)
Iron (total)	-	1.0mg/l (max)

[3]

#### Cooling Tower Blow Down

Free available Chlorine	0.5 mg/l (Max)
Zinc	1.0 mg/l (Max)
Chromium (total)	2.0 mg/l (Max)
Phosphate	0.2 mg/l (Max)

23. The wastewater generated from leakages, blow downs and DM plant shall be treated individually to meet the prescribed standard of effluent discharge to inland surface water and stored in a common basin (i.e. guard pond) for utilization for plantation, dust suppression ash handling and green belt purpose inside the factory premises. Lining shall be provided in guard pond to prevent any seepage into ground to avoid ground water contamination. The proponent shall submit detail drawing with specification of ETP within 6 months.
24. The proponent shall provide garland drains around coal storage area followed by series of settling tanks to retain the solids, if any, in order to reduce the load on common monitoring basin.
25. The unit shall furnish details of the control measures at coal loading and unloading points.
26. The acidic water generated during boiler cleaning shall be properly neutralized so that the pH of cleaning water remains within the range of 6.0 - 9.0. After neutralization this water can be discharged to the common monitoring basin.
27. Oil catch pits shall be provided in oil handling area of power plant for collection of spillage.
28. The unit shall provide treatment system such as Reverse osmosis plant to treat the waste water generated from cooling tower blow down and reuse the same in the process.
29. The storm water drains shall be maintained separately without being mixed up with the industrial effluent or sewage effluent. The domestic effluent from the industry as well as the colony shall be treated in proper sewage treatment plant to meet the prescribed BIS standard (SS - 30mg/l, BOD - 20mg/l) before being discharged or utilized for green belt development.
30. The industry shall adopt High Concentration Slurry Disposal (HCSD) method for ash disposal. A detail design of the ash disposal area, the dykes, run off and seepage collection system etc shall be made and submitted within 3 months from the date of issue of this consent to establish. ✓
31. A comprehensive ash utilization plan shall be prepared within the frame work of Fly Ash Notification, 2009 and its amendment thereof. The plan should explore all possible means of utilization with realistic timelines and utilization options. The ash utilization plan submitted by the proponent is not adequate. A detailed ash utilization plan is to be submitted keeping in view of less ash at the time of consent to operate application. ✓
32. The proponent shall take precautionary measures to prevent surface run off from ash disposal area during torrential rain. A detailed proposal to this effect is to be submitted within 3 months. ?
33. Rain water harvesting structure shall be developed inside the plant premises as per concept and practices made by GPCB and maximum efforts shall be made to reuse harvested rain water, with a definite plan and programme to reduce the drawal of fresh water from water bodies.
34. The unit shall explore the possibility of disposal of fly ash in abandoned mine pit for complete utilization of fly ash. ?
35. The unit shall submit details of hazardous chemicals and storage facility and risk assessment to the Board.
36. The industry shall comply with all the conditions stipulated under Charter on Corporate Responsibility for Environmental Protection (CREP) guidelines in a time bound manner as envisaged there in.



37. A toe drain shall be provided around the ash mound. The seepage water collected in the toe drain shall be monitored every month with respect to pH, SS, O&G and fluoride and shall meet the following standards
- pH-8.5 to 8.5  
 SS-100mg/l  
 O&G-20mg/l and  
 Fluoride-2.0mg/l
- and the monitoring report shall be submitted to the Board quarterly.
38. Regular monitoring of runoff water from the disposal area and excess ash water shall be carried out with respect to pH, SS, O&G and fluoride content and monitoring report shall be submitted to the Board every quarter.
39. Ash pond shall be lined with HDPE or any other suitable impermeable lining such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.
40. The Project Proponent shall carry out detail hydrogeological study of the ash pond site incorporating soil analysis, ground water quality (fluoride & heavy metals), surface water quality (fluoride & heavy metals) and drainage network of the area and the change in hydrological status shall be monitored annually.
41. Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (F, Cd, Hg, Cr, As, Pb) and records shall be maintained and submitted to the Board. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.
42. The entire upstream face of the dyke shall be provided with stone pitching or brick lining or precast tile lining to prevent erosion of the slope by wave action during heavy wind.
43. The entire area of the ash dyke shall be provided with fencing and unauthorized entry within this ash pond area shall be strictly prohibited. Security guards shall be posted for vigilance of the ash dyke area round the clock. This is very important as there are chances of sabotage. The entire dyke perimeter shall have accessible roads. The entire dyke area shall be provided with street lights or flood lights for inspection during night time. A site office shall be constructed with a full time engineer responsible for inspection and monitoring of the ash dyke.
44. The industry shall construct a Sewage Treatment Plant (STP) for treatment of wastewater to be generated from domestic source and the treated sewage shall be discharged to the common monitoring basin.
45. The unit shall explore the possibility to use chlorine di-oxide for treatment of water instead of chlorine gas.
46. Plantation activity shall be planned in such a way so that trees will have better growth by the time the unit starts operation.
47. The proponent shall deploy vehicles which conform to the latest BIS emission specification. The proponent shall also to give a detail proposal to control noise pollution during construction phase. The proponent shall prepare pollution prevention and environment management plan for construction phase and operation phase separately and should submit to the Board three months prior to commencement of construction and operation respectively.
48. The rising temperature during summer in the area is a major concern. The unit shall conduct a detailed study on contribution of thermal heat to atmosphere due to the proposed project and its impact on ambient temperature during different season. The study should also investigate the heat island effect due to the project.

49. The industry shall provide screen at the water intake system of Hirakud reservoir for protection of aquatic life.
50. The industry shall set up a full-fledged environment monitoring laboratory and an environment management cell with qualified personnel for monitoring of pollutants and effective remedial measures in case of necessity. Head of the environmental management cell shall report to the unit head.
51. The civil construction shall be carried out with the fly ash bricks. If the fly ash bricks are not available locally the civil construction may be carried out with other bricks with prior intimation to the concerned Regional Office of SPC Board. A statement indicating use of fly ash bricks during construction period shall be submitted to the Board every year for record.
52. The land on which the unit is proposed to be established the power plant shall be converted to industrial use Khasam by the competent authority. The copy of said land conversion document shall be submitted to the Board along with consent to operate application.
53. A green belt of adequate width and density preferably with local species along the periphery of the power plant shall be raised so as to provide protection against particulates and noise. It must be ensured that at least 33% of the total land area shall be under permanent green cover, in such a manner that, atleast plantation shall be taken up at least in 20% of the total green belt area and progressively achieve 100% in a span of five years.
54. No production activity shall commence prior to installation of the pollution control devices. In case, it is found that the plant is operating without installation of appropriate pollution control equipment(s) and without permission for trial operation from the Board, a direction of closure shall be issued u/s 31-A of Air (PCP) Act, 1981 and for u/s 33-A of Water (PCP) Act, 1974 without any further notice in this regard.
55. The Board may impose further conditions or modify the conditions stipulated in this order during installation and / or at the time of obtaining consent to operate and may revoke this clearance in case the stipulated conditions are not implemented and / or any information suppressed in the application form.

Encl: Approved layout Map & Annexures

  
MEMBER SECRETARY

To

Shri S. K. Reddy, General Manager,  
Derlipali Super Thermal Power Project (DSTPP) of  
M/s. NTPC Ltd.,  
3<sup>rd</sup> & 4<sup>th</sup> Floor, Amba Tower, Hospital Road,  
Sundargarh-770001.

Memo No. \_\_\_\_\_ /Dt. \_\_\_\_\_

Copy forwarded to:

1. District Magistrate & Collector, Sundargarh.
2. District Industries Centre, Sundargarh.
3. Director, Factories & Boiler, Bhubaneswar
4. Regional Officer, SPC Board, Rourkela.
5. Sr. Env. Engineer (Consent), SPC Board, Bhubaneswar.
6. DFO, Sundargarh.
7. Hazardous Waste Management Cell, SPC Board, Bhubaneswar.
8. Copy to Guard file.

SR. ENV. ENGINEER (N)

[ 6 ]

88

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

CSMC/TFC/CR-13/2013-14

Phone No : 080-26531200  
Fax No : 080-26531202

Directorate of Factories, Boilers, Industrial Safety &  
Health, "Karnika Bhavana" 2<sup>nd</sup> floor, Near Bengaluru  
Dairy, I.T.I. compound, Bannerghatta road,  
Bengaluru-29, Dated 23.09.2013.

To,  
General Manager  
M/s NTPC Limited,  
Kudgi Super Thermal Power Project,  
Plot No. 9, Mallikarjun Nagar,  
Managuli Road, Bijapur-586 109.

Sir,

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

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 final location for the establishment of super thermal power project for generating electrical power of 3 X 800 MW at Near Kudugi village, Basavana bagewadi Taluk, Bijapur District.

The site clearance is issued subject to the following conditions;

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


8. The mitigation measures as submitted in the presentation and as suggested by committee shall be incorporated in the on-site emergency plan. The same shall be submitted for scrutiny and approval.
9. The provisions of rule 50 to 251 of Building and Other Construction Workers (Regulation of Employment and condition of service) (Karnataka) Rules 2006 shall be complied to ensure occupational safety and health of the construction workers involved project. The compliance shall be furnished regularly to jurisdiction officers of our department and to the Director of Factories, Boilers, Industrial Safety and Health.

**Suggestions:**

1. The industry shall adopt the rain - harvesting system to harvest atleast 80% of the rain water.
2. 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. The department reserves all the rights to modify or withdraw clearance issued at any point of time.

Your's Faithfully,

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



ఆంధ్రప్రదేశ్ ఆంధ్ర ప్రదేశ్ ANDHRA PRADESH  
Sl.No. 1472 Date 24-10-2017  
RS. 100/-  
Sold To... Group katan maifi slo (s/o) Susanta kumar  
For whom... Sr. Deapujalnagar, Vsp. maifi,

*P. Varalakshmi*  
BV 429646  
**POLAVARAPU VARALAKSHMI**  
Licenced Stamp Vendor  
L.No. 03-16-008/2013  
R.L. No. 03-16-07/2016  
D.No. 2-56, Chappurupalli (West)  
Parawada, Visakha Dist.  
530090

**SUPPLEMENTARY AGREEMENT TO BULK WATER SUPPLY AGREEMENT**

This Supplementary Agreement to Bulk Water Supply Agreement dated 27th September 2006 (BWSA) is made at Visakhapatnam on 06<sup>th</sup> May 2018

BETWEEN

THE GOVERNOR OF THE STATE OF ANDHRA PRADESH for and on behalf of the Government of the State of Andhra Pradesh, Hyderabad, India (hereinafter called the "GoAP" which expression shall, unless the context otherwise requires, include its permitted successors and assigns) acting through the Vice Chairman and Managing Director of APIIC vide GO MS No. 55, dated June 18, 2004 issued by Irrigation and Command Area Development Department of the GoAP.

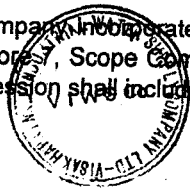
AND

VISAKHAPATNAM INDUSTRIAL WATER SUPPLY COMPANY LIMITED, a Company incorporated under The Companies Act, 1956, having its Registered Office at c/o Greater Visakhapatnam Municipal Corporation, Room No.204, Tenneti Bhawanam, Asselmetta JN, Visakhapatnam 530002 (hereinafter called the "Operator", which expression shall include its permitted successors and assigns).

AND

NTPC LIMITED, a Company incorporated under The Companies Act, 1956, having its Registered Office at Connaught Place, Scope Complex, Lodi Road, New Delhi (hereinafter called the "User", which expression shall include its permitted successors and assigns).

140



*Ambratan Maifi*

*06/05/2018*



## 1.0 BACKGROUND

### WHEREAS

- (i) In order to augment water supply to other consumers including NTPC in and around Visakhapatnam the GoAP has decided to implement the Visakhapatnam Industrial Water Supply (the Project) under Build Own Operate and Transfer (BOOT) scheme by GoAP entering in to a Concession Agreement dated March 12, 2004 with the Operator.
- (ii) The GoAP which has been supplying water through VIWSCO to NTPC will continue to supply water for the established 4 x 500 MW (2000 MW) units of NTPC Simhadri.
- (iii) The GOAP, Operator and User entered into the Bulk Water Supply Agreement dated 27<sup>th</sup> September 2006 to record the terms and conditions upon which Bulk Water will be supplied to User by the Operator.
- (iv) The rates for water supply and debt service restructuring for payment of the outstanding loan amount and Funded Interest amount, inter alia, had been discussed and mutually agreed by and between all the concerned participants viz., RINL, GVMC, NTPC, APIIC & VIWSCO in the meeting held on 19.11.2012 vide Minutes of the Meeting (MoM) of the even date.
- (v) The Government of Andhra Pradesh in the Irrigation and CAD Department, pursuant to the applicable provisions of the Concession Agreement between the GoAP and VIWSCO and taking into consideration the MoM of 19-11-2012, enhanced and fixed special rate for water supply to RINL, NTPC and GVMC by VIWSCO and accorded approval to the terms and conditions of the debt service restructuring as mutually agreed and advised entering in to supplementary agreements to give due effect and for implementation of the rate for water supply and debt service restructuring vide its G.O. MS No.24 dated 25.02.2015 by Irrigation and CAD Department, Government of Andhra Pradesh.

NOW This Supplementary Agreement to BWSA witnesses as follows:

### MODIFICATION OF RELEVANT PROVISIONS OF BWSA

The parties to this agreement hereby agree to modify the said Bulk Water Supply Agreement for the purpose of giving effect and to implement the decisions vide above cited Minutes of Meeting dated 19-11-2012 and G.O. Ms.No.24. dated 25.02.2015 by substituting and/or modifying the relevant paragraphs of the BWSA as below:

#### 5.0 CONVEYANCE AND CHARGES

##### 5.1 Conveyance and Payment for Raw Water

- (A) Upon the terms and subject to the conditions this Agreement and during the term hereof, the Operator undertakes to Deliver the quantity of Raw Water at the Delivery Point as per Contract Volume and at the Charges in accordance with

H/O



*Ampratan Malik*

Appendix 2 and Appendix 1 respectively, during the Supply Period and the User undertakes to take and pay for the quantity of Raw Water as per Contract Volume in the Supply Period, as agreed to by the User in writing before commencement of the Supply Period as per the terms and conditions mentioned below:

- (a) The User will pay for contract volume at Special Charges of Rs. 11.80 (Rupees eleven and eighty paise only) per Kiloliter from 01.04.2012. The Special Charges shall be escalated in accordance with the provisions given in Appendix 1 of this Agreement.
- (b) In case, if any additional Raw Water is required by the User beyond 32 MLD and up to 48 MLD then the User will indicate the Triennial Demand in writing to the Operator at least one month before the Water Drawl Committee meeting. The Operator Deliver such additional Raw Water up to 48 MLD at Special Charges in accordance with Appendix 1 of this Agreement. The revised requirement so indicated will be considered as the Contract Volume.
- (D) The Special Charges, subject to maximum of Rs. 23.36 (Rupees twenty three and Paise thirty six only) per Kiloliter or Charges fixed by Charge Review Committee, whichever is lower, shall be applicable to the Contract Volume and up to 48 MLD. Beyond 48 MLD the charges shall be as fixed by the Charge Review Committee.
- (E) (ii) The monthly billing shall be as per the actual water quantity Delivered.  
(iii) The monthly billing shall be as per the actual water quantity Delivered  
(iv) The monthly billing shall be as per the actual water quantity Delivered  
(v) In the month following the final month of the Supply Period the take or pay for Contract Volume for shall not be applied.
- (G) If during any Supply Period the total Volume of Raw Water taken by the User falls short of the obligations described in Appendix – 2 then the User shall pay as per actuals .

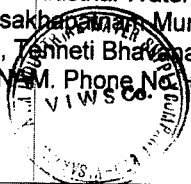
## 16. GENERAL

### 16.5 Notices

The Address of the Operators is changed as below:

**For the Operator:**

Chairman & Managing Director,  
Visakhapatnam Industrial Water Supply Company Limited  
C/o Greater Visakhapatnam Municipal Corporation  
Room No. 204, Tenneti Bhavanam, Asseelmetta Jn.  
VISA KHAPATNAM. Phone No. +91 0891-



*Amrpatan Maik*

## OTHER TERMS & CONDITIONS OF AGREEMENT

The recitals and other paragraphs of the Bulk Water Supply Agreement with the respective side headings are applicable except to the extent and as modified by this supplementary agreement and are not inconsistent with the modifications.

- Appendix 1 to BWSA dated 27-9-2006 is applicable subject to modifications in the form of substitution of paras 1, 2 and 3 with the following as paras A, B and C respectively:

A) "The User shall pay to the Operator the Special Charges of Rs. 11.80 (Rupees Eleven and Paisa Eighty only) per kilolitre of Raw Water Delivered at the Delivery Point from the Effective date i.e. from 01.04.2012 till 31-3-2013.

B) The special Charges of Rs. 11.80 (Rupees Eleven and Paisa Eighty only) per kiloliter shall continue till 31-3-2013. Thereafter the special charge as on 31<sup>st</sup> March of every Financial Year shall be escalated by 5% (five percent) annually as special charge for next financial year up to a maximum of Rs. 23.36 (Rupees Twenty Three and Paisa Thirty Six only) per kiloliter.

The yearly escalated annual charges applicable are as under:

Year	13-14	14-15	15-16	16-17	17-18	18-19	19-20
Special charges ( ` )	12.39	13.01	13.66	14.34	15.06	15.81	16.60

Year	20-21	21-22	22-23	23-24	24-25	25-26	26-27
Special charges ( ` )	17.43	18.31	19.22	20.18	21.19	22.25	23.36

C) Such Special Charges, subject to a maximum of Rs. 23.36 (Rupees twenty three and paisa thirty six only) per kiloliter or Charges fixed by Charge Review Committee, whichever is lower, shall be applicable to the Contract Volume and up to 48 MLD. Beyond 48 MLD, the Charges shall be as fixed by the Charge Review Committee."

Other contents of Appendix 1 remain unchanged

- Appendix 2 to BWSA dated 27-9-2006 is applicable subject to modifications in the form of substitution of para 1 with the following para:

The Operator undertakes to supply and the User undertakes to accept a take and pay quantity of Raw Water at the charges in accordance with Appendix 1 to this Agreement before commencement of each Supply Period. The Contract Volume for the Supply period commencing from 1-4-2013 shall be 26 MLD and up to 32 MLD. For the additional raw water requirement above 32 MLD and up to 48 MLD the user shall intimate the operator six months in advance. Such additional quantity

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*Ampratan Malik*

*9/10/13*

shall form part of contract volume from the supply period onwards. MLD denotes Million Liters per Day.

Other contents of Appendix 2 remain unchanged.

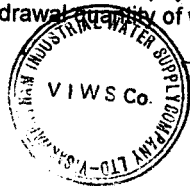
- Appendix 4 to BWSA dated 27-9-2006 is applicable subject to modifications in the form of substitution of clause 1 with the following paras:

Extreme hydrological condition shall mean hydrological condition in Yeleru Reservoir due to severe prolonged shortage of inflows from the catchment area by which reservoir water level falls below the minimum level at which water can be discharged by gravity to the YLBC Canal.

Procedure: In the unlikely event of the occurrence of hydrological conditions so severe that, despite the correct application by the GoAP the water availability throughout a Lean Period, the water availability in the YLBC canal deteriorate such that the reservoir water level approaches or falls below the minimum level at which water can be discharged by gravity through the head works into the YLBC, the Operator and the GoAP shall discuss possible exceptional mitigation measures which could be undertaken. These measures could include the granting of permission by the GoAP for the Operator to abstract water from the reservoir by pumping into the YLBC. The GoAP would be obliged to grant any such permission solely on a best effort basis, where such a course of action would be commensurate with responsible management of the Yeleru Reservoir water resources and having considered the other release requirements within the allocation of the GoAP. In the event that the GoAP grants the Operator permission, under whatever conditions the GoAP considers it necessary to impose, to abstract Raw Water from the reservoir by pumping, the Operator shall make all necessary arrangements for pumping including the provision of a retention structure within the reservoir, if required by the GoAP, and the removal of all obstructions to or works which may influence normal gravity operation of the head works once the need for pumped abstraction is past. In such case, the operator shall be entitled to all additional capital and operational costs which may be associated with such pumping and shall be charged among all users of dead storage pumping water in proportion to their drawl of dead storage pumping water.

Other contents of Appendix 4 remain unchanged

- Appendix 3 and 5 are applicable except to the extent and as stands modified by this supplementary agreement and are not inconsistent with the modifications.
- This Agreement constitutes as supplementary agreement to Bulk Water Supply Agreement (BWSA) entered into between GoAP, Operator and User and forms part of the said BWSA.
- This agreement shall remain in force and effect from 01.04.2012 till the validity of the said BWSA with enhanced period if any in the supplementary agreement. However, the payments / adjustments for the year 2012-13 shall based on actual drawal quantity of water.



*Amprabani Iliak*

*2/1/2012*

*110*

In witness whereof, the Parties through their authorized representatives have executed these presents and to a duplicate hereof on the day and month and year first mentioned above.

FOR AND ON BEHALF OF THE NTPC

FOR AND ON BEHALF OF VIWSCO

*Amratan Maib*  
Authorized Signatory



*[Signature]*  
Authorized Signatory

Contact Address:  
NTPC Limited  
NTPC - Simhadri  
Parawada Mandal  
Visakhapatnam - 531 020  
  
Telephone : +91 (8924)-243436  
Fax No. +91 (8924) - 243581

Contact Address:  
Visakhapatnam Industrial Water Supply  
Company Limited  
C/o. Greater Visakhapatnam  
Municipal Corporation, Room No. 204,  
Tenneti Bhavan, Aseelmetta Jn.  
VISAKHAPATNAM - 530002  
Telephone : +91(891)-2746301 (Extn.132)

In presence of:

1. *Y.M. Murthy*  
HOD (BEMC) Simhadri  
NTPC, VIZAG
2. *Q. Babu*  
K. Suresh Babu  
DBM (BEMC)  
NTPC Simhadri

In presence of:

1. *[Signature]*  
(C. V. S. KURTHY)  
Director, VIWSCO
2. *[Signature]*  
C. Suman  
SFO  
VIWSCO, VIZAG

FOR AND ON BEHALF OF GoAP

*[Signature]*  
Authorized Signatory

Andhra Pradesh Industrial Infrastructure Corporation Limited  
5-9-58/B, 6th Floor, Parisrama Bhavanam, Fateh Maidan Road  
Basheerbagh, Hyderabad - 500 004

In presence of

1. *[Signature]* (V. Nagendra Rao)  
Zonal Manager, APIIC
2. *[Signature]* (C. YATHANANDU)  
ZONAL MANAGER  
APIIC Limited  
Visakhapatnam-07

ZONAL MANAGER  
APIIC LIMITED  
SPECIAL PROJECTS ZONE  
ONE STOP SERVICE CENTRE  
APSEZ ATCHUTAPURAM  
VISAKHAPATNAM - 531 011



18



GOVERNMENT OF ANDHRA PRADESH  
INFRASTRUCTURE & INVESTMENT (Ports-I) DEPARTMENT

Memo No. 732-A/Ports.I (1)/2009-1, dated 13-8-2009

Sub: Ports Department – Permission for drawl of Sea Water for Power Projects / Industries – Certain Guidelines – Issued.

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The attention of the Director of Ports, Kaklnada is invited to the subject matter and is informed that Government have framed the following guidelines for according permission for drawl and use of Sea Water for the purposes of Power Projects and other Industries:

- 1) Initially only in-principle approval / permission shall be granted;
- 2) Before recommending to Government for such permission, the Director of Ports shall
  - a) confirm that the firm has obtained No Objection Certificate from the appropriate Local Authority / State Govt Authority for setting up of such Power Plant / Industry, etc.
  - b) verify all necessary documents along with the DPR which the Firm has submitted to relevant Agencies / Ministries of Government of India / GoAP.
  - c) depute suitable officer to the site and obtain a report to the effect that the activity of drawl and use of Sea water shall not interfere / hinder the present / future port / jetty development / operation activities

Based on the above details, Director of Ports shall make his recommendations to the Government of Andhra Pradesh. Government while granting such approval shall impose following conditions:-

- 1) that the Company shall pay an amount of Rs.0.05 paise per cum to the Director of Ports as charges and obtain statutory clearance such as environmental clearance etc, from the concerned departments for drawing the Sea water and pumping the same after use into Sea. The revision of charges, if any takes place at the instance of Gol / GoAP, shall be applicable.
- 2) The firm will give an undertaking that the activity of drawl and use of Sea water by the firm shall not hinder the present / future developmental / operational activities of the nearby Port / Jetty and in such event the firm agrees for withdrawal of permission at no costs to the Government.
- 3) that after using the Sea water, the same shall be treated / diluted to meet CPCB norms and other statutory environment norms before discharging to the Sea;

97

- 4) that necessary water measuring devices shall be fixed by the Consumer;
- 5) that the scheme of drawing of water from the intake point shall be got approved by the Director of Ports, prior to execution;
- 6) within 15 days after obtaining necessary permission for establishment of the Power Project / Industry, the Firm shall furnish a Bank Guarantee equivalent for 1 year water drawl from Sea and a DD for the same amount in advance towards water charges for one year and after completion of the first year, every year the DD in advance has to be submitted at the rate prevalling that time. In case of failure on the part of the Firm, the BG shall be encashed.
- 7) that in the event of misrepresentation of fact or the Firm not observing any of the statutory / regulatory provisions of Gol / State Government, the Government reserves the right to cancel such permission.

The Director of Ports, Kakliada is, therefore, requested to keep the above guidelines in view while submit his report / recommendation to Government for recording permission for drawl of Sea water for the use in the Power Plant / Industry etc.

MANMOHAN SINGH  
SECRETARY TO GOVERNMENT

To  
The Director of Ports,  
AP, Kakinada.

// forwarded by order //

  
ASST. SECRETARY TO GOVERNMENT (PORTS)