Petition No.....

Vallur Thermal Power Station (VTPS)

(3X500 MW)

TARIFF PETITION 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 **Vallur Thermal Power Station (3X500 MW) for the period from 01.04.2019 to 31.03.2024.**

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

Petitioner: : NTECL (NTPC Tamil Nadu Energy Company Ltd.)
NTPC Bhawan
Core-7, Scope Complex
7, Institutional Area, Lodhi Road
New Delhi-110 003

Respondents

1. A.P. Transmission Corporation Limited
Vidyut Soudha, Khairatabad,
Hyderabad-500082

2. APEPDCL (A.P. Eastern Power Distribution Company Ltd.)
P&T Colony, Seethammadhara,
Vishakapatnam-503013

3. APSPDCL (A.P. Southern Power Distribution Company Ltd)
Beside Srinivassakalyana Mandapam,
Tiruchanur Road, Kesavayana Gunta,
Tirupati- 517501

4. Transmission Corporation of Telangana Ltd.
Vidyut Soudha Khairatabad,
Hyderabad - 500 082

5. TSSPDCL (Telangana State Southern Power Distribution Company Ltd)
Mint Compound
Corporate Office
Hyderabad – 500 063.

6. TSNPDCL (Telangana Northern Power Distribution Company Ltd)
H.No. 2-5-31/2
Vidyut Bhavan
Nakkalagutta, Hanamkonda
Warangal – 506 001

7. Power Company of Karnataka Ltd.
KPTCL complex, KaveriBhawan,
Bengaluru- 560009

8. Bangalore Electricity Supply Company Ltd. (BESCOM)
Krishna Rajendra circle,
Bangalore- 506001

9. Mangalore Electricity Supply Company Ltd. (MESCOM)
MESCOM Bhavana
Corporate Office
Bejai Kevai Cross Road
Mangalore-575004

10. Chamundeshwari Electricity Supply Company Ltd.(CESC)
Corporate Office ,No 29,
GROUND Floor ,
Kaveri Grameena Bank Road
Vijayanagar 2nd Stage,
Mysore – 570017

11. Gulbarga Electricity Supply Company Ltd. (GESCOM)
Main Road, Gulbarga- 585102

12. Hubli Electricity Supply Company Ltd. (HESCOM)
Navanagar, PB Road,
Hubli- 580025

13. Tariff & Regulatory Cell
Kerala State Electricity Board Ltd.
Vaidyuthibhavanam, Pattom,
Thiruvananthapuram- 695004

14. Mechanical/ Regulatory Cell
Tamil Nadu generation & Distribution Corporation Ltd.
(TANGEDCO)
NPKRR Maaligai, 144, Anna Salai,
Chennai- 600002

15. Electricity department
Govt. of Puducherry,
137, Netaji Subhash Chandra Bose Salai,Puducherry-
605001

The Petitioner humbly states that:

1) The Petitioner herein NTECL (NTPC Tamilnadu Energy Company Limited) is a Joint Venture Company between NTPC Limited and TNEB (Presently TANGEDCO) incorporated under provisions of the Company Act, 1956 and a Government Company as defined under Section 2(45)of the Companies Act, 2013. Further, NTECL 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 NTECL, being a Generating Company owned and controlled by the Central Government. The regulation of the tariff of NTECL 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 Vallur Thermal Power Station (3X500 MW) (hereinafter referred to as VTPS) of NTECL is located in the State of Tamil Nadu in Southern region . The power generated from VTPS 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 VTPS for the period from 01.04.2019 to 31.03.2024 as per the Tariff Regulations 2019.

6) The tariff of the VTPS for the tariff period 1.4.2014 to 31.3.2019 was determined by the Hon'ble Commission vide its order dated 11.07.2017 in Petition No. 277/GT/2014 in accordance with the CERC (Terms & Conditions of Tariff) Regulations 2014. The petitioner vide affidavit dated 16.01.2020 has 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) The Hon'ble Commission vide order dated 11.07.2017 in Petition no 277/GT/2014 has allowed a capital cost of Rs 9335.4021 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. 9385.7368 Crs based on the actual expenditure after truing up exercise for the period 2014-19. Accordingly, the Petitioner has adjusted an amount of Rs. 50.3347 Cr in the admitted capital cost as on 31.03.2019 and therefore the opening capital cost as on 01.04.2019 has been considered as Rs. 9385.7368 Cr. in the instant petition. The Hon'ble Commission may be pleased to 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 expenditure claimed in the instant petition is based on the opening capital cost as on 01.04.2019 considered as above and capital expenditures claimed for the period 2019-24 have been projected based on the Regulation 19 and Regulation 25 and 26 of the Tariff Regulations, 2019.

9) As per Regulation 35(1)(6) of the Tariff Regulations 2019, the water charges, the 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 have been furnished below. The petitioner at present, is not paying any water charges and therefore the same have not been claimed in this petition. However, the details of actuals if paid by the petitioner in future, shall be furnished at the time of true-up and same shall be subject to retrospective adjustment.

Description	Remarks
Type of Plant	Coal Based
Type of cooling water system	IDCT
Consumption of Water	Sea Water intake
Rate of Water charges	Not Applicable
Total Water Charges	Not Applicable

10) Similarly, the Petitioner is claiming the security expenses based on the estimated expenses for the period 2019-24, the same shall be subject to retrospective adjustment based on actuals at the time of truing up. In respect of capital spares consumption, it is

submitted that the same shall be claimed at the time of true-up in terms of the proviso to the Regulation 35 (1)(6) based on actual consumption of spares during the period 2019-24

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

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

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

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

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

c) Details of the Revenue generated from sale of fly ash/ fly ash products and the expenditure incurred towards Ash utilisation up to 25.1.2016 and from 25.1.2016 to till date, separately.
d) Revenue generated from fly Ash sales maintained in a separate account as per the MoEF notification.

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

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

13) Hon'ble Commission has prescribed boiler efficiency and turbine heat rate separately for deriving the unit heat rate where the Unit Heat Rate is not guaranteed by the suppliers. It is submitted that the instant station was envisaged during the period 2014-19 and equipments including SG and TG specifications for tendering / award was stipulated considering the boiler efficiency and the turbine heat rate prescribed by the Hon'ble Commission in the Tariff Regulations at that time. . Based on the same the equipments were ordered through international competitive bidding. It was not possible for the petitioner to specify the efficiency parameters at the time of finalizing the contracts on the instant station as per the efficiency parameters specified in Tariff Regulations 2019-24 which are more stringent. .

In a similar case, Hon'ble Commission in its order dated 20.02.2014 in Petition No. 160/GT/2012 has considered the design parameters for computing Gross Heat Rate of the station with appropriate operating margin and has stated as under:

"161. As per the guaranteed turbine cycle heat rate of 1945 kCal/kWh and boiler efficiency of 88.5% along with the deviation of 6.5 % as per the 2009 Tariff Regulations, the Gross Heat Rate works out to 2340.59 kcal/kWh. Without the margin of Auxiliary consumption of 6.5%, the Gross Heat Rate works out as 2197.74 kcal/kWh. In light of this, achieving a GSHR of 2220 kcal/kWh as per submission of the respondents 1 to 6 is not possible. Also, the EPC contract was finalized in 2006 and there was no possibility for the petitioner to specify the Station Heat Rate as per the 2009 Tariff Regulations. In view of above, we consider a GSHR of 2340.59 kCal/kWh based on guaranteed turbine cycle heat rate 1945 kCal/kWh and boiler efficiency of 88.5% with a deviation of 6.5 % from the guaranteed design value."

Further, if the Petitioner had stipulated more stringent unit heat ratethis would have increased the capital cost commensurate to the efficiency parameters sought. The benefit of the lower capital cost due to lower efficiency parameters has already been passed onto the beneficiaries in terms of lower capital cost. . If now the boiler efficiency for working out the normative heat rate is considered as 86% instead of the actual design efficiency of 85% the unit heat rate would be worked out to be 2246.51 kcal/kwh and the operating margin available over the design heat rate would be 3.8% only which is much less than the operating margin of 5% allowed in the Tariff Regulations 2019. Moreover, it is submitted that boiler efficiency is largely a function of coal quality. In view of above submissions it is prayed that Gross Station Heat rate may be allowed based on guaranteed turbine cycle heat rate of 1932 Kcal/Kwh and boiler efficiency of 0.85 with a operating margin of 5 % from the guaranteed design value. The tariff computation attached at Appendix-I is based on considering Station Heat Rate as per design heat rate with applicable operating margin of 5%.

14) Further, Hon'ble Commission vide order dated 11.07.2017 in Petition No. 277/GT/2014 for the period 2014-19 had allowed additional APC of 0.94% in view of additional equipment/ system such as cross country pipe conveyor, grab unloader at jetty (for unloading coal from ship) and electrical equipment for desalination of sea water through RO system. In this regard Hon'ble Commission in the said order at Page (97) has stated as under-

Quote

".....It is observed that the station has special features for which there will be additional auxiliary consumption for running the additional systems like coal transportation from port to project and also additional electrical equipment installed for desalination of sea water through RO system. In this background, we are inclined to relax the operational norm for APC and allow the APC of 6.69% as claimed by the petitioner....."

Unquote

These special features mentioned above are integral part of the system, accordingly petitioner seeks additional APC of 0.94% over and above the normative APC of 6.25%. Hon'ble Commission may be please to allow the relaxation sought in APC. Further, in line with above the petitioner has considered an APC of 7.19% (6.25+0.94) as normative APC for computation of tariff in the instant petition.

15) The Petitioner has already paid the requisite filing fee vide UTR No. SBIN119114289852 on 24.04.2019 for the year 2019-20 and the details of the same have been duly furnished to the Hon'ble Commission vide our letter dtd. 04.05.2019. For the subsequent years, it shall be paid as per the provisions of the CERC (Payment of Fees) Regulations, 2012 as amended. Further Regulation 70 (1) of Tariff Regulations 2019 provides that the application fee and publication expenses may be allowed to be recovered directly from the beneficiaries at the discretion of the Hon'ble Commission. Accordingly, it is prayed that Hon'ble Commission may be pleased to allow recover filing fee and publication fee directly from the beneficiaries.

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) The Petitioner has served a copy of the Petition on to the Respondents mentioned herein above and has posted the Petition on the company website i.e. www. http://ntpcntecljv.co.in/

18) The petitioner is filing this tariff petition subject to the outcome of its various appeals/ petitions pending before different courts. Besides, the petition filed by NTECL for

determination of capital base as on 31.3.2014 through true-up exercise is 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, prays that the Hon'ble Commission may be pleased to:

i) Approve tariff of Vallur Thermal Power Station (3X500 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) Consider station heat rate based on design heat rate with applicable operating margin and allow normative APC as 7.19%.

v) Pass any other order as it may deem fit in the circumstances mentioned above.

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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 **Vallur Thermal Power Station (3X500 MW) for the period from 01.04.2019 to 31.03.2024**

AND
IN THE MATTER OF

Petitioner: : NTECL (NTPC Tamil Nadu Energy Company 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)
& others

NOTARY R.V. Singh Advocate Regd.No.2262 Commission Expires on 24-10-2022 Area-Delhi GOVT. OF INDIA

Affidavit

I, Arun Nair T P, son of Sh. C S Narayanan, aged about 39 years, working at NTECL, having office at NTPC Bhavan, SCOPE Complex, Lodhi Road, New Delhi do solemnly affirm and state as under:

1. That I am the Sr. Manager (EEMG) in Petitioner Corporation NTECL Ltd. and am well conversant with the facts of the case and am competent to swear the present affidavit.

2. That I have read the contents of the accompanying Petition being filed by NTECL and have understood the same.

3. That the contents of the accompanying Petition being filed by NTECL 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 there from.

Verified at New Delhi on this day 31st January 2020.

Deponent

NOTARY
SINGH
NOTARIAL
GOVT. OF INDIA

Notary Public, DELHI

31 JAN 2020

TARIFF FILING FORMS (THERMAL)

FOR DETERMINATION OF TARIFF

FOR

Vallur Thermal Power Station (3X500 MW)

(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	✓
FORM- 4	Details of Foreign loans	
FORM- 4A	Details of Foreign Equity	NA
FORM-5	Abstract of Admitted Capital Cost for the existing Projects	✓
FORM-5A**	Abstract of Claimed Capital Cost for the existing Projects	✓
FORM- 6	Financial Package upto COD	NA
FORM- 7	Details of Project Specific Loans	NA
FORM- 8	Details of Allocation of corporate loans to various projects	✓
FORM-9A**	Summary of Statement of Additional Capitalisation claimed during the period	✓
FORM-9 ##	Statement of Additional Capitalisation after COD	✓
FORM- 10	Financing of Additional Capitalisation	✓
FORM- 11	Calculation of Depreciation on original project cost	✓
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	✓
FORM- 15	Details of Fuel for Computation of Energy Charges	✓
FORM- 15A	Details of Seconday 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**

List of supporting documents for tariff filing for Thermal Stations

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

*** Shall be submitted at the time of truing up.

PART-I
FORM- 1

Summary of Tariff

Name of the Petitioner:	**NTECL**
Name of the Generating Station:	**Vallur Thermal Power Station (3X500 MW)**
Place (Region/District/State):	**Southern/ Tiruvallur/Tamil Nadu**

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	46,792.90	47,009.75	47,188.60	47,413.00	47,460.78	48,018.72
1.2	Interest on Loan	Rs Lakh	43,382.24	39,494.19	35,122.47	30,772.04	26,138.98	22,171.89
1.3	Return on Equity	Rs Lakh	55,214.79	52,887.38	53,037.77	53,237.45	53,289.22	53,917.29
1.4	Interest on Working Capital	Rs Lakh	16,930.21	15,883.34	15,897.53	15,907.96	15,911.59	15,935.83
1.5	O&M Expenses	Rs Lakh	38,543.68	37705.00	39058.45	40458.62	41906.19	43386.22
1.6	Special Allowance (If applicable)	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00
1.7	Compensation Allowance (If applicable – relevant for column 4 only)	Rs. Lakh	0.00					
	Total	Rs Lakh	**200863.81**	**192979.67**	**190304.83**	**187789.07**	**184706.77**	**183429.95**
2.1	Landed Fuel Cost (coal/gas/RLNG/ liquid)	Rs/Ton	**4183.05**					
	(%) of Fuel Quantity	(%)	**100**					
2.2	Landed Fuel Cost Imported Coal as per FSA approved by beneficiaries							
	(%) of Fuel Quantity							
2.3	Landed Fuel Cost (coal/gas /RLNG/liquid) other than FSA	Rs/Ton						
	(%) of Fuel Quantity	(%)						
2.4	Landed Fuel Cost Imported Coal other than FSA.							
	(%) of Fuel Quantity							
2.5	Secondary fuel oil cost	Rs/Unit	0.021					
	Energy Charge Rate ex-bus (Paise/kWh) 2A, 2B, 2C, 2D	Rs/Unit	3.608					

(Petitioner)

PART-1
FORM- 1(I)

Name of the Petitioner:	NTECL
Name of the Generating Station:	Vallur Thermal Power Station (3X500 MW)

Amount in Rs. Lakhs

Statement showing claimed capital cost – (A+B)

S. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Opening Capital Cost	9,38,573.68	9,38,662.68	9,45,715.68	9,47,623.68	9,47,623.68
2	Add: Addition during the year/period	89.00	7,053.00	1,908.00	-	22,280.00
3	Less: De-capitalisation during the year/period	-	-	-	-	-
4	Less: Reversal during the year / period	-	-	-	-	-
5	Add: Discharges during the year/ period	-	-	-	-	-
6	Closing Capital Cost	9,38,662.68	9,45,715.68	9,47,623.68	9,47,623.68	9,69,903.68
7	**Average Capital Cost**	**9,38,618.18**	**9,42,189.18**	**9,46,669.68**	**9,47,623.68**	**9,58,763.68**

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	938573.68	938662.68	940635.68	942306.68	942306.68
2	Add: Addition during the year / period	89.00	1973.00	1671.00	0.00	22280.00
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	938662.68	940635.68	942306.68	942306.68	964586.68
7	**Average Capital Cost**	**938618.18**	**939649.18**	**941471.18**	**942306.68**	**953446.68**

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	5080.00	5317.00	5317.00
2	Add: Addition during the year / period	0.00	5080.00	237.00	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	5080.00	5317.00	5317.00	5317.00
7	**Average Capital Cost**	**0.00**	**2540.00**	**5198.50**	**5317.00**	**5317.00**

(Petitioner)

PART-I
FORM- 1(IIA)

Name of the Petitioner:	NTECL
Name of the Generating Station:	Vallur Thermal Power Station (3X500 MW)

Statement showing Return on Equity at Normal Rate

Amount in Rs. Lakhs

S. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
	Return on Equity					
1	Gross Opening Equity (Normal)	2,81,572.10	2,81,598.80	2,82,190.70	2,82,692.00	282692.0049
2	Less: Adjustment in Opening Equity	-				
3	Adjustment during the year		0.00	0.00	0.00	0.00
4	Net Opening Equity (Normal)	2,81,572.10	2,81,598.80	2,82,190.70	2,82,692.00	2,82,692.00
5	Add: Increase in equity due to addition during the year / period	26.70	591.90	501.30	0.00	6684.00
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)	2,81,598.80	2,82,190.70	2,82,692.00	2,82,692.00	2,89,376.00
11	Average Equity (Normal)	2,81,585.45	2,81,894.75	2,82,441.35	2,82,692.00	2,86,034.00
12	Rate of ROE (%)	18.782	18.782	18.782	18.782	18.782
13	Total ROE	**52,887.38**	**52,945.47**	**53,048.14**	**53,095.21**	**53,722.91**

(Petitioner)

PART-I

FORM- 1(IIB)

Name of the Petitioner:	NTECL
Name of the Generating Station:	Vallur Thermal Power Station (3X500 MW)

Statement showing Return on Equity at Normal Rate

Amount in Rs. Lakhs

S. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
	Return on Equity (beyond the original scope of work excluding additional capitalization due to Change in Law)					
1	Gross Opening Equity (Normal)	0.00	0.00	1524.00	1595.10	1595.10
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	1524.00	1595.10	1595.10
5	Add: Increase in equity due to addition during the year / period	0.00	1524.00	71.10	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	1524.00	1595.10	1595.10	1595.10
11	Average Equity (Normal)	0.00	762.00	1559.55	1595.10	1595.10
12	Rate of ROE (%)	12.087	12.113	12.139	12.163	12.186
13	Total ROE	**0.00**	**92.30**	**189.31**	**194.01**	**194.38**

(Petitioner)

Plant Characteristics

Name of the Petitioner : NTPC TamilNadu Energy Company Limited
Name of the Generating Station : VTPS-VALLUR (3 X 500 MW)

Unit(s)/ Block(s) Parameters	Unit-I	Unit-II	Unit III
Installed Capacity (MW)	500	500	500
Schedule COD as per Investment Approval	12.02.2011	12.08.2011	27.01.2013
Actual COD /Date of Taken Over (as applicable)	29.11.2012	25.08.2013	26.02.2015
Pit Head or Non Pit Head	Non-Pit Head		
Name of the Boiler Manufacture	BHEL		
Name of Turbine Generator Manufacture	BHEL		
Main Steams Pressure at Turbine inlet (kg/Cm2) abs	170		
Main Steam Temperature at Turbine inlet (oC)	537		
Reheat Steam Pressure at Turbine inlet (kg/Cm2)	53.73		
Reheat Steam Temperature at Turbine inlet (oC)	565		
Main Steam flow at Turbine inlet under MCR condition (tons /hr)	1457.00		
Main Steam flow at Turbine inlet under VWO condition (tons /hr)[2]	1544.922		
Unit Gross electrical output under MCR /Rated condition (MW)[2]	500		
Unit Gross electrical output under VWO condition (MW)[2]	529.765		
Guaranteed Design Gross Turbine Cycle Heat Rate (kCal/kWh)[3]	1932		
Boiler Efficiency specified by Manufacturer (%)	85.00%		
Conditions on which design turbine cycle heat rate guaranteed			
% MCR	100%		
% Makeup Water Consumption	0% MU at guaranteed condition		
Design Capacity of Make up Water System	3%		
Design Capacity of Inlet Cooling System	54000 m3/hr		
Design Cooling Water Temperature (0C)	33		
Back Pressure	77 mm of Hg		
Steam flow at super heater outlet under BMCR condition (tons/hr)	1725		
Steam Pressure at super heater outlet under BMCR condition) (kg/Cm2)	178		
Steam Temperature at super heater outlet under BMCR condition (0C)	540		
Steam Temperature at Reheater outlet at BMCR condition (0C)	540		
Design / Guaranteed Boiler Efficiency (%)[4]	0.85		
Design Fuel with and without Blending of domestic/imported coal	Sub Bituminous Indian Coal (GCV 3300, ash 41, moisture 14%)		
Type of Cooling Tower	Induced Draft		
Type of cooling system	Closed Circuit Cooling (Sea Water)		
Type of Boiler Feed Pump	Steam Driven		
Fuel Details			
- Primary Fuel	Coal		
-Secondary Fuel	LDO/HFO		
-Alternate Fuels			
Special Features/Site Specific Features	Special Features/Site Specific Features[4]: Non Pit Head, Total raw water from sea water, Production of potable water and DM water through Desalination plant, close to SEA (CRZ clearence obtained), Cross country coal conveyor between port and plant, bridge over the creek for coal conveyor and water pipe lines, Gas insulated switch yard constructed due to sea vicinity		
Special Technological Features	N/A		
Environmental Regulation related features	ESP		
Any other special features	FGD/De-Nox under implementation		

[1] Closed circuit cooling, once through cooling, sea cooling, natural draft cooling, induced draft cooling.
[2] Motor driven, steam turbine driven etc.
[3] Coal or natural gas or naptha or lignite etc.
[4] Any site specific feature such as Merry-go-round, vicinity to sea, intake/make up water system etc. scrubbers etc. Specify all such features.
[5] Any special Technological feature like Advanced class FA technology in Gas Turbines etc.
[6] Environmental regulation related features like FGD, ESP etc.
[7] Minimum Boiler efficiency consider as per CERC of 85%

PETITIONER

PART-I
FORM- 3

Normative parameters considered for tariff computations

Name of the Petitioner:	NTECL
Name of the Generating Station:	Vallur Thermal Power Station (3X500 MW)

(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 $$	%	15.50	15.50	15.50	15.50	15.50	15.50
Base Rate of Return on Equity on Add. Capitalization** $$	%	-	9.975	9.997	10.018	10.038	10.057
Effective Tax Rate	%	21.5488	17.4720	17.4720	17.4720	17.4720	17.4720
Target Availability	%	85.00	85.00				
In High Demand Season	%	-	-	85.00	85.00	85.00	85.00
Peak Hours	%	-	-	85.00	85.00	85.00	85.00
Off-Peak Hours	%	-	-	85.00	85.00	85.00	85.00
In Low Demand Season(Off-Peak)	%	-	-	85.00	85.00	85.00	85.00
Peak Hours	%	-	-	85.00	85.00	85.00	85.00
Off-Peak Hours	%	-	-	85.00	85.00	85.00	85.00
Auxiliary Energy Consumption	%	6.69	7.19	7.19	7.19	7.19	7.19
Gross Station Heat Rate	kCal/kWh	2351.25	2386.59	2386.59	2386.59	2386.59	2386.59
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	The existing storage capacity of primary fuel is approx. 30 days with three units operating at normative availability factor.(6 LMT)					
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 beyong original scope and excluding Change in Law

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

Petitioner

Part-I
FORM-3A
ADDITIONAL FORM

Calculation of O&M Expenses

Name of the Company :	NTECL
Name of the Power Station :	Vallur Thermal Power Station (3X500 MW)

Amount in Rs. Lakhs

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	7	8
1	**O&M expenses under Reg.35(1)**					
1a	Normative	33765.00	34950.00	36180.00	37455.00	38760.00
2	**O&M expenses under Reg.35(6)**					
2a	Water Charges	0.00	0.00	0.00	0.00	0.00
2b	Security expenses*	2834.00	2964.00	3094.00	3225.00	3357.00
2c	Additional O&M for Desalination Plant*	1106.00	1144.45	1184.62	1226.19	1269.22
2d	Capital Spares**					
3	O&M expenses-Ash Transportation**	0.00	0.00	0.00	0.00	0.00
	Total O&M Expenses	**37705.00**	**39058.45**	**40458.62**	**41906.19**	**43386.22**

** Shall be provided at the time of truing up

* Subject to true up

CERC vide its order dated 11.07.2017 of petition no. 277/GT/2014 has allowed additional O&M for desalination plant. Petitioner (NTECL) vide affidavit dated 16.01.2020 has filed its true up petition for 2014-19 period and has claimed additional O&M expenses for desalination plant on actual basis. The O&M expenses claimed under this head for FY 2018-19 were Rs. 1068.16 lakhs on actual basis. The projection of Additional O&M under this head is claimed at an escalation rate of 3.51% in line with CERC Tariff Regulations, 2019. Hon'ble Commission may be pleased to allow the same.

Petitioner

PART 1
FORM- 5

Abstract of Admitted Capital Cost for the existing Projects

Name of the Company :	NTECL
Name of the Power Station :	Vallur Thermal Power Station (3X500 MW)

Last date of order of Commission for the project	**Date (DD-MM-YYYY)**	11-07-2017
Reference of petition no. in which the above order was passed	**Petition no.**	277/GT/2014
Following details (whether admitted and /or considered) as on the last date of the period for which tariff is approved, in the above order by the Commission:		
Capital cost	**(Rs. in lakh)**	933540.21
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)		25577.70
Gross Normative Debt		653478.15
Cumulative Repayment		237831.22
Net Normative Debt		415646.93
Normative Equity		280062.06
Cumulative Depreciation		237831.23
Freehold land		15786.77

(Petitioner)

PART 1
FORM- 5A

Abstract of Claimed Capital Cost for the existing Projects

Name of the Company :	**NTECL**
Name of the Power Station :	**Vallur Thermal Power Station (3X500 MW)**

Reference of Final True-up Tariff Petition	**Affidavit dated**	16-01-2020
Capital Cost as on 31.03.2019 as per Hon'ble Commission's Order dated 11.07.2017 In Pet. No. 277/GT/2014	**Rs. Lakhs**	933540.21
Adjustment as per Para (7) of this petition		5033.47
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 01.04.02014	**(Rs. in lakh)**	938573.68
Amount of un-discharged liabilities included in above (& forming part of admitted capital cost)		
Amount of un-discharged liabilities corresponding to above admitted capital cost (but not forming part of admitted capital cost being allowed on cash basis)		
Gross Normative Debt		6,57,001.58
Cumulative Repayment		237584.19
Net Normative Debt		4,19,417.39
Normative Equity		2,81,572.10
Cumulative Depreciation		2,06,459.05
Freehold land		10,298.56

(Petitioner)

PART-I
FORM- 7

Details of Project Specific Loans

Name of the Company NTPC Tamilnadu Energy Company Limited

Name of the Power Station Vallur Thermal Power Project

(Amount in Crore)

Particulars	Package1	Package	Package	Package	Package	Remarks
1	2	3	4	5	6	7
Source of Loan[1]	M/s Rural Electrification Corporation Limited					
Currency[2]	INR					
Amount of Loan sanctioned	Phase I- Rs. 4329.48 Crores & Phase II- 2335.02 Crores					
Amount of Gross Loan drawn upto 31.03.2015/COD[3,4,5,13,15]	Phase I- Rs.3966.44 Crores & Phase II- 2183.33 Crores					
Interest Type[6]	**Phase 2** -Floating rate with reset after every three years.					
Fixed Interest Rate, if applicable	N/A					
Base Rate, if Floating Interest[7]	Phase 2 -As per loan policy circular of REC applicable for conventional generation- Large Project pertaining to					
Margin, if Floating Interest[8]	Phase -2 : 0 bps					
Are there any Caps/Floor[9]	N/A					
If above is yes,specify caps/floor	N/A					
Moratorium Period[10]	commissioning of the project whichever is earlier.					
Moratorium effective from	Phase 1 - 26.06.2008, Phase 2 - six months from the date of commissioning of the project					
Repayment Period[11]	Phase 1 - 15 Years , Phase 2 - 15 Years					
Repayment effective from	Phase 1 - 30.06.2014 & Phase II- Extension given upto 30.09.2015					
Repayment Frequency[12]	Phase 1 & 2 - Quarterly					
Repayment Instalment[13,14]	Phase 1 & 2 - 60					
Base Exchange Rate[16]	N/A					
Are foreign currency loan hedged?	N/A					
If above is yes, specify details[17]	N/A					

[1] Source of loan means the agency from whom the loan has been taken such as WB, ADB, WMB, PNB, SBI, ICICI, IFC, PFC etc.

[2] Currency refers to currency of loan such as US$, DM, Yen,Indian Rupee etc.

[3] Details are to be submitted as on 31.03.2004 for existing assets and as on COD for the remaining assets.

[4] Where the loan has been refinanced, details in the Form is to be given for the loan refinaced. However, the details of the original loan is to be given seperately in the same

[5] If the Tariff in the petition is claimed seperately for various units, details in the Form is to be given seperately for all the units in the same form.

[6] Interest type means whether the interest is fixed or floating.

[7] Base rate means the base as PLR, LIBOR etc. over which the margin is to be added. Applicable base rate on different dates from the date of drawl may also be enclosed.

[8] Margin means the points over and above the floating rate.

[9] At times caps/floor are put at which the floating rates are frozen. If such a condition exists, specify the limits.

[10] Moratorium period refers to the period during which loan servicing liability is not required.

[11] Repayment period means the repayment of loan such as 7 years, 10 years, 25 years etc.

[12] Repayment frequency means the interval at which the debt servicing is to be done such as monthly, quarterly, half yearly, annual, etc.

[13] Where there is more than one drawal/repayment for a loan, the date & amount of each drawal/repayement and its allocation may also be given seperately

[14] If the repayment instalment amount and repayment date can not be worked out from the data furnished above, the repayment schedule to be furnished seperately.

[15] In case of Foreign loan,date of each drawal & repayment alongwith exchange rate at that date may be given.

[16] Base exchange rate means the exchange rate prevailing as on 31.03.2009 for existing assets and as on COD for the remaining assets.

[17] In case of hedging, specify details like type of hedging, period of hedging, cost of hedging etc.

[18] At the time of truing up rate of interest with relevant reset date (if any) to be furnished separately

[19] At the time of truing up provide details of refinancing of loans considered earlier. Details such as date on which refinacing done, amount of refinanced loan, terms and

Petitioner

FORM- 7(Annexure 1)

Amount in Rs.

Phase I

SL.NO.	DRAWAL OF LOAN FROM REC	NOD NO.	DATE OF DRAWAL	Rate of Interest	Loan Drawl	Interest Drawl
1	5000,00,000.00	1	26-Jun-08	10.93	5000,00,000.00	
2	3000,00,000.00	2	11-Aug-08	10.93	3000,00,000.00	
3	2761,00,000.00	3	12-Sep-08	10.93	2761,00,000.00	
4	1500,00,000.00	4	26-Sep-08	10.93	1500,00,000.00	
5	1000,00,000.00	5	29-Sep-08	10.93	1000,00,000.00	
6	2000,00,000.00	6	22-Oct-08	10.93	2000,00,000.00	
7	1500,00,000.00	7	23-Oct-08	10.93	1500,00,000.00	
8	2500,00,000.00	8	14-Nov-08	10.93	2500,00,000.00	
9	2500,00,000.00	9	18-Nov-08	10.93	2500,00,000.00	
10	3500,00,000.00	10	08-Dec-08	10.93	3500,00,000.00	
11	3500,00,000.00	11	16-Dec-08	10.93	3500,00,000.00	
12	3000,00,000.00	12	22-Jan-09	10.93	3000,00,000.00	
13	5000,00,000.00	13	02-Feb-09	10.93	5000,00,000.00	
14	5000,00,000.00	14	16-Feb-09	10.93	5000,00,000.00	
15	5000,00,000.00	15	09-Mar-09	10.93	5000,00,000.00	
16	5000,00,000.00	16	20-Mar-09	10.93	5000,00,000.00	
17	8800,00,000.00	17	25-Mar-09	10.93	8800,00,000.00	
18	5000,00,000.00	18	13-Apr-09	10.93	5000,00,000.00	
19	2500,00,000.00	19	29-Apr-09	10.93	2500,00,000.00	
20	1500,00,000.00	20	12-May-09	10.93	1500,00,000.00	
21	1100,00,000.00	21	25-May-09	10.93	1100,00,000.00	
22	6000,00,000.00	22	10-Jun-09	10.93	6000,00,000.00	
23	1500,00,000.00	23	25-Jun-09	10.93	1500,00,000.00	
24	2500,00,000.00	24	08-Jul-09	10.93	2500,00,000.00	
25	2414,00,000.00	25	10-Aug-09	10.93	2414,00,000.00	
26	1499,99,963.37	26	19-Sep-09	10.93	1499,99,963.37	
27	1499,99,988.00	27	25-Sep-09	10.93	1499,99,988.00	
28	14999,99,886.28	28	25-Sep-09	10.93	14999,99,886.28	
29	1153,99,971.37	29	05-Oct-09	10.93	1153,99,971.37	
30	2999,99,977.14	30	13-Oct-09	10.93	2999,99,977.14	
31	1999,99,996.43	31	20-Oct-09	10.93	1999,99,996.43	
32	3999,99,922.86	32	26-Oct-09	10.93	3999,99,922.86	
33	1500,00,002.57	33	30-Oct-09	10.93	1500,00,002.57	
34	1999,99,996.43	34	05-Nov-09	10.93	1999,99,996.43	
35	1500,00,002.57	35	12-Nov-09	10.93	1500,00,002.57	
36	1500,00,002.57	36	24-Nov-09	10.93	1500,00,002.57	
37	1457,00,000.22	37	14-Dec-09	10.93	1457,00,000.22	
38	1500,00,002.57	38	22-Dec-09	10.93	1500,00,002.57	
39	2700,00,000.43	39	30-Dec-09	10.93	2700,00,000.43	
40	1500,00,000.47	40	04-Jan-10	10.93	1500,00,000.47	
41	480000000.5	41	09-Jan-10	10.93	4800,00,000.53	
42	100000000.3	42	18-Jan-10	10.93	1000,00,000.31	
43	2900,00,000.07	43	28-Jan-10	10.93	2900,00,000.07	
44	4000,00,000.56	44	30-Jan-10	10.93	4000,00,000.56	
45	1000,00,000.30	45	04-Feb-10	10.93	1000,00,000.30	
46	1000,00,000.31	46	10-Feb-10	10.93	1000,00,000.31	
47	1500,00,000.47	47	12-Feb-10	10.93	1500,00,000.47	
48	1178,00,000.59	48	19-Feb-10	10.93	1178,00,000.59	
49	2000,00,000.63	49	22-Feb-10	10.93	2000,00,000.63	
50	3000,00,000.24	50	25-Feb-10	10.93	3000,00,000.24	
51	2000,00,000.63	51	26-Feb-10	10.93	2000,00,000.63	
52	1500,00,000.47	52	03-Mar-10	10.93	1500,00,000.47	
53	1700,00,000.11	53	09-Mar-10	10.93	1700,00,000.11	
54	2000,00,000.63	54	12-Mar-10	10.93	2000,00,000.63	
55	2000,00,000.63	55	15-Mar-10	10.93	2000,00,000.63	
56	3000,00,000.94	56	22-Mar-10	10.93	3000,00,000.94	
57	3000,00,000.94	57	23-Mar-10	10.93	3000,00,000.94	
58	5364,00,001.13	58	25-Mar-10	10.93	5364,00,001.13	
59	4000,00,000.56	59	26-Mar-10	10.93	4000,00,000.56	
60	4000,00,000.56	60	29-Mar-10	10.93	4000,00,000.56	
61	5000,00,000.17	61	30-Mar-10	10.93	5000,00,000.17	
62	1000,00,000.31	62	09-Apr-10	10.93	1000,00,000.31	
63	1000,00,000.31	63	29-Apr-10	10.93	1000,00,000.31	
64	1500,00,000.47	64	06-May-10	10.93	1500,00,000.47	

65	1500,00,000.47	65	17-May-10	10.93	1500,00,000.47		
66	2000,00,000.63	66	20-May-10	10.93	2000,00,000.63		
67	1500,00,000.47	67	28-May-10	10.93	1500,00,000.47		
68	3000,00,000.94	68	07-Jun-10	10.93	3000,00,000.94		
69	3917,00,000.37	69	10-Jun-10	10.93	3917,00,000.37		
70	5658,90,171.47	70	18-Jun-10	10.93	5658,90,171.47		
71	3207,69,748.28	71	30-Jun-10	10.93	3207,69,748.28		
72	5034,70,935.00	72	30-Jun-10	10.93		5034,70,935.00	
73	157100000.05	73	09-Jul-10	10.93	1571,00,000.05		
74	150000000.47	74	19-Jul-10	10.93	1500,00,000.47		
75	150000000.47	75	21-Jul-10	10.93	1500,00,000.47		
76	250000000.09	76	26-Jul-10	10.93	2500,00,000.09		
77	150000000.47	77	27-Jul-10	10.93	1500,00,000.47		
78	150000000.47	78	03-Aug-10	10.93	1500,00,000.47		
79	150000000.47	79	06-Aug-10	10.93	1500,00,000.47		
80	100000000.31	80	24-Aug-10	10.93	1000,00,000.31		
81	100000000.31	81	27-Aug-10	10.93	1000,00,000.31		
82	150000000.47	82	07-Sep-10	10.93	1500,00,000.47		
83	100000000.31	83	13-Sep-10	10.93	1000,00,000.31		
84	100000000.31	84	27-Sep-10	10.93	1000,00,000.31		
85	596031636.00	85	30-Sep-10	10.93		5960,31,636.00	
86	200000000.63	86	07-Oct-10	10.93	2000,00,000.63		
87	100000000.31	87	25-Oct-10	10.93	1000,00,000.31		
88	200000000.63	88	28-Oct-10	10.93	2000,00,000.63		
89	200000000.63	89	01-Nov-10	10.93	2000,00,000.63		
90	200000000.63	90	08-Nov-10	10.93	2000,00,000.63		
91	100000000.31	91	12-Nov-10	10.93	1000,00,000.31		
92	200000000.63	92	22-Nov-10	10.93	2000,00,000.63		
93	100000000.31	93	30-Nov-10	10.93	1000,00,000.31		
94	100000000.31	94	06-Dec-10	10.93	1000,00,000.31		
95	60000000.33	95	27-Dec-10	10.93	600,00,000.33		
96	250000000.09	96	31-Dec-10	10.93	2500,00,000.09		
97	654682105.26	97	31-Dec-10	10.93		6546,82,105.26	
98	30000000.51	98	27-Jan-11	10.93	300,00,000.51		
99	460000000.89	99	31-Jan-11	10.93	4600,00,000.89		
100	240000000.61	100	02-Feb-11	10.93	2400,00,000.61		
101	250000000.09	101	18-Feb-11	10.93	2500,00,000.09		
102	300000000.24	102	25-Feb-11	10.93	3000,00,000.24		
103	150000000.47	103	03-Mar-11	10.93	1500,00,000.47		
104	400000000.56	104	11-Mar-11	10.93	4000,00,000.56		
105	400000000.56	105	18-Mar-11	10.93	4000,00,000.56		
106	480000000.53	106	24-Mar-11	10.93	4800,00,000.53		
107	470000000.36	107	28-Mar-11	10.93	4700,00,000.36		
108	100000000.10	108	31-Mar-11	10.93	1000,00,000.10		
109	705892120.36	109	31-Mar-11	10.93		7058,92,120.36	
110	100000000.10	110	06-Apr-11	10.93	1000,00,000.10		
111	25000000.43	111	05-May-11	10.93	250,00,000.43		
112	450000000.01	112	30-May-11	10.93	4500,00,000.01		
113	250000000.09	113	17-Jun-11	10.93	2500,00,000.09		
114	190000000.18	114	22-Jun-11	10.93	1900,00,000.18		
115	803581236.00	115	30-Jun-11	10.93		8035,81,236.00	
116	2900,00,000.21	116	19-Jul-11	10.93	2900,00,000.21		
117	1600,00,000.15	117	27-Jul-11	10.93	1600,00,000.15		
118	1400,00,000.02	118	01-Aug-11	10.93	1400,00,000.02		
119	2300,00,000.16	119	08-Aug-11	10.93	2300,00,000.16		
120	1699,99,958.74	120	18-Aug-11	10.93	1699,99,958.74		
121	1600,00,000.01	121	24-Aug-11	10.93	1600,00,000.01		
122	3000,00,000.00	122	21-Sep-11	10.93	3000,00,000.00		
123	2850,00,000.06	123	26-Sep-11	10.93	2850,00,000.06		
124	8735,55,728.00	124	30-Sep-11	10.93		8735,55,728.00	
125	1800,00,000.00	125	12-Oct-11	10.93	1800,00,000.00		
126	2200,00,000.03	126	16-Nov-11	10.93	2200,00,000.03		
127	1000,00,000.10	127	29-Nov-11	10.93	1000,00,000.10		
128	1000,00,000.00	128	30-Nov-11	10.93	1000,00,000.00		
129	9328,59,539.00	129	31-Dec-11	10.93		9328,59,539.00	
130	9548,88,119.00	130	31-Mar-12	10.93		9548,88,119.00	
131	9804,80,428.00	131	30-Jun-12	10.92		9804,80,428.00	
132	9,864.00	132	30-Jun-12	10.92		9,864.00	
133	7,11,778.00	133	30-Jun-12	10.64		7,11,778.00	
134	1500,00,000.00	134	26-Dec-13	10.98	1500,00,000.00		
135	1999,99,951.43	135	12-Feb-14	10.96	1999,99,951.43		

136	3500,00,000.00	136	26-Sep-14	10.63	3500,00,000.00	
137	6000,00,000.17	137	19-Dec-14	9.92	6000,00,000.17	
138	2000,00,000.00	138	17-Feb-15	9.71	2000,00,000.00	
139	6000,00,000.17	139	30-Mar-15	9.71	6000,00,000.17	
140	1620,00,000.00	140	30-Jun-15		1620,00,000.00	
141	5400,00,000.50	141	30-Mar-16		5400,00,000.50	
142	4500,00,000.00	142	04-Nov-16		4500,00,000.00	
143	1500,00,000.00	143	31-Jan-17		1500,00,000.00	
144	2500,00,000.00	144	23-Mar-17		2500,00,000.00	
145	6000,00,000.00	145	29-Jun-18		6000,00,000.00	
146	7000,00,000.00	146	28-Dec-18		7000,00,000.00	
147	7783,76,470.00	147	22-Mar-19		7783,76,470.00	
	432947,99,532.89				**362886,36,044.27**	**70061,63,488.62**

Amount in Rs.

Phase II

SL.NO.	DRAWAL OF LOAN FROM REC	NOD NO.	DATE OF DRAWAL	Rate of Interest	Total Loan Drawl	
1	100000000.10	1	24-Mar-11	11.25	1000,00,000.10	
2	15000000.40	2	05-May-11	11.50	150,00,000.40	
3	47500000.10	3	22-Jun-11	12.00	475,00,000.10	
4	3194384.00	4	30-Jun-11	12.00	31,94,384.00	
5	600,00,000.90	5	19-Jul-11	12.00	600,00,000.90	
6	700,00,000.00	6	28-Jul-11	12.00	700,00,000.00	
7	1000,00,000.10	7	01-Aug-11	12.00	1000,00,000.10	
8	700,00,000.00	8	18-Aug-11	12.25	700,00,000.00	
9	700,00,000.00	9	24-Aug-11	12.25	700,00,000.00	
10	700,00,000.00	10	21-Sep-11	12.50	700,00,000.00	
11	450,00,000.00	11	26-Sep-11	12.50	450,00,000.00	
12	2300,00,000.00	12	27-Sep-11	12.50	2300,00,000.00	
13	1000,00,000.03	13	31-Oct-11	12.50	1000,00,000.03	
14	2000,00,000.00	14	03-Nov-11	12.50	2000,00,000.00	
15	1000,00,000.00	15	14-Nov-11	12.50	1000,00,000.00	
16	1800,00,000.01	16	15-Nov-11	12.50	1800,00,000.01	
17	1000,00,000.03	17	13-Dec-11	12.50	1000,00,000.03	
18	1000,00,000.03	18	19-Dec-11	12.50	1000,00,000.03	
19	1000,00,000.03	19	21-Dec-11	12.50	1000,00,000.03	
20	1000,00,000.03	20	26-Dec-11	12.50	1000,00,000.03	
21	1000,00,000.03	21	27-Dec-11	12.50	1000,00,000.03	
22	1500,00,000.01	22	06-Jan-12	12.50	1500,00,000.01	
23	1000,00,000.03	23	16-Jan-12	12.50	1000,00,000.03	
24	1000,00,000.00	24	18-Jan-12	12.50	1000,00,000.00	
25	1000,00,000.00	25	20-Jan-12	12.50	1000,00,000.00	
26	1000,00,000.00	26	24-Jan-12	12.50	1000,00,000.00	
27	1000,00,000.00	27	30-Jan-12	12.50	1000,00,000.00	
28	900,00,000.02	28	31-Jan-12	12.50	900,00,000.02	
29	1500,00,000.00	29	08-Feb-12	12.50	1500,00,000.00	
30	1000,00,000.03	30	13-Feb-12	12.50	1000,00,000.03	
31	1000,00,000.00	31	21-Feb-12	12.50	1000,00,000.00	
32	1000,00,000.00	32	27-Feb-12	12.50	1000,00,000.00	
33	1000,00,000.00	33	29-Feb-12	12.50	1000,00,000.00	
34	2000,00,000.00	34	09-Mar-12	12.50	2000,00,000.00	
35	1000,00,000.00	35	15-Mar-12	12.50	1000,00,000.00	
36	2000,00,000.00	36	20-Mar-12	12.50	2000,00,000.00	
37	2000,00,000.00	37	22-Mar-12	12.50	2000,00,000.00	
38	2500,00,000.00	38	27-Mar-12	12.50	2500,00,000.00	
39	7000,00,000.00	39	31-Mar-12	12.50	7000,00,000.00	
40	3500,00,000.00	40	31-Mar-12	12.50	3500,00,000.00	
41	899,92,281.00	41	31-Mar-12	12.50		899,92,281.00
42	1500,00,000.01	42	11-May-12	12.50	1500,00,000.01	
43	1500,00,000.01	43	17-May-12	12.50	1500,00,000.01	
44	1000,00,000.00	44	28-May-12	12.50	1000,00,000.00	
45	900,00,000.02	45	01-Jun-12	12.50	900,00,000.02	
46	1500,00,000.01	46	12-Jun-12	12.50	1500,00,000.01	
47	2000,00,000.00	47	28-Jun-12	12.50	2000,00,000.00	
48	1735,67,382.00	48	30-Jun-12	12.50		1735,67,382.00
49	1000,00,000.00	49	10-Jul-12	12.50	1000,00,000.00	
50	1000,00,000.00	50	16-Jul-12	12.50	1000,00,000.00	
51	1000,00,000.00	51	23-Jul-12	12.50	1000,00,000.00	
52	1000,00,000.00	52	26-Jul-12	12.50	1000,00,000.00	
53	1500,00,000.01	53	01-Aug-12	12.50	1500,00,000.01	
54	1000,00,000.00	54	07-Aug-12	12.50	1000,00,000.00	
55	1000,00,000.00	55	16-Aug-12	12.50	1000,00,000.00	
56	1000,00,000.00	56	27-Aug-12	12.50	1000,00,000.00	
57	2500,00,000.00	57	28-Aug-12	12.50	2500,00,000.00	
58	3000,00,000.00	58	11-Sep-12	12.50	3000,00,000.00	
59	2000,00,000.00	59	14-Sep-12	12.50	2000,00,000.00	
60	2000,00,000.00	60	21-Sep-12	12.50	2000,00,000.00	
61	10000,00,000.00	61	27-Sep-12	12.50	10000,00,000.00	
62	2245,96,031.00	62	30-Sep-12	12.50		2245,96,031.00

63	1000,00,000.00	63	01-Oct-12	12.50	1000,00,000.00	
64	1000,00,000.00	64	03-Oct-12	12.50	1000,00,000.00	
65	1000,00,000.00	65	09-Oct-12	12.50	1000,00,000.00	
66	1000,00,000.00	66	22-Oct-12	12.50	1000,00,000.00	
67	1000,00,000.00	67	25-Oct-12	12.50	1000,00,000.00	
68	1900,00,000.00	68	29-Oct-12	12.50	1900,00,000.00	
69	900,00,000.00	69	01-Nov-12	12.50	900,00,000.00	
70	1000,00,000.00	70	12-Nov-12	12.50	1000,00,000.00	
71	1000,00,000.00	71	20-Nov-12	12.50	1000,00,000.00	
72	2000,00,000.00	72	23-Nov-12	12.50	2000,00,000.00	
73	1000,00,000.00	73	27-Nov-12	12.50	1000,00,000.00	
74	1000,00,000.00	74	29-Nov-12	12.50	1000,00,000.00	
75	1000,00,000.00	75	03-Dec-12	12.50	1000,00,000.00	
76	1000,00,000.00	76	24-Dec-12	12.50	1000,00,000.00	
77	6300,00,000.00	77	28-Dec-12	12.50	6300,00,000.00	
78	3241,41,522.00	78	31-Dec-12	12.50		3241,41,522.00
79	1500,00,000.00	79	07-Jan-13	12.50	1500,00,000.00	
80	1000,00,000.00	80	16-Jan-13	12.50	1000,00,000.00	
81	1500,00,000.00	81	01-Feb-13	12.50	1500,00,000.00	
82	1000,00,000.00	82	11-Feb-13	12.50	1000,00,000.00	
83	1500,00,000.00	83	19-Feb-13	12.25	1500,00,000.00	
84	1000,00,000.00	84	26-Feb-13	12.25	1000,00,000.00	
85	2499,99,999.97	85	27-Feb-13	12.25	2499,99,999.97	
86	1000,00,000.00	86	28-Feb-13	12.25	1000,00,000.00	
87	5000,00,000.00	87	26-Mar-13	12.25	5000,00,000.00	
88	9500,00,000.01	88	28-Mar-13	12.25	9500,00,000.01	
89	3864,67,049.00	89	31-Mar-13	12.25		3864,67,049.00
90	3500,00,000.00	90	15-May-13	12.25	3500,00,000.00	
91	1000,00,000.00	91	24-May-13	12.25	1000,00,000.00	
92	1000,00,000.00	92	31-May-13	12.25	1000,00,000.00	
93	1000,00,000.00	93	04-Jun-13	12.25	1000,00,000.00	
94	1000,00,000.00	94	11-Jun-13	12.25	1000,00,000.00	
95	1000,00,000.00	95	18-Jun-13	12.25	1000,00,000.00	
96	3000,00,000.00	96	26-Jun-13	12.25	3000,00,000.00	
97	4704,37,203.00	97	30-Jun-13	12.25		4704,37,203.00
98	1000,00,000.00	98	30-Jul-13	12.25	1000,00,000.00	
99	1000,00,000.00	99	05-Aug-13	12.25	1000,00,000.00	
100	1000,00,000.00	100	13-Aug-13	12.25	1000,00,000.00	
101	1000,00,000.00	101	23-Aug-13	12.50	1000,00,000.00	
102	2000,00,000.00	102	29-Aug-13	12.50	2000,00,000.00	
103	4000,00,000.00	103	05-Sep-13	12.50	4000,00,000.00	
104	5280,52,311.00	104	28-Sep-13	12.50		5280,52,311.00
105	2000,00,000.00	105	09-Oct-13	12.50	2000,00,000.00	
106	2000,00,000.00	106	22-Oct-13	12.50	2000,00,000.00	
107	1000,00,000.00	107	01-Nov-13	12.50	1000,00,000.00	
108	2000,00,000.00	108	19-Nov-13	12.25	2000,00,000.00	
109	3500,00,000.00	109	28-Jan-14	12.25	3500,00,000.00	
110	1500,00,000.00	110	17-Feb-14	12.25	1500,00,000.00	
111	2500,00,000.00	111	27-Feb-14	12.25	2500,00,000.00	
112	3500,00,000.00	112	26-Mar-14	12.25	3500,00,000.00	
113	5854,08,718.00	113	31-Mar-14	12.25		5854,08,718.00
114	3500,00,000.00	114	29-May-14		3500,00,000.00	
115	2000,00,000.00	115	03-Jul-14		2000,00,000.00	
116	2000,00,000.00	116	27-Aug-14	12.25	2000,00,000.00	
117	7000,00,000.00	117	17-Feb-15	12.50	7000,00,000.00	
118	1980,00,000.00	118	30-Jun-15		1980,00,000.00	
119	9000,00,000.00	119	30-Dec-15		9000,00,000.00	
120	4187,00,000.60	120	30-Mar-16		4187,00,000.60	
	23350056883.52				**20567394386.52**	**2782662497.00**

PETITIONER

PART-I
FORM- 9A
Additional Form

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTECL
Name of the Generating Station	Vallur Thermal Power Station (3X500 MW)
COD	26-02-2015
For Financial Year	2019-24 (Summary)

Amount in Rs Lakh

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)					Justification/ Regulation under which claimed	Admitted Cost by the Commission, if any
		2019-20	2020-21	2021-22	2022-23	2023-24		
1	2	3	4	5	6	7	8	9
A.	**Works under Original scope, Change in Law etc. eligble for RoE at Normal Rate**							
1	Ash Dyke lagoon-1/ Ash Handling related works					14004.00	Please refer Form -9 of respective year	
2	Ash Dyke lagoon-2, 1st Raising					8000.00		
3	HFO/LDO conversion		52.00					
4	On line Coal Analyser		67.00					
5	Dust Suppression system for Ash Dyke-Lagoon			323.00		276.00		
6	Seggregation of plant drains	86.00						
7	Dust extraction system of Crusher house & Coal Yard sprinkling system in CHP		461.00					
8	Bio-degradable waste management / Hazardous Waste Management Facility	3.00	276.00					
9	Scrap Yard for steel waste		117.00					
10	Electro chlorination system in CWPH		1000.00	1348.00				
	Total (A)	**89.00**	**1,973.00**	**1,671.00**	**-**	**22,280.00**		
B.	**Works beyond Original scope exluding add-cap due to Change in Law eligble for RoE at Wtd. Average rate of Interest**							
7	Desalination, Remineralisation Ultrafiltration packagepackage	-	4880.00				Please refer Form -9 of respective year	
9	Works for enhancing security	-	200.00	237.00				
10		-						
11		-						
12		-						
	Total (B)	**-**	**5,080.00**	**237.00**	**-**			
Total Add. Cap. Claimed (A+B)		**89.00**	**7,053.00**	**1,908.00**	**-**	**22,280.00**		

(Petitioner)

PART-I
FORM- 9

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTECL
Name of the Generating Station	Vallur Thermal Power Station (3X500 MW)
COD	26-02-2015
For Financial Year	2019-20

Amount in Rs Lakh

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)				Regulations under which claimed	Justification	Admitted Cost by the Commission, if any
		Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3			
1	2	3	4	5= (3-4)	6	7	8	9
A.	**Works under Original scope, Change in Law etc. eligble for RoE at Normal Rate**							
1	Seggregation of plant drains/ ZLD	86.00	0	86.00		26(1)(b)	As per the direction of Tamil Nadu Pollution Control Board (TNPCB) in the Consent to Operate (CTO) (copy attached at Annexure-D)at Clause-5 of General Conditions (page-11 of 15) works are being carried out to seperate plant drains with storm water drains before upstream of terminal manholes. Hon'ble Commission may pleased to aloow the same under change in law.	
2	Bio-degradable waste management / Hazardous Waste Management Facility	3.00		3.00		26(1)(b)	In line with the TNPCB norms on site storage requirements a containment system is to be provided at the area of storage. The system should be designed to drain and remove liquids and to avoid contact from the accumulated soils. Also,the station should not store hazardous waste on open ground. It shall be stored in closed containers in an isolated area earmarked for the purpose within the premises. The containers holding the hazardous wastes should be kept in good condition and made of materials which can withstand the physical and environmental conditions during storage and transportation. Hon'ble Commission may pleased to allow the same under Regulation 26(1) (b). Relevant Annexures are attached at Annexure-E in this regard.	
	Total (A)	89.00	-	89.00	-			
B.	**Works beyond Original scope exluding add-cap due to Change in Law eligble for RoE at Wtd. Average rate of Interest**							
	Total (B)	-	-	-	-			
Total Add. Cap. Claimed (A+B)		89.00	-	89.00	-			

(Petitioner)

PART-I
FORM- 9

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTECL
Name of the Generating Station	Vallur Thermal Power Station (3X500 MW)
COD	26-02-2015
For Financial Year	2020-21

Amount in Rs Lakh

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)				Regulations under which claimed	Justification	Admitted Cost by the Commission, if any
		Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3			
1	2	3	4	5= (3-4)	6	7	8	9
A.	**Works under Original scope, Change in Law etc. eligble for RoE at Normal Rate**							
1	HFO/LDO conversion	52.00	0	52.00		26(1) (b)	Hon'ble Supreme Court vide order dated 13th December, 2017 in WP (Civil) No. 13029 of 1985 has directed to complete the switch over of Thermal Plants in Delhi and NCR states from Furnace Oil (FO) to Light Diesel Oil (LDO) with in one year. Based on the directions of Hon'ble Supreme Court, Ministry of Power has issued an Office Memorandum dated 16th March, 2018 for the compliance of the same. NTECL being a coastal plant and comes under CRZ (Coastal Regulatory Zone). So to maintain the ecological balance with the surrounding environment, the following work was carried out in the instant station. Relevant annexures are attached at **Annexure-A** in this regard. Hence it may please be allowed by the Hon'ble Commission.	
2	On line Coal Analyser	67.00	0	67.00		26(1) (b)	Vide OM dated 26.08.2015 (copy attached at **Annexure-B**), 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 ....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 on online coal analyser to comply with the direction of MOEF, GoI. Accordingly Hon"b;e Commission may be pleased to allow the same under change in law.	
3	Dust extraction system of Crusher house & Coal Yard sprinkling system in CHP	461.00	0	461.00		25(1) (d)	These works/packages pertain to the original scope of work and the same have been already completed within the cut-off date of the station. However, on account of non-closure of the contract in view of various reasons like final settlement of bill, defect rectification, price adjustment as per the contact, these balance amounts are still to be released by the Petitioner. Most of these deferred liabilities are proposed to be released during FY 2019-20 & 2020-21, during the contract closure. Hon'ble Commission may be pleased to allow the same under Regulation 25(1)(d).	
4	Bio-degradable waste management / Hazardous Waste Management Facility	276.00	0	276.00		26(1) (b)	Refer Form-9 of FY 2019-20	
5	Scrap Yard for steel waste	117.00	0	117.00		26(1) (b)	TNPCB vide letter dated 04.09.2018 has issued certain instructions for NTECL station. One of the instruction was that unit shall ensure that the soil or other construction materials arising due to the construction shall not be stored or disposed in CRZ (Coastal Regulation Zone) area. The petitioner has to prepare a seperate scrap yard for the plant scrap to store it in isolation. Hon'ble Commission may be pleased to allow the same under Regulation 26(1) (b). Relevant Annexure is attached at **Annexure-F**	
6	Electro chlorination system in CWPH	1000.00	0	1,000.00		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 dozing system is now being replaced by Electro chlorination system, which is much safer and less hazardous than chlorine dosing system. Accordingly, the petitioner is replacing the current system with Electro Chlorination system for higher safety of the plant.Hon'ble Commission may be pleased to allow the same under Reg. 26(1)(d).	
	Total (A)	1,973.00	-	1,973.00	-			
B.	**Works beyond Original scope exluding add-cap due to Change in Law eligble for RoE at Wtd. Average rate of interest**							

PART-I
FORM- 9

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTECL
Name of the Generating Station	Vallur Thermal Power Station (3X500 MW)
COD	26-02-2015
For Financial Year	2020-21

Amount in Rs Lakh

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)				Regulations under which claimed	Justification	Admitted Cost by the Commission, if any
		Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3			
1	2	3	4	5= (3-4)	6	7	8	9
7	Desalination, Remineralisation Ultrafiltration packagepackage	4880.00	0	4,880.00		26(1) (c)	Due to the increase presence of contaminants leading to increased Bio-chemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) & Total Organic Carbon (TOC) levels, certain works are being carried out in order to increase the life of desalination plant and to get required quality of water for cycle make up. Detailed justification and related documents are under compilation at site and the same would take some time. Petitioner seeks liberty to file the same shortly. The same will be submitted before the listing of petition in court of Hon'ble Commission.	
8	Works for enhancing security	200.00	0	200.00		26(1) (d)	The Petitioner is in receipt of letter dated 23.10.2019 from MoP, GoI for enhancement & automation of security at power station, in view of consistent threat to various vital installations and infrastructure inlcuding power stations as per reports from external agencies. In view of similar information received earlier,the Petitioner, in collaboration with Central Industrial Security Force(CISF), has prepared a comprehensive multilayer e-security system, to be installed in various power power stations across the country. This integrated security system (ISS) is proposed to be installed in the instant station during the tariff period 2019-24. This ISS shall not only enhance the reliability of the security system, but it will also help rationalise the security manpower at the station. Hon'ble Commission may be pleased to allow this work under Regaulstion- 26(1)(d). The MoP letter dated 23.10.2019 is attached at **Annexure-G.**	
	Total (B)	5,080.00	-	5,080.00	-			
Total Add. Cap. Claimed (A+B)		7,053.00	-	7,053.00	-			

(Petitioner)

PART-I
FORM- 9

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	**NTECL**
Name of the Generating Station	**Vallur Thermal Power Station (3X500 MW)**
COD	**26-02-2015**
For Financial Year	**2021-22**

Amount in Rs Lakh

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)				Regulations under which claimed	Justification	Admitted Cost by the Commission, if any
		Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3			
1	2	3	4	5= (3-4)	6	7	8	9
A.	**Works under Original scope, Change in Law etc. eligble for RoE at Normal Rate**							
1	Dust Suppression system for Ash Dyke- Lagoon	323.00	0	323.00		26(1) (b)	In order to comply with the TNPCB norms station has to ensure that the discharge of Ash to Dyke should be in slurry form only and also to provide an adequate water cover to maintain the Ash Dyke to prevent fugitive emission. Hon'ble Commission may please allow the expenditure for the same. Relevant annexures are attached at **Annexure-C** in this regard.	
2	Electro chlorination system in CWPH	1348.00	0	1,348.00			Refer Form-9 of FY 2020-21	
	Total (A)	**1,671.00**	-	**1,671.00**	-			
B.	**Works beyond Original scope exluding add-cap due to Change in Law eligble for RoE at Wtd. Average rate of Interest**							
7	Works for enhancing security	237.00	0	237.00			Refer Form-9 of FY 2020-21	
	Total (B)	**237.00**	-	**237.00**	-			
Total Add. Cap. Claimed (A+B)		**1,908.00**	-	**1,908.00**	-			

(Petitioner)

PART-I
FORM- 9

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	**NTECL**
Name of the Generating Station	**Vallur Thermal Power Station (3X500 MW)**
COD	**26-02-2015**
For Financial Year	**2022-23**

Amount in Rs Lakh

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

(Petitioner)

PART-I
FORM- 9

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	**NTECL**
Name of the Generating Station	**Vallur Thermal Power Station (3X500 MW)**
COD	**26-02-2015**
For Financial Year	**2023-24**

Amount in Rs Lakh

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)				Regulations under which claimed	Justification	Admitted Cost by the Commission, if any
		Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3			
1	2	3	4	5= (3-4)	6	7	8	9
A.	**Works under Original scope, Change in Law etc. eligble for RoE at Normal Rate**							
1	Ash Dyke lagoon-1/ Ash Handling related works	14004.00	0	14004.00		25(1) (c) & 25(1) (g)	The projected expenditure is for planned works related to Ash dyke/ ash handling system, which are of continuous nature during the operational life of the generating station. These works are as per the approved scheme under original scope of work. Hence it may please be allowed by the Hon'ble Commission.	
2	Ash Dyke lagoon-2, 1st Raising	8000.00	0.00	8000.00		25(1) (c) & 25(1) (g)	Raising of ash dyke is a part of Ash Disposal sysytem. The projected expenditure projected is for planned works related to Ash dyke/ ash handling system, which are of continuous nature during the operational life of the generating station. These works are as per the approved scheme under original scope of work. Hence it may please be allowed by the Hon'ble Commission.	
3	Dust Suppression system for Ash Dyke- Lagoon	276.00	0	276.00		26 (1) b	Refer Form-9 for FY 2021-22	
	Total (A)	**22,280.00**	-	**22,280.00**	-			
B.	**Works beyond Original scope exluding add-cap due to Change in Law eligble for RoE at Wtd. Average rate of Interest**							
	Total (B)	-	-	-	-			
Total Add. Cap. Claimed (A+B)		**22,280.00**	-	**22,280.00**	-			

(Petitioner)

PART-I
FORM- 10

Name of the Petitioner	**NTECL**
Name of the Generating Station	**Vallur Thermal Power Station (3X500 MW)**
Date of Commercial Operation	**26-02-2015**

Amount in Rs Lakh

Financial Year (Starting from COD)1	Actual					Admitted				
	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
1		3	4	5	6	7	8	9	10	11
Amount capitalised in Work/ Equipment										
Financing Details	**Add cap is proposed to be finance in Debt:Equity ratio of 70:30**									
Loan-1										
Loan-2										
Loan-3 and so on										
Total Loan2										
Equity Internal Resources										
Others (Pl. specify)										
Total										

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

(Petitioner)

Calculation of Depreciation Rate

Form-11

Name of the Company: NTPC TAMILNADU ENERGY COMPANY LIMITED

Name of Power Station: VTPS-VALLUR

				DEPRECIATION
Sl.No.	Name of the Assets	Gross Block as on 31.03.2019	Depreciation Rates as per CERC's Depreciation Rate Schedule	As on 31.03.2019
1	Land :	12462.80	0.00%	0.00
2	Freehold	2420.87	3.34%	80.86
3	Leasehold	13863.65	3.34%	463.05
4	Roads,bridges, culverts	103314.84	3.34%	3450.72
5	Building :	288.71	100.00%	288.71
6	Temporary erection	2691.62	5.28%	142.12
7	Water supply, drainage & sewerage system	829851.52	5.28%	43816.16
8	Plant and machinery	1267.50	6.33%	80.23
9	Furniture and fixtures	60.08	9.50%	5.71
10	Vehicles including speedboats	355.05	6.33%	22.47
11	Office equipment	464.04	15.00%	69.61
12	IT Equipments	1205.35	5.28%	63.64
13	Construction equipments	1104.22	5.28%	58.30
14	Electrical Installations	139.60	6.33%	8.84
15	Communication Equipments	12.47	5.28%	0.66
16	Hospital Equipments	0.00	0.00%	0.00
17	Assets not owned by the company	823.08	0.00%	0.00
18	Intangible Assets	17113.59	5.28%	903.60
19	Capital Spares	**987438.99**		**49454.67**
	Total			**5.0084%**
	Weighted average rate of depreciation (%)			

PART-I
FORM- 12

Statement of Depreciation

Name of the Company : NTECL

Name of the Power Station : Vallur Thermal Power Station (3X500 MW)

(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	924508.64	9,38,573.68	9,38,662.68	9,45,715.68	9,47,623.68	9,47,623.68
2	Closing Capital Cost	938573.68	9,38,662.68	9,45,715.68	9,47,623.68	9,47,623.68	9,69,903.68
3	Average Capital Cost	931541.16	9,38,618.18	9,42,189.18	9,46,669.68	9,47,623.68	9,58,763.68
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	10,298.56	10,298.56	10,298.56	10,298.56	10,298.56	10,298.56
5	Rate of depreciation	5.023	5.0084	5.0084	5.0084	5.0084	5.0084
6	Depreciable value	8,29,118.34	8,35,487.66	8,38,701.56	8,42,734.01	8,43,592.61	8,53,618.61
7.	Balance useful life at the beginning of the period	18.66	17.66	16.66	15.66	14.66	13.66
8	Remaining depreciable value	6,66,719.67	6,29,028.61	5,85,232.75	5,42,076.60	4,95,522.20	4,58,087.41
9	Depreciation (for the period)	46,792.90	47,009.75	47,188.60	47,413.00	47,460.78	48,018.72
10	Depreciation (annualised)	46,792.90	**47,009.75**	**47,188.60**	**47,413.00**	**47,460.78**	**48,018.72**
11	Cumulative depreciation at the end of the period		2,53,468.81	3,00,657.41	3,48,070.41	3,95,531.20	4,43,549.92
12	Less: Cumulative depreciation adjustment on account of un-discharged liabilities deducted as on 01.04.2009	0.00	-	-	-	-	-
13	Add: Cumulative depreciation adjustment on account of liability Discharge	0.00	-	-	-	-	-
14	Less: Cumulative depreciation adjustment on account of de-capitalisation	2,732.51	-	-	-	-	-
15	Net Cumulative depreciation at the end of the period after adjustments	2,06,459.05	2,53,468.81	3,00,657.41	3,48,070.41	3,95,531.20	4,43,549.92

* shall be provided at the time of truing up

(Petitioner)

Form -13

Calculation of Weighted Average Interest Rate on Actual Loans

Name of the Company: NTPC TamilNadu Energy Company limited

Name of the Power Station: Vallur Thermal Power Project

Particulars	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
1						
PHASE -1 TERM LOAN						
Gross loan - Opening	4128.609	4340.867	4561.589	4791.070	5029.703	5277.996
Cumulative repayments of Loans upto previous year	1078.369	1369.230	1661.385	1955.449	2252.056	2551.867
Net loan - Opening	3050.240	3215.525	3387.980	3567.286	3753.199	3945.570
Add: drawal(s) during the Year	207.838	214.838	221.838	228.838	235.838	242.838
Less : Repayment(s) of Loans during the year	290.860	292.155	294.064	296.607	299.811	303.709
Net loan - Closing	2967.217	3138.208	3315.754	3499.516	3689.226	3884.699
Average Net Loan	3008.728	3176.866	3351.867	3533.401	3721.212	3915.134
Rate of Interest on Loan on annual basis	10.00%	10.03%	10.06%	10.08%	10.09%	10.11%
Interest on Loan	300.963	318.683	337.049	356.033	375.612	395.773
PHASE -2 TERM LOAN						
Gross loan - Opening	2331.346	2331.346	2331.346	2331.346	2331.346	2331.346
Cumulative repayments of Loans upto previous year	384.919	540.631	696.342	852.053	1007.765	1163.476
Net loan - Opening	1946.426	1790.715	1635.004	1479.292	1323.581	1167.870
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	155.711	155.711	155.711	155.711	155.711	155.711
Net loan - Closing	1790.715	1635.004	1479.292	1323.581	1167.870	1012.158
Average Net Loan	1868.571	1712.859	1557.148	1401.437	1245.725	1090.014
Rate of Interest on Loan on annual basis	9.69%	9.87%	9.87%	9.87%	9.87%	9.87%
Interest on Loan	181.065	169.054	153.686	138.318	122.949	107.581
SUMMARY						
Gross loan - Opening	6459.955	6672.212	6892.934	7122.416	7361.048	7609.342
Cumulative repayments of Loans upto previous year	1463.289	1909.860	2357.727	2807.502	3259.821	3715.343
Net loan - Opening	4996.666	4762.352	4535.208	4314.914	4101.228	3893.999
Add: drawal(s) during the Year	207.838	214.838	221.838	228.838	235.838	242.838
Less : Repayment(s) of Loans during the year	446.572	447.866	449.775	452.319	455.522	459.420
Net loan - Closing	4757.932	4529.323	4307.270	4091.433	3881.543	3677.416
Average Net Loan	4877.299	4889.726	4909.015	4934.838	4966.938	5005.148
Rate of Interest on Loan on annual basis	9.88%	9.97%	10.00%	10.02%	10.04%	10.06%
Interest on Loan	482	487.737	490.735	494.351	498.561	503.354
REC Drawal -1-Phase I						
Gross loan - Opening	3658.322	3658.322	3658.322	3658.322	3658.322	3658.322
Cumulative repayments of Loans upto previous year	975.553	1219.441	1463.329	1707.217	1951.105	2194.993
Net loan - Opening	2682.770	2682.770	2682.770	2682.770	2682.770	2682.770
Add: drawal(s) during the Year	0.000					
Less : Repayment(s) of Loans during the year	243.888	243.888	243.888	243.888	243.888	243.888
Net loan - Closing	2438.881	2438.881	2438.881	2438.881	2438.881	2438.881
Average Net Loan	2560.825	2560.825	2560.825	2560.825	2560.825	2560.825
Rate of Interest on Loan on annual basis	10.03%	10.03%	10.03%	10.03%	10.03%	10.03%
Interest on Loan	257	257	257	257	257	257
REC Drawal -2-Phase I						
Gross loan - Opening	98.049	98.049	98.049	98.049	98.049	98.049
Cumulative repayments of Loans upto previous year	26.146	32.683	39.220	45.756	52.293	58.829
Net loan - Opening	71.903	65.366	58.829	52.293	45.756	39.220
Add: drawal(s) during the Year	0.000					
Less : Repayment(s) of Loans during the year	6.537	6.537	6.537	6.537	6.537	6.537
Net loan - Closing	65.366	58.829	52.293	45.756	39.220	32.683
Average Net Loan	68.634	62.098	55.561	49.025	42.488	35.951
Rate of Interest on Loan on annual basis	10.03%	10.03%	10.03%	10.03%	10.03%	10.03%
Interest on Loan	7	6	6	5	4	4
REC Drawal -3-Phase I						
Gross loan - Opening	0.071	0.071	0.071	0.071	0.071	0.071
Cumulative repayments of Loans upto previous year	0.019	0.024	0.028	0.033	0.038	0.043
Net loan - Opening	0.052	0.047	0.043	0.038	0.033	0.028
Add: drawal(s) during the Year	0.000					
Less : Repayment(s) of Loans during the year	0.005	0.005	0.005	0.005	0.005	0.005
Net loan - Closing	0.047	0.043	0.038	0.033	0.028	0.024

Calculation of Weighted Average Interest Rate on Actual Loans

Name of the Company: NTPC TamilNadu Energy Company limited

Name of the Power Station: Vallur Thermal Power Project

Particulars	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Average Net Loan	0.050	0.045	0.040	0.036	0.031	0.026
Rate of Interest on Loan on annual basis	10.03%	10.03%	10.03%	10.03%	10.03%	10.03%
Interest on Loan	0.00	0.00	0.00	0.00	0.00	0.00
REC Drawal -4-Phase I						
Gross loan - Opening	21.967	26.387	32.271	39.915	49.710	62.166
Cumulative repayments of Loans upto previous year	4.420	5.884	7.644	9.795	12.456	15.770
Net loan - Opening	17.547	20.502	24.628	30.120	37.254	46.396
Add: drawal(s) during the Year	0.000					
Less : Repayment(s) of Loans during the year	1.464	1.759	2.151	2.661	3.314	4.144
Net loan - Closing	16.082	18.743	22.476	27.459	33.940	42.251
Average Net Loan	16.814	19.623	23.552	28.789	35.597	44.323
Rate of Interest on Loan on annual basis	10.03%	10.03%	10.03%	10.03%	10.03%	10.03%
Interest on Loan	1.69	1.97	2.36	2.89	3.57	4.44
REC Drawal -5-Phase I						
Gross loan - Opening	20.000	20.000	21.000	23.000	26.000	30.000
Cumulative repayments of Loans upto previous year	5.333	6.667	8.000	9.400	10.933	12.667
Net loan - Opening	14.667	13.333	13.000	13.600	15.067	17.333
Add: drawal(s) during the Year	0.000	1.000	2.000	3.000	4.000	5.000
Less : Repayment(s) of Loans during the year	1.333	1.333	1.400	1.533	1.733	2.000
Net loan - Closing	13.333	13.000	13.600	15.067	17.333	20.333
Average Net Loan	14.000	13.167	13.300	14.333	16.200	18.833
Rate of Interest on Loan on annual basis	10.03%	10.03%	10.03%	10.03%	10.03%	10.03%
Interest on Loan	1.40	1.32	1.33	1.44	1.62	1.89

Form -13

Calculation of Weighted Average Interest Rate on Actual Loans

Name of the Company: NTPC TamilNadu Energy Company limited

Name of the Power Station: Vallur Thermal Power Project

Particulars	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
REC Drawal -6-Phase I						
Gross loan - Opening	35.000	35.000	36.000	38.000	41.000	45.000
Cumulative repayments of Loans upto previous year	8.898	11.271	13.644	16.085	18.661	21.441
Net loan - Opening	26.102	23.729	22.356	21.915	22.339	23.559
Add: drawal(s) during the Year	0.000	1.000	2.000	3.000	4.000	5.000
Less : Repayment(s) of Loans during the year	2.373	2.373	2.441	2.576	2.780	3.051
Net loan - Closing	23.729	22.356	21.915	22.339	23.559	25.508
Average Net Loan	24.915	23.042	22.136	22.127	22.949	24.534
Rate of Interest on Loan on annual basis	10.03%	10.03%	10.03%	10.03%	10.03%	10.03%
Interest on Loan	2.50	2.31	2.22	2.22	2.30	2.46
REC Drawal -7-Phase I						
Gross loan - Opening	60.000	60.000	61.000	63.000	66.000	70.000
Cumulative repayments of Loans upto previous year	14.483	18.621	22.759	26.966	31.310	35.862
Net loan - Opening	45.517	41.379	38.241	36.034	34.690	34.138
Add: drawal(s) during the Year	0.000	1.000	2.000	3.000	4.000	5.000
Less : Repayment(s) of Loans during the year	4.138	4.138	4.207	4.345	4.552	4.828
Net loan - Closing	41.379	38.241	36.034	34.690	34.138	34.310
Average Net Loan	43.448	39.810	37.138	35.362	34.414	34.224
Rate of Interest on Loan on annual basis	10.03%	10.03%	10.03%	10.03%	10.03%	10.03%
Interest on Loan	4.36	3.99	3.72	3.55	3.45	3.43
REC Drawal -8-Phase I						
Gross loan - Opening	20.000	20.000	21.000	23.000	26.000	30.000
Cumulative repayments of Loans upto previous year	4.561	5.965	7.368	8.842	10.456	12.281
Net loan - Opening	15.439	14.035	13.632	14.158	15.544	17.719
Add: drawal(s) during the Year	0.000	1.000	2.000	3.000	4.000	5.000
Less : Repayment(s) of Loans during the year	1.404	1.404	1.474	1.614	1.825	2.105
Net loan - Closing	14.035	13.632	14.158	15.544	17.719	20.614
Average Net Loan	14.737	13.833	13.895	14.851	16.632	19.167
Rate of Interest on Loan on annual basis	10.03%	10.03%	10.03%	10.03%	10.03%	10.03%
Interest on Loan	1.48	1.39	1.39	1.49	1.67	1.92
REC Drawal -9-Phase I						
Gross loan - Opening	130.200	130.200	130.200	130.200	130.200	130.200
Cumulative repayments of Loans upto previous year	29.581	40.948	52.315	63.682	75.049	86.416
Net loan - Opening	100.619	89.252	77.885	66.518	55.151	43.784
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	11.367	11.367	11.367	11.367	11.367	11.367
Net loan - Closing	89.252	77.885	66.518	55.151	43.784	32.417
Average Net Loan	94.936	83.569	72.202	60.835	49.468	38.101
Rate of Interest on Loan on annual basis	10.03%	10.03%	10.03%	10.03%	10.03%	10.03%
Interest on Loan	9.52	8.38	7.24	6.10	4.96	3.82
REC Drawal -10-Phase I						
Gross loan - Opening	45.000	45.000	46.000	48.000	51.000	55.000
Cumulative repayments of Loans upto previous year	5.400	9.000	12.600	16.280	20.120	24.200
Net loan - Opening	39.600	36.000	33.400	31.720	30.880	30.800
Add: drawal(s) during the Year	0.000	1.000	2.000	3.000	4.000	5.000
Less : Repayment(s) of Loans during the year	3.600	3.600	3.680	3.840	4.080	4.400
Net loan - Closing	36.000	33.400	31.720	30.880	30.800	31.400
Average Net Loan	37.800	34.700	32.560	31.300	30.840	31.100
Rate of Interest on Loan on annual basis	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%
Interest on Loan	3.25	2.98	2.80	2.69	2.65	2.67
REC Drawal -11-Phase I						
Gross loan - Opening	15.000	15.000	16.000	18.000	21.000	25.000
Cumulative repayments of Loans upto previous year	1.531	2.755	3.980	5.286	6.755	8.469
Net loan - Opening	13.469	12.245	12.020	12.714	14.245	16.531
Add: drawal(s) during the Year	0.000	1.000	2.000	3.000	4.000	5.000
Less : Repayment(s) of Loans during the year	1.224	1.224	1.306	1.469	1.714	2.041
Net loan - Closing	12.245	12.020	12.714	14.245	16.531	19.490
Average Net Loan	12.857	12.133	12.367	13.480	15.388	18.010
Rate of Interest on Loan on annual basis	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%

Form -13

Calculation of Weighted Average Interest Rate on Actual Loans

Name of the Company: NTPC TamilNadu Energy Company limited

Name of the Power Station: Vallur Thermal Power Project

Particulars	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Interest on Loan	1.07	1.01	1.03	1.12	1.28	1.50
REC Drawal -12-Phase I						
Gross loan - Opening	25.000	25.000	26.000	28.000	31.000	35.000
Cumulative repayments of Loans upto previous year	2.444	4.485	6.526	8.648	10.934	13.465
Net loan - Opening	22.556	20.515	19.474	19.352	20.066	21.535
Add: drawal(s) during the Year	0.000	1.000	2.000	3.000	4.000	5.000
Less : Repayment(s) of Loans during the year	2.041	2.041	2.122	2.286	2.531	2.857
Net loan - Closing	20.515	19.474	19.352	20.066	21.535	23.678
Average Net Loan	21.535	19.995	19.413	19.709	20.801	22.607
Rate of Interest on Loan on annual basis	8.64%	8.64%	8.64%	8.64%	8.64%	8.64%
Interest on Loan	1.86	1.73	1.68	1.70	1.80	1.95
REC Drawal -13-Phase I						
Gross loan - Opening	0.000	60.000	120.000	180.000	240.000	300.000
Cumulative repayments of Loans upto previous year	0.000	5.455	10.909	16.364	21.818	27.273
Net loan - Opening	0.000	54.545	109.091	163.636	218.182	272.727
Add: drawal(s) during the Year	60.000	60.000	60.000	60.000	60.000	60.000
Less : Repayment(s) of Loans during the year	5.455	5.455	5.455	5.455	5.455	5.455
Net loan - Closing	54.545	109.091	163.636	218.182	272.727	327.273
Average Net Loan	27.273	81.818	136.364	190.909	245.455	300.000
Rate of Interest on Loan on annual basis	10.03%	10.03%	10.03%	10.03%	10.03%	10.03%
Interest on Loan	2.74	8.21	13.68	19.15	24.62	30.09
REC Drawal -14-Phase I						
Gross loan - Opening	0.000	70.000	140.000	210.000	280.000	350.000
Cumulative repayments of Loans upto previous year	0.000	3.333	6.667	10.000	13.333	16.667
Net loan - Opening	0.000	66.667	133.333	200.000	266.667	333.333
Add: drawal(s) during the Year	70.000	70.000	70.000	70.000	70.000	70.000
Less : Repayment(s) of Loans during the year	3.333	3.333	3.333	3.333	3.333	3.333
Net loan - Closing	66.667	133.333	200.000	266.667	333.333	400.000
Average Net Loan	33.333	100.000	166.667	233.333	300.000	366.667
Rate of Interest on Loan on annual basis	11.40%	11.40%	11.40%	11.40%	11.40%	11.40%
Interest on Loan	3.80	11.40	19.00	26.60	34.20	41.80
REC Drawal -15-Phase I						
Gross loan - Opening	0.000	77.838	155.675	233.513	311.351	389.188
Cumulative repayments of Loans upto previous year	0.000	2.698	6.397	11.095	16.794	23.492
Net loan - Opening	0.000	75.139	149.278	222.418	294.557	365.696
Add: drawal(s) during the Year	77.838	77.838	77.838	77.838	77.838	77.838
Less : Repayment(s) of Loans during the year	2.698	3.698	4.698	5.698	6.698	7.698
Net loan - Closing	75.139	149.278	222.418	294.557	365.696	435.835
Average Net Loan	37.570	112.209	185.848	258.487	330.126	400.765
Rate of Interest on Loan on annual basis	9.85%	9.85%	9.85%	9.85%	9.85%	9.85%
Interest on Loan	3.70	11.05	18.30	25.45	32.51	39.46
Net closing	2967.217	3138.208	3315.754	3499.516	3689.226	3884.699
	4128.609	4340.887	4561.589	4791.070	5029.703	5277.998
REC Drawal -16-Phase II						
Gross loan - Opening	17.000	17.000	17.000	17.000	17.000	17.000
Cumulative repayments of Loans upto previous year	2.833	3.967	5.100	6.233	7.367	8.500
Net loan - Opening	14.167	13.033	11.900	10.767	9.633	8.500
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	1.133	1.133	1.133	1.133	1.133	1.133
Net loan - Closing	13.033	11.900	10.767	9.633	8.500	7.367
Average Net Loan	13.600	12.467	11.333	10.200	9.067	7.933
Rate of Interest on Loan on annual basis	9.69%	9.87%	9.87%	9.87%	9.87%	9.87%
Interest on Loan	1.32	1.23	1.12	1.01	0.89	0.78
REC Drawal -17-Phase II						
Gross loan - Opening	7.500	7.500	7.500	7.500	7.500	7.500
Cumulative repayments of Loans upto previous year	1.250	1.750	2.250	2.750	3.250	3.750
Net loan - Opening	6.250	5.750	5.250	4.750	4.250	3.750

Form -13

Calculation of Weighted Average Interest Rate on Actual Loans

Name of the Company: NTPC TamilNadu Energy Company limited

Name of the Power Station: Vallur Thermal Power Project

Particulars	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	0.500	0.500	0.500	0.500	0.500	0.500
Net loan - Closing	5.750	5.250	4.750	4.250	3.750	3.250
Average Net Loan	6.000	5.500	5.000	4.500	4.000	3.500
Rate of Interest on Loan on annual basis	9.69%	9.87%	9.87%	9.87%	9.87%	9.87%
Interest on Loan	0.58	0.54	0.49	0.44	0.39	0.35
REC Drawal -18-Phase II						
Gross loan - Opening	5.069	5.069	5.069	5.069	5.069	5.069
Cumulative repayments of Loans upto previous year	0.845	1.183	1.521	1.859	2.197	2.535
Net loan - Opening	4.225	3.887	3.549	3.211	2.873	2.535
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	0.338	0.338	0.338	0.338	0.338	0.338
Net loan - Closing	3.887	3.549	3.211	2.873	2.535	2.197
Average Net Loan	4.056	3.718	3.380	3.042	2.704	2.366
Rate of Interest on Loan on annual basis	9.69%	9.87%	9.87%	9.87%	9.87%	9.87%
Interest on Loan	0.39	0.37	0.33	0.30	0.27	0.23
REC Drawal -19-Phase II						
Gross loan - Opening	24.000	24.000	24.000	24.000	24.000	24.000
Cumulative repayments of Loans upto previous year	4.000	5.600	7.200	8.800	10.400	12.000
Net loan - Opening	20.000	18.400	16.800	15.200	13.600	12.000
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	1.600	1.600	1.600	1.600	1.600	1.600

Calculation of Weighted Average Interest Rate on Actual Loans

Name of the Company: NTPC TamilNadu Energy Company limited

Name of the Power Station: Vallur Thermal Power Project

Particulars	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Net loan - Closing	18.400	16.800	15.200	13.600	12.000	10.400
Average Net Loan	19.200	17.600	16.000	14.400	12.800	11.200
Rate of Interest on Loan on annual basis	9.69%	9.87%	9.87%	9.87%	9.87%	9.87%
Interest on Loan	1.86	1.74	1.58	1.42	1.26	1.11
REC Drawal -20-Phase II						
Gross loan - Opening	34.500	34.500	34.500	34.500	34.500	34.500
Cumulative repayments of Loans upto previous year	5.750	8.050	10.350	12.650	14.950	17.250
Net loan - Opening	28.750	26.450	24.150	21.850	19.550	17.250
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	2.300	2.300	2.300	2.300	2.300	2.300
Net loan - Closing	26.450	24.150	21.850	19.550	17.250	14.950
Average Net Loan	27.600	25.300	23.000	20.700	18.400	16.100
Rate of Interest on Loan on annual basis	9.69%	9.87%	9.87%	9.87%	9.87%	9.87%
Interest on Loan	2.67	2.50	2.27	2.04	1.82	1.59
REC Drawal -21-Phase II						
Gross loan - Opening	30.000	30.000	30.000	30.000	30.000	30.000
Cumulative repayments of Loans upto previous year	5.000	7.000	9.000	11.000	13.000	15.000
Net loan - Opening	25.000	23.000	21.000	19.000	17.000	15.000
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	2.000	2.000	2.000	2.000	2.000	2.000
Net loan - Closing	23.000	21.000	19.000	17.000	15.000	13.000
Average Net Loan	24.000	22.000	20.000	18.000	16.000	14.000
Rate of Interest on Loan on annual basis	9.69%	9.87%	9.87%	9.87%	9.87%	9.87%
Interest on Loan	2.33	2.17	1.97	1.78	1.58	1.38
REC Drawal -22-Phase II						
Gross loan - Opening	28.000	28.000	28.000	28.000	28.000	28.000
Cumulative repayments of Loans upto previous year	4.667	6.533	8.400	10.267	12.133	14.000
Net loan - Opening	23.333	21.467	19.600	17.733	15.867	14.000
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	1.867	1.867	1.867	1.867	1.867	1.867
Net loan - Closing	21.467	19.600	17.733	15.867	14.000	12.133
Average Net Loan	22.400	20.533	18.667	16.800	14.933	13.067
Rate of Interest on Loan on annual basis	9.69%	9.87%	9.87%	9.87%	9.87%	9.87%
Interest on Loan	2.17	2.03	1.84	1.66	1.47	1.29
REC Drawal -23-Phase II						
Gross loan - Opening	50.000	50.000	50.000	50.000	50.000	50.000
Cumulative repayments of Loans upto previous year	8.333	11.667	15.000	18.333	21.667	25.000
Net loan - Opening	41.667	38.333	35.000	31.667	28.333	25.000
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	3.333	3.333	3.333	3.333	3.333	3.333
Net loan - Closing	38.333	35.000	31.667	28.333	25.000	21.667
Average Net Loan	40.000	36.667	33.333	30.000	26.667	23.333
Rate of Interest on Loan on annual basis	9.69%	9.87%	9.87%	9.87%	9.87%	9.87%
Interest on Loan	3.88	3.62	3.29	2.96	2.63	2.30
REC Drawal -24-Phase II						
Gross loan - Opening	15.000	15.000	15.000	15.000	15.000	15.000
Cumulative repayments of Loans upto previous year	2.500	3.500	4.500	5.500	6.500	7.500
Net loan - Opening	12.500	11.500	10.500	9.500	8.500	7.500
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	1.000	1.000	1.000	1.000	1.000	1.000
Net loan - Closing	11.500	10.500	9.500	8.500	7.500	6.500
Average Net Loan	12.000	11.000	10.000	9.000	8.000	7.000
Rate of Interest on Loan on annual basis	9.69%	9.87%	9.87%	9.87%	9.87%	9.87%
Interest on Loan	1.16	1.09	0.99	0.89	0.79	0.69
REC Drawal -25-Phase II						
Gross loan - Opening	40.000	40.000	40.000	40.000	40.000	40.000
Cumulative repayments of Loans upto previous year	6.667	9.333	12.000	14.667	17.333	20.000
Net loan - Opening	33.333	30.667	28.000	25.333	22.667	20.000

Form -13

Calculation of Weighted Average Interest Rate on Actual Loans

Name of the Company: NTPC TamilNadu Energy Company limited

Name of the Power Station: Vallur Thermal Power Project

Particulars	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	2.667	2.667	2.667	2.667	2.667	2.667
Net loan - Closing	30.667	28.000	25.333	22.667	20.000	17.333
Average Net Loan	32.000	29.333	26.667	24.000	21.333	18.667
Rate of Interest on Loan on annual basis	9.69%	9.87%	9.87%	9.87%	9.87%	9.87%
Interest on Loan	3.10	2.90	2.63	2.37	2.11	1.84
REC Drawal -26-Phase II						
Gross loan - Opening	34.000	34.000	34.000	34.000	34.000	34.000
Cumulative repayments of Loans upto previous year	5.667	7.933	10.200	12.467	14.733	17.000
Net loan - Opening	28.333	26.067	23.800	21.533	19.267	17.000
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	2.267	2.267	2.267	2.267	2.267	2.267

Form -13

Calculation of Weighted Average Interest Rate on Actual Loans

Name of the Company: NTPC TamilNadu Energy Company limited

Name of the Power Station: Vallur Thermal Power Project

Particulars	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Net loan - Closing	26.067	23.800	21.533	19.267	17.000	14.733
Average Net Loan	27.200	24.933	22.667	20.400	18.133	15.867
Rate of Interest on Loan on annual basis	9.69%	9.87%	9.87%	9.87%	9.87%	9.87%
Interest on Loan	2.64	2.46	2.24	2.01	1.79	1.57
REC Drawal -27-Phase II						
Gross loan - Opening	20.000	20.000	20.000	20.000	20.000	20.000
Cumulative repayments of Loans upto previous year	3.333	4.667	6.000	7.333	8.667	10.000
Net loan - Opening	16.667	15.333	14.000	12.667	11.333	10.000
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	1.333	1.333	1.333	1.333	1.333	1.333
Net loan - Closing	15.333	14.000	12.667	11.333	10.000	8.667
Average Net Loan	16.000	14.667	13.333	12.000	10.667	9.333
Rate of Interest on Loan on annual basis	9.69%	9.87%	9.87%	9.87%	9.87%	9.87%
Interest on Loan	1.55	1.45	1.32	1.18	1.05	0.92
REC Drawal -28-Phase II						
Gross loan - Opening	40.000	40.000	40.000	40.000	40.000	40.000
Cumulative repayments of Loans upto previous year	6.667	9.333	12.000	14.667	17.333	20.000
Net loan - Opening	33.333	30.667	28.000	25.333	22.667	20.000
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	2.667	2.667	2.667	2.667	2.667	2.667
Net loan - Closing	30.667	28.000	25.333	22.667	20.000	17.333
Average Net Loan	32.000	29.333	26.667	24.000	21.333	18.667
Rate of Interest on Loan on annual basis	9.69%	9.87%	9.87%	9.87%	9.87%	9.87%
Interest on Loan	3.10	2.90	2.63	2.37	2.11	1.84
REC Drawal -29-Phase II						
Gross loan - Opening	50.000	50.000	50.000	50.000	50.000	50.000
Cumulative repayments of Loans upto previous year	8.333	11.667	15.000	18.333	21.667	25.000
Net loan - Opening	41.667	38.333	35.000	31.667	28.333	25.000
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	3.333	3.333	3.333	3.333	3.333	3.333
Net loan - Closing	38.333	35.000	31.667	28.333	25.000	21.667
Average Net Loan	40.000	36.667	33.333	30.000	26.667	23.333
Rate of Interest on Loan on annual basis	9.69%	9.87%	9.87%	9.87%	9.87%	9.87%
Interest on Loan	3.88	3.62	3.29	2.96	2.63	2.30
REC Drawal -30-Phase II						
Gross loan - Opening	138.999	138.999	138.999	138.999	138.999	138.999
Cumulative repayments of Loans upto previous year	23.167	32.433	41.700	50.966	60.233	69.500
Net loan - Opening	115.833	106.566	97.299	88.033	78.766	69.500
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	9.267	9.267	9.267	9.267	9.267	9.267
Net loan - Closing	106.566	97.299	88.033	78.766	69.500	60.233
Average Net Loan	111.199	101.933	92.666	83.400	74.133	64.866
Rate of Interest on Loan on annual basis	9.69%	9.87%	9.87%	9.87%	9.87%	9.87%
Interest on Loan	10.78	10.06	9.15	8.23	7.32	6.40
REC Drawal -31-Phase II						
Gross loan - Opening	699.231	699.231	699.231	699.231	699.231	699.231
Cumulative repayments of Loans upto previous year	116.539	163.154	209.769	256.385	303.000	349.616
Net loan - Opening	582.693	536.077	489.462	442.846	396.231	349.616
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	46.615	46.615	46.615	46.615	46.615	46.615
Net loan - Closing	536.077	489.462	442.846	396.231	349.616	303.000
Average Net Loan	559.385	512.770	466.154	419.539	372.923	326.308
Rate of Interest on Loan on annual basis	9.69%	9.87%	9.87%	9.87%	9.87%	9.87%
Interest on Loan	54.20	50.61	46.01	41.41	36.81	32.21
REC Drawal -32-Phase II						
Gross loan - Opening	1098.046	1098.046	1098.046	1098.046	1098.046	1098.046
Cumulative repayments of Loans upto previous year	179.369	252.861	326.352	399.843	473.335	546.826
Net loan - Opening	918.676	845.185	771.694	698.202	624.711	551.220
Add: drawal(s) during the Year	0.000	0.000	0.000	0.000	0.000	0.000
Less : Repayment(s) of Loans during the year	73.491	73.491	73.491	73.491	73.491	73.491
Net loan - Closing	845.185	771.694	698.202	624.711	551.220	477.728

Form -13

Calculation of Weighted Average Interest Rate on Actual Loans

Name of the Company: NTPC TamilNadu Energy Company limited

Name of the Power Station: Vallur Thermal Power Project

Particulars	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Average Net Loan	881.931	808.439	734.948	661.457	587.965	514.474
Rate of Interest on Loan on annual basis	9.69%	9.87%	9.87%	9.87%	9.87%	9.87%
Interest on Loan	85.46	79.79	72.54	65.28	58.03	50.78
	1790.72	1635.00	1479.29	1323.58	1167.87	1012.16

Computation of Energy Charges

Form-13F
ADDITIONAL FORM

Name of the Company	NTECL
Name of the Power Station	Vallur Thermal Power Station (3X500 MW)

Computation of Energy Charges

1	Rate of Energy Charge from Sec. Fuel Oil/ Alternate Fuel (p/kwh) $(REC)_s$	$= (Q_s)_n \times P_s$		1.967
2	Heat Contribution from SFO / Alternate Fuel (H_s)	$= (Qs)_n \times (GCV)_s$		5.021
3	Heat Contribution from coal $(H_p)_s$	$= GHR - H_s$		2381.57
4	Specific Primary Fuel Consumption $(Qp)_n$	$= H_p / (GCV)_p$		0.796
5	Rate of Energy charge from Primary Fuel (p/kwh) $(REC)_p$			332.865
6	Rate of Energy charge ex-bus (p/kWh) (REC)	$= ((REC)_s + (REC)_p / (1-(AUX))$		360.772

		2019-20	2020-21	2021-22	2022-23	2023-24
No of Days in the year	Days	366	365	365	365	366
Sp. Oil consumption	ml/kwh	0.5	0.5	0.5	0.5	0.5
Auxiliary consumption	%	7.19	7.19	7.19	7.19	7.19
Heat Rate	Kcal/Kwh	2,386.59	2,386.59	2,386.59	2,386.59	2386.588235
Computation of Variable Charges						
Variable Charge (Coal)	p/kwh	358.652	358.652	358.652	358.652	358.652
Variable Charge (Oil)	p/kwh	2.120	2.120	2.120	2.120	2.120
Total	p/kwh	360.772	360.772	360.772	360.772	360.772
Price of fuel from Form-15/15A						
Coal Cost	(Rs./MT)	4183.05	4183.05	4183.05	4183.05	4183.05
Oil Cost	(Rs./KL)	39343.61	39343.61	39343.61	39343.61	39343.61
Computation of Fuel Expenses for Calculation of IWC:						
ESO in a year	(MUs)	10394.35	10365.95	10365.95	10365.95	10394.349
ESO for 50 days	(MUs)	1419.993	1419.993	1419.99	1419.99	1419.993
Cost of coal for 45 Days	(Rs. Lakh)	50928.33	50928.33	50928.33	50928.33	50928.33
Cost of oil for 2 months	(Rs. Lakh)	367.19	366.19	366.19	366.19	367.19
Energy Expenses for 45 days	(Rs. Lakh)	46106.37	46106.37	46106.37	46106.37	46106.37

Coal		**3rd month**	**2nd month**	**1st month**	**Wtd. Avg.**
Wtd. Avg. Price of Coal	Rs./MT	4559.43	3619.28	4047.06	**4183.05**
Wtd. Avg. GCV of Coal as received	kCal/Kg	3092.18	3079.74	3061.69	**3077.87**
Wtd. Avg. GCV of Coal as received after adjustement of 85 kcal/kg					**2992.87**
Sec. Oil					
Wtd. Avg. Price of Secondary Fuel	Rs/KL	37423.97	40219.17	40387.70	**39343.61**
Wtd. Avg. GCV of Secondary Fuel	kCal/L	10042.90	10042.90	10042.90	**10042.90**

PETITIONER

NTECL

NTPC TAMILNADU ENERGY COMPANY LIMITED
(A Joint Venture of NTPC Ltd & TNEB)
Vallur Thermal Power Project

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:- NTECL
Name of Power Station:- Vallur Thermal Power Project
Month:- October'18

S.No.	Particulars	Unit	Supplied by Rail Cum Sea	E-Auction coal	Imported Coal
			(ii)	(iii)	(iv)
1	Quantity of coal supplied by the coal Company inclusive of opening stock of coal	(MT)	343558.22	-	0.00
2	Adjustment (+/-) in quantity supplied by the coal Company	(MT)	-	-	-
3	Coal supplied by the Coal Company inclusive of opening stock of coal (1+2)	(MT)	343558.22	-	0.00
4	Normative transit & handling losses (for coal based projects)	(MT)	2933.42	-	0.00
5	Net coal suplied inclusive of opening stock of coal (3-4)	(MT)	340624.80	-	0.00
6	Amount charged by the coal company inclusive of value of opening stock of coal	(Rs.)	638073432.62	-	0.00
7	Adjustment (+/-) in amount charged by the coal Company	(Rs.)	0.00	-	
8	Total amount charged inclusive of opening stock of coal (6+7)	(Rs.)	638073432.62	-	0.00
9	Transportation charges by Rail / Ship / Road Transport	(Rs.)	720809768.32	-	0.00
10	Adjustment (+/-) in amount charged by Railways / transport Company	(Rs.)	-	-	-
11	Demurrage charges, if any	(Rs.)	-	-	-
12	Cost of diesel in transporting coal through MGR system	(Rs.)	-	-	-
13	Total Transportation Charges (9+/-10-11+12)	(Rs.)	720809768.32	-	0.00
13A	Others (Stone picking charges, Loco driver's salary, Sampling Charges etc)	(Rs.)	19646041.00	-	-
14	Total amount charged for coal supplied including transportation (8+13+13A)	(Rs.)	1378529241.94	-	0.00
15	Landed cost of coal	(Rs./MT)	4047.06	-	0
16	Blending ratio		100.00	-	-
17	Weighted average cost of coal	(Rs./MT)	4047.06		
18	GCV of Domestic Coal as per bill of Coal Company, EM basis	(kCal/Kg)	3740.39		
19	GCV of Imported Coal as per bill of Coal Company, AD basis	(kCal/Kg)			-
20	Weighted average GCV of coal as Billed, TM basis	(kCal/Kg)	3508.90		
21	GCV of Domestic Coal as received at Station, TM basis	(kCal/Kg)	3061.69		
22	GCV of Imported Coal as received at Station, TM basis	(kCal/Kg)			-
23	Weighted average GCV of coal as received at station TM basis	(kCal/Kg)	3061.69		

S. SONNY ASSOCIATES * CHENNAI * CHARTERED ACCOUNTANTS

NTECL

NTPC TAMILNADU ENERGY COMPANY LIMITED
(A Joint Venture of NTPC Ltd & TNEB)
Vallur Thermal Power Project

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:- NTECL
Name of Power Station:- Vallur Thermal Power Project
Month:- November'18

S.No.	Particulars	Unit	Supplied by Rail Cum Sea	E-Auction coal	Imported Coal
			(ii)	(iii)	(iv)
1	Quantity of coal supplied by the coal Company inclusive of opening stock of coal	(MT)	446998.80	-	0.00
2	Adjustment (+/-) in quantity supplied by the coal Company	(MT)	-	-	-
3	Coal supplied by the Coal Company inclusive of opening stock of coal (1+2)	(MT)	446998.80	-	0.00
4	Normative transit & handling losses (for coal based projects)	(MT)	4375.58	-	0.00
5	Net coal suplied inclusive of opening stock of coal (3-4)	(MT)	442623.22	-	0.00
6	Amount charged by the coal company inclusive of value of opening stock of coal	(Rs.)	668018726.75	-	0.00
7	Adjustment (+/-) in amount charged by the coal Company	(Rs.)	0.00	-	
8	Total amount charged inclusive of opening stock of coal (6+7)	(Rs.)	668018726.75	-	0.00
9	Transportation charges by Rail / Ship / Road Transport	(Rs.)	1023029288.27	-	0.00
10	Adjustment (+/-) in amount charged by Railways / transport Company	(Rs.)	-	-	-
11	Demurrage charges, if any	(Rs.)	-	-	-
12	Cost of diesel in transporting coal through MGR system	(Rs.)	-	-	-
13	Total Transportation Charges (9+/-10-11+12)	(Rs.)	1023029288.27	-	0.00
13A	Others (Stone picking charges, Loco driver's salary, Sampling Charges etc)	(Rs.)	29708915.00	-	-
14	Total amount charged for coal supplied including transportation (8+13+13A)	(Rs.)	1720756930.02	-	0.00
15	Landed cost of coal	(Rs./MT)	3887.63	-	0
16	Blending ratio		100.00	-	-
17	Weighted average cost of coal	(Rs./MT)	3887.63		
18	GCV of Domestic Coal as per bill of Coal Company, EM basis	(kCal/Kg)	3819.35		
19	GCV of Imported Coal as per bill of Coal Company, AD basis	(kCal/Kg)			-
20	Weighted average GCV of coal as Billed, TM basis	(kCal/Kg)	3604.20		
21	GCV of Domestic Coal as received at Station, TM basis	(kCal/Kg)	3079.74		
22	GCV of Imported Coal as received at Station, TM basis	(kCal/Kg)			-
23	Weighted average GCV of coal as received at station TM basis	(kCal/Kg)	3079.74		

S. SONNY ASSOCIATES * CHARTERED ACCOUNTANTS * CHENNAI

NTECL

NTPC TAMILNADU ENERGY COMPANY LIMITED
(A Joint Venture of NTPC Ltd & TNEB)
Vallur Thermal Power Project

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:- NTECL
Name of Power Station:- Vallur Thermal Power Project
Month:- December'18

S.No.	Particulars	Unit	Supplied by Rail Cum Sea	E-Auction coal	Imported Coal
			(II)	(iii)	(iv)
1	Quantity of coal supplied by the coal Company inclusive of opening stock of coal	(MT)	474112.22	-	0.00
2	Adjustment (+/-) in quantity supplied by the coal Company	(MT)	-	-	-
3	Coal supplied by the Coal Company inclusive of opening stock of coal (1+2)	(MT)	474112.22	-	0.00
4	Normative transit & handling losses (for coal based projects)	(MT)	3649.42	-	0.00
5	Net coal suplied inclusive of opening stock of coal (3-4)	(MT)	470462.80	-	0.00
6	Amount charged by the coal company inclusive of value of opening stock of coal	(Rs.)	1155362683.74	-	0.00
7	Adjustment (+/-) in amount charged by the coal Company	(Rs.)	0.00	-	
8	Total amount charged inclusive of opening stock of coal (6+7)	(Rs.)	1155362683.74	-	0.00
9	Transportation charges by Rail / Ship / Road Transport	(Rs.)	964697926.55	-	0.00
10	Adjustment (+/-) in amount charged by Railways / transport Company	(Rs.)	-	-	-
11	Demurrage charges, if any	(Rs.)	-	-	-
12	Cost of diesel in transporting coal through MGR system	(Rs.)	-	-	-
13	Total Transportation Charges (9+/-10-11+12)	(Rs.)	964697926.55	-	0.00
13A	Others (Stone picking charges, Loco driver's salary, Sampling Charges etc)	(Rs.)	24983385.00	-	-
14	Total amount charged for coal supplied including transportation (8+13+13A)	(Rs.)	2145043995.29	-	0.00
15	Landed cost of coal	(Rs./MT)	4559.43	-	0
16	Blending ratio		100.00	-	-
17	Weighted average cost of coal	(Rs./MT)	4559.43		
18	GCV of Domestic Coal as per bill of Coal Company, EM basis	(kCal/Kg)	3621.64		
19	GCV of Imported Coal as per bill of Coal Company, AD basis	(kCal/Kg)			-
20	Weighted average GCV of coal as Billed, TM basis	(kCal/Kg)	3430.10		
21	GCV of Domestic Coal as received at Station, TM basis	(kCal/Kg)	3092.18		
22	GCV of Imported Coal as received at Station, TM basis	(kCal/Kg)			-
23	Weighted average GCV of coal as received at station TM basis	(kCal/Kg)	3092.18		

S. SONNY ASSOCIATES CHENNAI CHARTERED ACCOUNTANTS

Auditor Certificate

NTPC TAMILNADU ENERGY COMPANY LIMITED
(A Joint Venture of NTPC Ltd & TNEB)
Vallur Thermal Power Project

NAME OF COMPANY : NTECL

PART - 1
FORM 19

NAME OF POWER STATION : VALLUR THERMAL POWER PROJECT

HFO

S. No.	Particulars	RS/Unit	October-18
1	OPENING STOCK OF OIL-	KL	1,662.270
2	VALUE OF OPENING STOCK	RS	6,22,08,750.443
3	QTY OF OIL SUPPLIED BY THE OIL CO.	KL	0.000
4	ADJUST.(+/-) IN QTY SUPLIED MADE BY OIL CO.	KL	0.00
5	OIL SUPPLIED BY OIL COMPANY (3+4)	KL	0.000
6	NORMATIVE TRANSIT AND HANDLING LOSS	KL	0.00
7	NET OIL SUPPLIED (5-6)	KL	0.000
8	AMOUNT CHARGED BY OIL CO.	Rs.	0.00
9	ADJUST. (+/-) IN AMOUNT CHARGED MADE BY OIL CO.	Rs.	0.00
10	TOTAL AMOUNT CHARGED (8+9)	Rs.	0.00
11	TRANSPORTATION CHARGES BY RAIL/SHIP/ ROAD TRANSPORT	Rs.	0.00
12	ADJUST. (+/-) IN AMOUNT CHARGED MADE BY RAILWAY/TRANSPORT CO.	Rs.	0.00
13	DEMURRAGE CHARGES	Rs.	0.00
14	TOTAL TRANSPORTATION CHARGES (11+/-12)	Rs.	0.00
15	TOTAL AMOUNT CHARGED FOR OIL SUPPLIED INCLUDING TRANSPORTATION (10+14)	Rs.	0.00
16	WEIGHTED AVG. GCV OF OIL AS FIRED	Kcal/KL	**10,042.90**
17	QUANTITY OF OIL AT THE STATION FOR THE MONTH (1+7)	KL	1,662.270
18	TOTAL AMOUNT CHARGED FOR OIL (2+15)	RS.	6,22,08,750.44
19	**LANDED COST OF OIL (18/17)**	**RS/KL**	**37,423.975**
20	QUANTITY OF OIL CONSUMED	KL	355.770
21	VALUE OF OIL CONSUMED (19*20)	RS	1,33,14,327.48
22	CLOSING STOCK OF OIL(17-20)	KL	1,306.500
23	VALUE OF CLOSING STOCK (18-21)	RS	4,88,94,422.96

LDO

S. No.	Particulars	RS/Unit	October-18
1	OPENING STOCK OF OIL	KL	340.079
2	VALUE OF OPENING STOCK	RS	1,76,77,034.384
3	QTY OF OIL SUPPLIED BY THE OIL CO.	KL	392.000
4	ADJUST.(+/-) IN QTY SUPLIED MADE BY OIL CO.	KL	0.00
5	OIL SUPPLIED BY OIL COMPANY (3+4)	KL	392.000
6	NORMATIVE TRANSIT AND HANDLING LOSS	KL	0.00
7	NET OIL SUPPLIED (5-6)	KL	392.000
8	AMOUNT CHARGED BY OIL CO.	Rs.	2,30,66,542.57
9	ADJUST. (+/-) IN AMOUNT CHARGED MADE BY OIL CO.	Rs.	
10	TOTAL AMOUNT CHARGED (8+9)	Rs.	2,30,66,542.57
11	TRANSPORTATION CHARGES BY RAIL/SHIP/ ROAD TRANSPORT	Rs.	0.00
12	ADJUST. (+/-) IN AMOUNT CHARGED MADE BY RAILWAY/TRANSPORT CO.	Rs.	0.00
13	DEMURRAGE CHARGES	Rs.	0.00
14	TOTAL TRANSPORTATION CHARGES (11+/-12)	Rs.	0.00
15	TOTAL AMOUNT CHARGED FOR OIL SUPPLIED INCLUDING TRANSPORTATION (10+14)	Rs.	2,30,66,542.57
16	WEIGHTED AVG. GCV OF OIL AS FIRED	Kcal/KL	**9,225.60**
17	QUANTITY OF OIL AT THE STATION FOR THE MONTH (1+7)	KL	732.079
18	TOTAL AMOUNT CHARGED FOR OIL (2+15)	RS.	4,07,43,576.95
19	**LANDED COST OF OIL (18/17)**	**RS/KL**	**55,654.62**
20	QUANTITY OF OIL CONSUMED	KL	252.199
21	VALUE OF OIL CONSUMED (19*20)	RS	1,40,36,038.95
22	CLOSING STOCK OF OIL(17-20)	KL	479.880
23	VALUE OF CLOSING STOCK (18-21)	RS	2,67,07,538.00

S. SONNY ASSOCIATES CHENNAI CHARTERED ACCOUNTANTS

Auditor Certificate

NTPC TAMILNADU ENERGY COMPANY LIMITED
(A Joint Venture of NTPC Ltd & TNEB)
Vallur Thermal Power Project

NAME OF COMPANY : NTECL — **PART - 1**
NAME OF POWER STATION : VALLUR THERMAL POWER PROJECT — **FORM 19**

HFO

S. No.	Particulars	RS/Unit	November-18
1	OPENING STOCK OF OIL-	KL	1,306.500
2	VALUE OF OPENING STOCK	RS	4,88,94,422.964
3	QTY OF OIL SUPPLIED BY THE OIL CO.	KL	535.816
4	ADJUST.(+/-) IN QTY SUPLIED MADE BY OIL CO.	KL	0.00
5	OIL SUPPLIED BY OIL COMPANY (3+4)	KL	535.816
6	NORMATIVE TRANSIT AND HANDLING LOSS	KL	0.00
7	NET OIL SUPPLIED (5-6)	KL	535.816
8	AMOUNT CHARGED BY OIL CO.	Rs.	2,52,01,998.00
9	ADJUST. (+/-) IN AMOUNT CHARGED MADE BY OIL CO.	Rs.	0.00
10	TOTAL AMOUNT CHARGED (8+9)	Rs.	2,52,01,998.00
11	TRANSPORTATION CHARGES BY RAIL/SHIP/ ROAD TRANSPORT	Rs.	0.00
12	ADJUST. (+/-) IN AMOUNT CHARGED MADE BY RAILWAY/TRANSPORT CO.	Rs.	0.00
13	DEMURRAGE CHARGES	Rs.	0.00
14	TOTAL TRANSPORTATION CHARGES (11+/-12)	Rs.	0.00
15	TOTAL AMOUNT CHARGED FOR OIL SUPPLIED INCLUDING TRANSPORTATION (10+14)	Rs.	2,52,01,998.00
16	WEIGHTED AVG. GCV OF OIL AS FIRED	Kcal/KL	10,042.90
17	QUANTITY OF OIL AT THE STATION FOR THE MONTH (1+7)	KL	1,842.316
18	TOTAL AMOUNT CHARGED FOR OIL (2+15)	RS.	7,40,96,420.96
19	**LANDED COST OF OIL (18/17)**	RS/KL	40,219.170
20	QUANTITY OF OIL CONSUMED	KL	0.000
21	VALUE OF OIL CONSUMED (19*20)	RS	0.00
22	CLOSING STOCK OF OIL(17-20)	KL	1,842.316
23	VALUE OF CLOSING STOCK (18-21)	RS	7,40,96,420.96

LDO

S. No.	Particulars	RS/Unit	November-18
1	OPENING STOCK OF OIL	KL	479.880
2	VALUE OF OPENING STOCK	RS	2,67,07,538.000
3	QTY OF OIL SUPPLIED BY THE OIL CO.	KL	0.000
4	ADJUST.(+/-) IN QTY SUPLIED MADE BY OIL CO.	KL	0.00
5	OIL SUPPLIED BY OIL COMPANY (3+4)	KL	0.000
6	NORMATIVE TRANSIT AND HANDLING LOSS	KL	0.00
7	NET OIL SUPPLIED (5-6)	KL	0.000
8	AMOUNT CHARGED BY OIL CO.	Rs.	0.00
9	ADJUST. (+/-) IN AMOUNT CHARGED MADE BY OIL CO.	Rs.	
10	TOTAL AMOUNT CHARGED (8+9)	Rs.	0.00
11	TRANSPORTATION CHARGES BY RAIL/SHIP/ ROAD TRANSPORT	Rs.	0.00
12	ADJUST. (+/-) IN AMOUNT CHARGED MADE BY RAILWAY/TRANSPORT CO.	Rs.	0.00
13	DEMURRAGE CHARGES	Rs.	0.00
14	TOTAL TRANSPORTATION CHARGES (11+/-12)	Rs.	0.00
15	TOTAL AMOUNT CHARGED FOR OIL SUPPLIED INCLUDING TRANSPORTATION (10+14)	Rs.	0.00
16	WEIGHTED AVG. GCV OF OIL AS FIRED	Kcal/KL	9,225.60
17	QUANTITY OF OIL AT THE STATION FOR THE MONTH (1+7)	KL	479.880
18	TOTAL AMOUNT CHARGED FOR OIL (2+15)	RS.	2,67,07,538.00
19	**LANDED COST OF OIL (18/17)**	RS/KL	55,654.62
20	QUANTITY OF OIL CONSUMED	KL	113.883
21	VALUE OF OIL CONSUMED (19*20)	RS	63,38,114.84
22	CLOSING STOCK OF OIL(17-20)	KL	365.997
23	VALUE OF CLOSING STOCK (18-21)	RS	2,03,69,423.16

S. SONNY ASSOCIATES CHENNAI CHARTERED ACCOUNTANTS

Auditor Certificate

NTPC TAMILNADU ENERGY COMPANY LIMITED
(A Joint Venture of NTPC Ltd & TNEB)
Vallur Thermal Power Project

NAME OF COMPANY : NTECL
NAME OF POWER STATION : VALLUR THERMAL POWER PROJECT

PART - 1
FORM 19

HFO

S. No.	Particulars	RS/Unit	December-18
1	OPENING STOCK OF OIL-	KL	1,842.316
2	VALUE OF OPENING STOCK	RS	7,40,96,420.964
3	QTY OF OIL SUPPLIED BY THE OIL CO.	KL	63.000
4	ADJUST.(+/-) IN QTY SUPLIED MADE BY	KL	0.00
	OIL CO.		
5	OIL SUPPLIED BY OIL COMPANY (3+4)	KL	63.000
6	NORMATIVE TRANSIT AND HANDLING LOSS	KL	0.00
7	NET OIL SUPPLIED (5-6)	KL	63.000
8	AMOUNT CHARGED BY OIL CO.	Rs.	28,54,903.80
9	ADJUST. (+/-) IN AMOUNT CHARGED	Rs.	0.00
	MADE BY OIL CO.		0.00
10	TOTAL AMOUNT CHARGED (8+9)	Rs.	28,54,903.80
11	TRANSPORTATION CHARGES BY RAIL/SHIP/	Rs.	0.00
	ROAD TRANSPORT		
12	ADJUST. (+/-) IN AMOUNT CHARGED	Rs.	0.00
	MADE BY RAILWAY/TRANSPORT CO.		
13	DEMURRAGE CHARGES	Rs.	0.00
14	TOTAL TRANSPORTATION CHARGES (11+/-12)	Rs.	0.00
15	TOTAL AMOUNT CHARGED FOR OIL SUPPLIED	Rs.	
	INCLUDING TRANSPORTATION (10+14)	Rs.	28,54,903.80
16	WEIGHTED AVG. GCV OF OIL AS FIRED	Kcal/KL	**10,042.90**
17	QUANTITY OF OIL AT THE STATION FOR THE MONTH (1+7)	KL	1,905.316
18	TOTAL AMOUNT CHARGED FOR OIL (2+15)	RS.	7,69,51,324.76
19	LANDED COST OF OIL (18/17)	RS/KL	**40,387.697**
20	QUANTITY OF OIL CONSUMED	KL	452.086
21	VALUE OF OIL CONSUMED (19*20)	RS	1,82,58,712.25
22	CLOSING STOCK OF OIL(17-20)	KL	1,453.230
23	VALUE OF CLOSING STOCK (18-21)	RS	5,86,92,612.51

LDO

S. No.	Particulars	RS/Unit	December-18
1	OPENING STOCK OF OIL	KL	365.997
2	VALUE OF OPENING STOCK	RS	2,03,69,423.161
3	QTY OF OIL SUPPLIED BY THE OIL CO.	KL	137.000
4	ADJUST.(+/-) IN QTY SUPLIED MADE BY	KL	0.00
	OIL CO.		
5	OIL SUPPLIED BY OIL COMPANY (3+4)	KL	137.000
6	NORMATIVE TRANSIT AND HANDLING LOSS	KL	0.00
7	NET OIL SUPPLIED (5-6)	KL	137.000
8	AMOUNT CHARGED BY OIL CO.	Rs.	64,98,403.89
9	ADJUST. (+/-) IN AMOUNT CHARGED	Rs.	
	MADE BY OIL CO.		
10	TOTAL AMOUNT CHARGED (8+9)	Rs.	64,98,403.89
11	TRANSPORTATION CHARGES BY RAIL/SHIP/	Rs.	0.00
	ROAD TRANSPORT		
12	ADJUST. (+/-) IN AMOUNT CHARGED	Rs.	0.00
	MADE BY RAILWAY/TRANSPORT CO.		
13	DEMURRAGE CHARGES	Rs.	0.00
14	TOTAL TRANSPORTATION CHARGES (11+/-12)	Rs.	0.00
15	TOTAL AMOUNT CHARGED FOR OIL SUPPLIED	Rs.	
	INCLUDING TRANSPORTATION (10+14)	Rs.	64,98,403.89
16	WEIGHTED AVG. GCV OF OIL AS FIRED	Kcal/KL	**9,225.60**
17	QUANTITY OF OIL AT THE STATION FOR THE MONTH (1+7)	KL	502.997
18	TOTAL AMOUNT CHARGED FOR OIL (2+15)	RS.	2,68,67,827.05
19	LANDED COST OF OIL (18/17)	RS/KL	**53,415.48**
20	QUANTITY OF OIL CONSUMED	KL	**199.832**
21	VALUE OF OIL CONSUMED (19*20)	RS	1,06,74,122.54
22	CLOSING STOCK OF OIL(17-20)	KL	303.165
23	VALUE OF CLOSING STOCK (18-21)	RS	1,61,93,704.51

S. SONNY ASSOCIATES CHENNAI CHARTERED ACCOUNTANTS

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PART 1
FORM- H

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

Name of the Company :	NTECL
Name of the Power Station :	Vallur Thermal Power Station (3X500 MW)
COD	26-02-2015

(Amount in Rs. Lakh)

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
NA									

Note:

1. Cost Benefit analysis for capital additions done should be submitted along with petition for approval of such schemes

2. Justification for additional capital expenditure claim for each asset should be relevant to regulations under which claim has been made and the necessity of capitalization of the asset.

(Petitioner)

PART 1
FORM- L

Name of the Petitioner: NTECL
Name of the Generating Station: Vallur Thermal Power Station (3X500 MW)

Statement of Capital cost
(To be given for relevant dates and year wise)

(Amount in Rs. Lakh)

S. No.	Particulars	As on relevant date		
		Accrual Basis	Un-discharged Liabilities	Cash Basis
A	a) Opening Gross Block Amount as per books	987438.99	25577.70	961861.29
	b) Amount of IDC in A(a) above	161682.86		
	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	28281.84		
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)

PART 1
FORM- M

Name of the Petitioner: NTECL
Name of the Generating Station: Vallur Thermal Power Station (3X500 MW)

Statement of Capital Woks in Progress

(To be given for relevant dates and year wise)

(Amount in Rs. Lakh)

S. No.	Particulars	As on relevant date		
		Accrual Basis	Un-discharged Liabilities	Cash Basis
A	a) Opening CWIP as per books	30065.33	16567.37	13497.95
	b) Amount of IDC in A(a) above	7026.02		
	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	2148.91		
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)

PART-I
FORM- N

Calculation of Interest on Normative Loan

Name of the Company :	**NTECL**
Name of the Power Station :	**Vallur Thermal Power Station (3X500 MW)**

(Amount in Rs Lakh)

S. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	4	5	6	7	8
1	Gross Normative loan – Opening	6,57,001.58	6,57,063.88	6,62,000.98	6,63,336.58	6,63,336.58
2	Cumulative repayment of Normative loan up to previous year	2,37,584.19	2,84,593.94	3,31,782.54	3,79,195.55	4,26,656.33
3	**Net Normative loan – Opening**	4,19,417.39	3,72,469.94	3,30,218.43	2,84,141.03	2,36,680.25
4	Add: Increase due to addition during the year / period	62.30	4,937.10	1,335.60	-	15,596.00
5	Less: Decrease due to de-capitalisation during the year / period	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
8	Less: Repayment of Loan	47,009.75	47,188.60	47,413.00	47,460.78	48,018.72
9	**Net Normative loan - Closing**	3,72,469.94	3,30,218.43	2,84,141.03	2,36,680.25	2,04,257.53
10	**Average Normative loan**	3,95,943.66	3,51,344.19	3,07,179.73	2,60,410.64	2,20,468.89
11	Weighted average rate of interest	9.9747	9.9966	10.0176	10.0376	10.0567
12	**Interest on Loan**	**39494.19**	**35122.47**	**30772.04**	**26138.98**	**22171.89**

(Petitioner)

PART 1
FORM- O

Calculation of Interest on Working Capital

Name of the Company :	**NTECL**
Name of the Power Station :	**Vallur Thermal Power Station (3X500 MW)**

(Amount in Rs Lakh)

S. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	4	5	6	7	8
1	Cost of Coal/Lignite	50928.33	50928.33	50928.33	50928.33	50928.33
2	Cost of Main Secondary Fuel Oil	367.19	366.19	366.19	366.19	367.19
3	Fuel Cost					
4	Liquid Fuel Stock					
5	O & M Expenses	3142.08	3254.87	3371.55	3492.18	3615.52
6	Maintenance Spares	7541.00	7811.69	8091.72	8381.24	8677.24
7	Receivables	69833.38	69568.61	69258.45	68878.44	68659.24
8	Total Working Capital	131811.99	131929.69	132016.24	132046.38	132247.52
9	Rate of Interest	12.0500	12.0500	12.0500	12.0500	12.0500
10	**Interest on Working Capital**	**15883.34**	**15897.53**	**15907.96**	**15911.59**	**15935.83**

Petitioner

Form-S

Flow of Capital liabilities from 01.04.2018 and onwards

Sr. No.	Name of the Party	Name of the work	Year of creation of liability capitalised in Gross Block	Undischarged liabilities relating to GB as on 01.04.2018	liability in additional capitalisation for 2018-19 as per annexure IB-column 9	Contractors ERV updation	Discharge during the year 2018-19 -by payment	-by reversal	Total discharge	Undischarged liabilities relating to GB 31.03.2019
(1)	(2)	(3)	(4)	(5)	(6)	(6A)	(7)	(8)	(9)=(7+8)	(10)=(5+6+6A-9)
1	BHARAT HEAVY ELECTRICALS LIMITED	SG PHASE 1	28-11-2012	786,30,076.60			84,04,914.00		84,04,914.00	702,25,162.60
2	BHARAT HEAVY ELECTRICALS LIMITED	TG PHASE 1	28-11-2012	578,93,736.24			209,20,627.00		209,20,627.00	369,73,109.24
3	ABB INDIA LIMITED	33 KV, 11 KV & 3.3KV SWITCHGEARS	28-11-2012	0.00					-	0.00
4	IEC FABCHEM LTD.	Chlorination	28-11-2012	-					-	-
5	TECHNO ELECTRIC & ENGINEERING CO. LTD.,	FOU & Station Piping	28-11-2012	9,46,061.61					-	9,46,061.61
6	ABB INDIA LIMITED	AC Package	28-11-2012	3,10,635.81					-	3,10,635.81
7	ABB INDIA LIMITED	Ventilation Package	28-11-2012	(0.00)					-	(0.00)
8	LLOYD INSULATIONS (INDIA) LTD	FDPS	28-11-2012	51,28,854.29					-	51,28,854.29
9	ION Exchange India Ltd	Desalination	28-11-2012	(0.37)					-	(0.37)
10	LARSEN & TOUBRO LIMITED	Electrical Equipment	28-11-2012	(0.00)					-	(0.00)
11	HYOSUNG CORPORATION	Switch Yard-Import	28-11-2012	98,74,727.00	6,75,455.00				-	105,50,182.00
12	GAMMON INDIA LTD	CHIMNEY AND CHIMNEY ELEVATOR PACKAGE	28-11-2012	1642,50,504.60			334,72,509.00		334,72,509.00	1307,77,995.60
13	RPP INFRA PROJECTS LIMITED	CONSTRUCTION OF TOWNSHIP PACKAGE	28-11-2012	-					-	-
14	IVRCL INFRASTRUCTURES & PROJECTS LIMITED	SITE LEVELLING AND GROUND IMPROVEMENT	28-11-2012	99,16,198.09					-	99,16,198.09
15	RITES LIMITED	BRIDGE OVER CREEK	28-11-2012	70,62,499.61	5,53,822.00		68,91,527.00		68,91,527.00	7,24,794.61
16	IVRCL INFRASTRUCTURES & PROJECTS LIMITED	BOUNDARY WALL	28-11-2012	12,34,229.96					-	12,34,229.98
17	GAMMON INDIA LTD	IDCT-Civil	28-11-2012	0.08					-	0.08
18	GAMMON INDIA LTD	IDCT-Mechanical	28-11-2012	71,21,253.05					-	71,21,253.05
19	FLSMIDTH PRIVATE LIMITED	EXTERNAL CHP	28-11-2012	514,65,953.00	2,68,795.00				-	517,34,748.00
20	Vijaya	CONSTRUCTION OF NORTHEN APPROACH ROAD	28-11-2012	30,06,863.43					-	30,06,863.43
21	WPIL LIMITED	CW system Equipment Package	28-11-2012	-					-	-
22	GANGOTRI ENTERPRISES LTD.,	ASH DYKE	28-11-2012	54,51,054.54					-	54,51,054.54
23	IVRCL INFRASTRUCTURES & PROJECTS LIMITED	CW & MAKE UP WATER SYSTEM	28-11-2012	56,73,424.22					-	56,73,424.22
24	THE INDURE PRIVATE LIMITED	Ash Handling System	28-11-2012	-					-	-
25	BHARAT HEAVY ELECTRICALS LIMITED	Coal Handling System	28-11-2012	2639,32,321.45					-	2639,32,321.45
26	HONEYWELL AUTOMATION INDIA LTD	C&I PACKAGE	28-11-2012	47,57,507.82			16,89,789.00		16,89,789.00	30,67,718.82
27	BHARAT HEAVY ELECTRICALS LIMITED	Power Transformer	28-11-2012	(66,00,000.00)					-	(66,00,000.00)
28	DEPUTY SALT COMMISSIONER CHENNAI	Freehold Land	28-11-2012	714,51,171.41					-	714,51,171.41
29	BHARAT HEAVY ELECTRICALS LIMITED	SG PHASE 1	28-11-2012	72,89,753.21					-	72,89,753.21
30	BHARAT HEAVY ELECTRICALS LIMITED	TG PHASE 1	28-11-2012	975,80,673.15					-	975,80,673.15
31	HAVELLS INDIA LIMITED	LT Power cables	28-11-2012	(53,07,374.00)					-	(53,07,374.00)
32	IEC FABCHEM LTD.	Chlorination	24-08-2013	-					-	-
33	DRIPLEX WATER ENGINEERING PRIVATE LIMITED	Condensate Polishing Unit	24-08-2013	32,88,319.13					-	32,88,319.13
34	TECHNOFAB ENGINEERING LTD.	AWRS	24-08-2013	-					-	-
35	TECHNO ELECTRIC & ENGINEERING CO. LTD.,	FOU & Station Piping	24-08-2013	5,64,833.85					-	5,64,833.85
36	ABB INDIA LIMITED	AC Package	24-08-2013	1,58,513.66					-	1,58,513.66
37	ABB INDIA LIMITED	Ventilation Package	24-08-2013	-					-	-
38	LLOYD INSULATIONS (INDIA) LTD	FDPS	24-08-2013	57,69,616.32					-	57,69,616.32
39	ION Exchange India Ltd	Desalination	24-08-2013	-					-	-
40	GE INDIA INDUSTRIAL PRIVATE LIMITED	LT Switch gear	24-08-2013	-					-	-
41	LARSEN & TOUBRO LIMITED	Electrical Equipment	24-08-2013	73,60,849.00					-	73,60,849.00
42	GAMMON INDIA LTD	CHIMNEY AND CHIMNEY ELEVATOR PACKAGE	24-08-2013	23,10,103.25					-	23,10,103.25
43	IVRCL INFRASTRUCTURES & PROJECTS LIMITED	SITE LEVELLING AND GROUND IMPROVEMENT	24-08-2013	378,93,862.24					-	378,93,862.24
44	IVRCL INFRASTRUCTURES & PROJECTS LIMITED	BOUNDARY WALL	24-08-2013	4,55,509.78					-	4,55,509.78
45	GAMMON INDIA LTD	IDCT-Civil	24-08-2013	0.12					-	0.12
46	GAMMON INDIA LTD	IDCT-Mechanical	24-08-2013	143,53,546.16					-	143,53,546.16
47	FLSMIDTH PRIVATE LIMITED	EXTERNAL CHP	24-08-2013	-					-	-
48	WPIL LIMITED	CW system Equipment Package	24-08-2013	-					-	-
49	GANGOTRI ENTERPRISES LTD.,	ASH DYKE	24-08-2013	59,60,718.64					-	59,60,718.64
50	IVRCL INFRASTRUCTURES & PROJECTS LIMITED	CW & MAKE UP WATER SYSTEM	24-08-2013	12,11,240.09					-	12,11,240.09
51	THE INDURE PRIVATE LIMITED	Ash Handling System	24-08-2013	-					-	-
52	BHARAT HEAVY ELECTRICALS LIMITED	Coal Handling System	24-08-2013	197,10,481.80					-	197,10,481.80
53	HONEYWELL AUTOMATION INDIA LTD	C&I PACKAGE	24-08-2013	55,91,918.99					-	55,91,918.99
54	BHARAT HEAVY ELECTRICALS LIMITED	Power Transformer	24-08-2013	(1505,29,205.00)					-	(1505,29,205.00)
55	DEPUTY SALT COMMISSIONER CHENNAI	Freehold Land	24-08-2013	170,12,856.59					-	170,12,856.59
56	RITES LIMITED	BRIDGES & CULVERTS PLANT AREA	24-08-2013	3,43,082.39					-	3,43,082.39
57	GAMMON INDIA LTD	MAIN PLANT BUILDINGS	24-08-2013	25,77,825.00			80,10,442.74		80,10,442.74	(54,32,617.74)
58	BHARAT HEAVY ELECTRICALS LIMITED	TURBINE GENERATOR PH 1	24-08-2013	214,65,766.80					-	214,65,766.80
59	FLSMIDTH PRIVATE LIMITED	EX CHP	24-08-2013	-					-	-
60	IVRCL INFRASTRUCTURES & PROJECTS LIMITED	BOUNDARY WALL	24-08-2013	58,610.24					-	58,610.24
61	BHARAT HEAVY ELECTRICALS LIMITED	STEAM GENERATOR PH 2	24-08-2013	9976,62,408.80			1418,15,678.00		1418,15,678.00	8560,46,730.80
62	BHARAT HEAVY ELECTRICALS LIMITED	TURBINE GENERATOR PH 2	24-08-2013	2531,58,411.12			1701,77,657.00		1701,77,657.00	829,80,754.12
63	DRIPLEX WATER ENGINEERING LIMITED	condensate polishing unit	24-08-2013	184,97,408.44			52,49,585.00	58,85,356.00	111,34,941.00	73,62,467.44
64	BHARAT HEAVY ELECTRICALS LIMITED	Coal Handling System	24-08-2013	402,26,393.04					-	402,26,393.04

Flow of Capital liabilities from 01.04.2018 and onwards

Sr. No.	Name of the Party	Name of the work	Year of creation of liability capitalised in Gross Block	Undischarged liabilities relating to GB as on 01.04.2018	liability in additional capitalisation for 2018-19 as per annexure IB-column 9	Contractors ERV updation	Discharge during the year 2018-19 -by payment	-by reversal	Total discharge	Undischarged liabilities relating to GB 31.03.2019
									(9)=(7+8)	(10)=(5+6+6A-9)
(1)	(2)	(3)	(4)	(5)	(6)	(6A)	(7)	(8)		
65	T R F LIMITED	GRAB UNLOADER	24-08-2013	67,67,145.00					-	67,67,145.00
66	THE INDURE PRIVATE LIMITED	ASH HANDLING SYSTEM	25-02-2015	-					-	-
67	WPIL LIMITED	CW SYSTEM EQUIPMENT PACKAGE	25-02-2015	16,89,433.00			16,89,433.00		16,89,433.00	-
68	GAMMON INDIA LTD	IDCT	25-02-2015	528,12,604.82					-	528,12,604.82
69	IVRCL INFRASTRUCTURES & PROJECTS LIMITED	CW & MAKE UP WATER SYSTEM	25-02-2015	341,30,478.40					-	341,30,478.40
70	CORDS CABLE INDUSTRIES LIMITED	Instrumentation Cables	25-02-2015	4,33,908.84			4,33,908.84		4,33,908.84	-
71	HONEYWELL AUTOMATION INDIA LTD.	C&I PACKAGE	25-02-2015	65,48,613.19					-	65,48,613.19
72	ABB INDIA LIMITED	AC Package	25-02-2015	42,00,749.96					-	42,00,749.96
73	ABB INDIA LIMITED	Ventilation Package	25-02-2015	-					-	-
74	TECHNO ELECTRIC & ENGINEERING CO. LTD.,	FOU & Station Piping	25-02-2015	332,90,080.79				63,58,894.00	63,58,894.00	269,31,186.79
75	LLOYD INSULATIONS (INDIA) LTD	FDPS	25-02-2015	209,96,098.84			178,55,135.00		178,55,135.00	31,40,963.84
76	LARSEN & TOUBRO LIMITED	ELECTRICAL AND AUXILLIARY EQUIPMENTS	25-02-2015	-					-	-
77	KANOHAR ELECTRICALS LTD.	OUTDOOR TRANSFORMER PACKAGE	25-02-2015	-					-	-
78	HAVELLS INDIA LIMITED	HT POWER CABLE	25-02-2015	42,302.77					-	42,302.77
79	C&S ELECTRIC LIMITED	GENERATOR BUS DUCTS	25-02-2015	-					-	-
80	GAMMON INDIA LTD	Chimeny Phase 2	25-02-2015	116,64,715.26			116,64,715.26		116,64,715.26	-
81	IEC FABCHEM LTD.	Chlorination	25-02-2015	14,213.00					-	14,213.00
82	ION Exchange India Ltd	Desalination Plant Package	25-02-2015	83,75,885.00				14,41,334.00	14,41,334.00	69,34,551.00
83	TECHNOFAB ENGINEERING LTD.	AWRS	25-02-2015	-					-	-
84	LARSEN & TOUBRO LIMITED	SWITCH YARD PACKAGE	25-02-2015	30,46,401.00					-	30,46,401.00
85	ABB INDIA LIMITED	33 KV, 11 KV & 3.3KV SWITCHGEARS	25-02-2015	-					-	-
86	BHARAT HEAVY ELECTRICALS LIMITED	Power Transformer	25-02-2015	382,73,596.00			382,73,596.00		382,73,596.00	-
87	GE INDIA INDUSTRIAL PRIVATE LIMITED	LT SWITCHGEARS AND LT BUS DUCTS PACKAGE	25-02-2015	18,83,476.00			18,83,476.00		18,83,476.00	-
88	GAMMON INDIA LTD	MAIN PLANNT	25-02-2015	167,24,617.55					-	167,24,617.55
89	VALLURU SURESH	CAPITALISATION OF STORAGE SHED	25-02-2015	12,06,822.66					-	12,06,822.66
90	BHARAT HEAVY ELECTRICALS LIMITED	STEAM GENERATOR	25-02-2015	217,90,611.78					-	217,90,611.78
91	BHARAT HEAVY ELECTRICALS LIMITED	STEAM TURBINE GENERATOR	25-02-2015	119,50,493.66					-	119,50,493.66
92	ABB INDIA LIMITED	AC PACK -SUPPLY	25-02-2015	16,97,042.62					-	16,97,042.62
93	ABB INDIA LIMITED	VENTILATION PACK	25-02-2015	48,65,897.00					-	48,65,897.00
94	LARSEN & TOUBRO LIMITED	ELECT EQUIP	25-02-2015	(0.00)					-	(0.00)
95	GAMMON INDIA LTD	Chimney	25-02-2015	32,49,627.05					-	32,49,627.05
96	LARSEN & TOUBRO LIMITED	SWITCHYARD	25-02-2015	0.00					-	0.00
97	GAMMON INDIA LTD	CANTEEN BUILDING	31-03-2016	167,24,617.55					-	167,24,617.55
98	RPP INFRA PROJECTS LIMITED	C2 BLOCK (TOWNSHIP PACKAGE)	31-03-2016	21,25,913.00					-	21,25,913.00
99	BHARAT HEAVY ELECTRICALS LIMITED	TAKEOVER OF BHEL STORES-2	31-03-2016	18,13,090.05					-	18,13,090.05
100	T R F LIMITED	GRAB UNLOADED-UNIT-3	31-03-2016	120,22,175.00					-	120,22,175.00
101	THE INDURE PRIVATE LIMITED	Ash Handling System	31-03-2016	0.00					-	0.00
102	HONEYWELL AUTOMATION INDIA LTD.	C&I System	31-03-2016	80,21,716.40					-	80,21,716.40
103	DEPUTY SALT COMMISSIONER CHENNAI	VALUE OF LAND BASED ON DRO 31.03.17	31-03-2017	431,64,000.00	215,82,000.00				-	647,46,000.00
104	ANNAI INFRA DEVELOPERS PVT LTD	CHP ROAD	31-03-2017	137,51,761.00			21,79,860.00		21,79,860.00	115,71,901.00
105	ANNAI INFRA DEVELOPERS PVT LTD	ASH SILO ROAD	31-03-2017	44,38,755.00					-	44,38,755.00
106	KSB CONSTRUCTIONS	LAYING OF INTERLOCKING TILES AT 845 WEST ROAD	31-03-2017	-					-	-
107	SWAMINATHAN & CO.,	ASH DYKE ROAD	31-03-2017	(0.00)					-	(0.00)
108	THIRUMALA TRADERS	BALANCE ROAD IN MAIN ROAD	31-03-2017	207,91,119.00	281,42,441.00		207,91,119.00		207,91,119.00	281,42,441.00
109	GAMMON INDIA LIMITED	SERVICE BUILDING	31-03-2017	374,84,298.45					-	374,84,298.45
110	J.M.S CONSTRUCTION	UNTI #3 CONTROL ROOM TOILET	31-03-2017	45,967.13					-	45,967.13
111	VALLUR SURESH	CONCRETE PAVING AT NTECL STORES	31-03-2017	6,52,624.28			6,52,624.28		6,52,624.28	(0.01)
112	SWATHI ENGINEERING AGENCIES	OCCUPATIONAL HEALTH CENTRE	31-03-2017	(0.01)					-	(0.01)
113	KABIL ENTERPRISES	DELUGE VALUE	31-03-2017	2,43,250.00			-		-	2,43,250.00
114	RAJAVEL ENTERPRISES	ATM BUILDING	31-03-2017	31,897.88	6,65,936.00				-	6,97,833.88
115	CIVICONS	CHP TOOLS STORAGE SHED	31-03-2017	9,500.10					-	9,500.10
116	KABIL ENTERPRISES	STORAGE SHED	31-03-2017	8,15,416.88	15,65,273		-		-	23,80,689.88
117	ELAVARASAN ENGINEERING WORKS	STEEL GATE	31-03-2017	33,992.33					-	33,992.33
118	SWATHI ENGINEERING AGENCIES	OCCUPATIONAL HEALTH CENTRE	31-03-2017	(0.01)					-	(0.01)
119	N.S.K.BUILDERS (P) LTD	CONSTRUCTION OF EARTHRN DRAINS OUTSIDE NTECL	31-03-2017	7,38,998.70			7,38,998.70		7,38,998.70	-
120	SRI SENTHUR ENTERPRISES	STOM WATER DRAINANGE SCHEM FOR FIELD HOSTEL	31-03-2017	15,34,494.00					-	15,34,494.00
121	HUBERT ENVIRO CARE SYSTEM	STB IN TOWNSHIP	31-03-2017	-					-	-
122	SWATHI ENGINEERING AGENCIES	STB IN TOWNSHIP	31-03-2017	-					-	-
123	BHARAT HEAVY ELECTRICALS LTD	Turbine gendrator	31-03-2017	11,65,085.10					-	11,65,085.10
124	SWAMINATHAN & CO.,	Kondakkari to township rod	31-03-2017	-					-	-
125	VALLURU SURESH	AAQMS building	31-03-2017	1,56,578.90					-	1,56,578.90
126	KABIL ENTERPRISES	kondakkari compound wall	31-03-2017	2,20,522.18			2,20,522.18		2,20,522.18	(0.01)
127	BHARAT HEAVY ELECTRICALS LTD		31-03-2017	71,96,243.63					-	71,96,243.63
128	T R F LIMITED			-					-	-

Form-S

Flow of Capital liabilities from 01.04.2018 and onwards

Sr. No.	Name of the Party	Name of the work	Year of creation of liability capitalised in Gross Block	Undischarged liabilities relating to GB as on 01.04.2018	liability in additional capitalisation for 2018-19 as per annexure IB-column 9	Contractors ERV updation	Discharge during the year 2018-19		Total discharge	Undischarged liabilities relating to GB 31.03.2019
							-by payment	-by reversal		
(1)	(2)	(3)	(4)	(5)	(6)	(6A)	(7)	(8)	(9)=(7+8)	(10)=(5+6+6A-9)
129	THE INDURE PRIVATE LIMITED		31-03-2017	-					-	-
130	PRASAD & COMPANY (PROJECTWORKS) LIMITED		31-03-2017	(0.01)					-	(0.01)
131	PRASAD & COMPANY (PROJECTWORKS) LIMITED		31-03-2017	467,97,997.00	192,37,305.00		218,63,694.00		218,63,694.00	441,71,608.00
132	HONEYWELL AUTOMATION INDIA LTD.		31-03-2017	3,26,033.63					-	3,26,033.63
133	HAIER APPLIANCES INDIA PVT LTD		31-03-2017	13,464.30					-	13,464.30
134	LLOYD INSULATIONS (INDIA) LTD.		31-03-2017	-					-	-
135	TECHNOFAB ENGINEERING LTD.		31-03-2017	374,46,145.00			39,95,565.00	8,63,768.00	48,59,333.00	325,86,812.00
136	BABUJI CIVIL CONSTRUCTION	CAP ON LAYING OF BALANCE ROADS INSIDE MAIN PLANT	31-03-2018	48,67,022.00	10,93,760.00				-	59,60,782.00
137	DO WELL INFRASTRUCTURES	CAP ON TRESTLE CONCRETE ENCASEMENT IN MAIN PLANT & OFFSITE	31-03-2018	3,12,877.00					-	3,12,877.00
138	INDHUMATHI INFRA PROJECTS	CONSTRUCTION OF LABOUR REST ROOM/LUNCH ROOM AND CANTEEN BUILDING FOR LABOURS	31-03-2018	12,31,985.00					-	12,31,985.00
139	INDHUMATHI INFRA PROJECTS	EXECUTION OF CIVIL WORKS FOR RAIN WATER HARVESTING	31-03-2018	66,60,625.00	51,70,319.00		66,60,625.00		66,60,625.00	51,70,319.00
140	INDHUMATHI INFRA PROJECTS	CONCRETE PAVING BETWEEN GRADE SLAB & DRAIN WALL AT CHP COAL STACK YARD	31-03-2018	5,27,926.00			5,27,926.00		5,27,926.00	-
141	INDHUMATHI INFRA PROJECTS	PAVING WORK IN THE SHOULDERS OF MAIN PLANT PERIPHEREAL ROAD	31-03-2018	42,30,526.00			42,30,526.00		42,30,526.00	-
142	INDHUMATHI INFRA PROJECTS	KURIVEMEDU RAOD	31-03-2018	16,94,037.00			-		-	16,94,037.00
143	INDUS VALLEY BUILDERS	CAP ON CONTRACT WORKERS LABOUR COLONY	31-03-2018	34,02,595.00	24,01,307.00		12,94,192.00		12,94,192.00	45,09,710.00
144	K S B CONSTRUCTIONS	CONSTRUCTION OF ROAD OUTSIDE TOWNSHIP EASTERN ENTRANCE GATE	31-03-2018	10,55,500.00	3,96,193.00		8,83,254.00		8,83,254.00	5,68,439.00
145	KAVITHA ENGINEERING WORKS	PROVIDING BRIDGE BETWEEN DRIVE HOUSE AND BRIDGE OVER CREEK	31-03-2018	6,49,600.00					-	6,49,600.00
146	KSB CONSTRUCTIONS	CONSTRUCTION OF STROM WATER DRAINAGE WITH SERVICE ROAD AT NTECL	31-03-2018	28,20,844.00	33,72,368.00				-	61,93,212.00
147	S THARTIUS ENGINEERING CONTRACTORS	INTERLOCKING TILES PAVEMENT IN & AROUND VARIOUS BUILDING OF NTECL	31-03-2018	10,72,618.00			10,72,618.00		10,72,618.00	-
148	SENGAMMAL CONSTRUCTIONS	CONSTRUCTION OF SEPTIC TANK IN LABOUR REST ROOM AT UNIT - III	31-03-2018	52,446.00			52,446.00		52,446.00	-
149	SREE SAKTHI CONSTRUCTIONS & INFRASTRUCTURE LTD	EXECUTION OF BALANCE WORKS IN D2-4 BLOCK IN NTECL TOWNSHIP	31-03-2018	46,43,136.00			2,03,738.00		2,03,738.00	44,39,398.00
150	UDHAYAM CONSTRUCTIONS	CONSTRUCTION OF TOILETS AT UNIT I & II MAIN PLANT & OFFSITE	31-03-2018	2,90,098.00					-	2,90,098.00
151	YOGAMBAL CONSTRUCTION	CONSTRUCTION OF SAFETY CENTRE BUILDING AT NTECL	31-03-2018	14,08,746.00			14,08,746.00		14,08,746.00	-
152	BAJAJ ELECTRICALS LTD.	SUPPLY & ERECTION OF 4 NOS OF 20 MTR LIGHTING MASTS IN NTECL MAIN PLANT AND ASSOCIATED AREAS	31-03-2019		63,254.00				-	63,254.00
153	P&C PROJECTS PRIVATE LIMITED	Capitalisation of Township	31-03-2019		2966,88,062.00				-	2966,88,062.00
154	THERMAX LIMITED	SUPPLY, INSTALLATION AND COMMISSIONING OF VAPOUR ABSORPTION , CHILLER	31-03-2019		9,36,000.00				-	9,36,000.00
				27247,14,246.86	3828,14,290.00	-	5352,09,447.00	145,49,352.00	5497,58,799.00	25577,69,737.86

PART 1
FORM-T

Summary of issue involved in the petition

Name of the Company :		NTECL
Name of the Power Station :		Vallur Thermal Power Station (3X500 MW)
1	Petitioner:	NTECL
2	Subject	Petition Under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-V of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Chapter-3, Regulation-9 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for approval of tariff of Vallur Thermal Power Station (3X500 MW) for the period from 01.04.2019 to 31.03.2024.
3	Prayer: i) Approve tariff of Vallur Thermal Power Station (3X500 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) Consider station heat rate based on design heat rate with applicable operating margin and allow normative APC as 7.19%. v) Pass any other order as it may deem fit in the circumstances mentioned above.	
4	Respondents:	As per Petition
	Name of Respondents	
	a.	
	b.	
	c.	
5	Project Scope	
	Cost	
	Commissioning	
	Claim	
	AFC	
	Capital cost	
	Initial spare	
	NAPAF (Gen)	
	Any Specific	

Annexure-A

[illegible]

[illegible]
Govt. of NCT of Delhi
Secretariat

[illegible]

Office Memorandum

Sub: Switch over of Thermal Power Plants in Delhi and NCR States from Furnace Oil (FO) to Light Diesel Oil (LDO) within One(1) year-Direction under Section 5(1) of EPA, 1986 – Reg

The undersigned is directed to enclose herewith a copy of Communication No. J-18011/13/2008-CPA dated 23.01.2018 received from Ministry of Environment, Forest & Climate change along with an Order dated 13th December, 2017 of Hon'ble Supreme Court in WP(Civil) No. 13029 of 1985 in the matter of M.C. Mehta Vs. Union of India [illegible] the above mentioned subject for necessary action and compliance.

Encl: as above

→ GM (OS-Ber)

(Anita Saini)
Under Secretary to the Govt. of Delhi
[illegible]

1. Secretary (Power), Govt. of Delhi & NCR, Sachivalaya Marg, Near ITO, Vikram Nagar, New Delhi-110002
2. Secretary(Power), Govt. of Uttar Pradesh, The Mall Avenue, Lucknow, [illegible]
3. Secretary(Power), Govt. of Haryana, Haryana Civil Secretariat, Sector-1, Chandigargh
4. Secretary(Power), Govt. of Rajasthan, Secretariat, Jaipur
5. [illegible] NTPC Ltd., Scope Complex, Lodhi Road, New Delhi

[illegible]

[illegible]

[illegible]

[illegible]
Jai Bagh Road
New Delhi-110003
Dated 23rd January 2018

Subject: Switchover of Thermal Power Plants in Delhi and NCR States from Furnace Oil (FO) to Light Diesel Oil (LDO) within One (1) Year - Direction under Section 3(1) of EPA, 1986 -reg.

This is in reference to Hon'ble Supreme Court order dated 13th December 2017 in WP (Civil) No. 13029 of 1985 in the matter of M.C. Mehta vs. Union of India, which inter alia include direction with reference to above cited subject (copy enclosed). In this regard para no. 3 of Order may be referred.

2. As directed by Hon'ble Supreme Court to complete the switchover of Thermal Power Plants in Delhi and NCR states from Furnace Oil (FO) to Light Diesel Oil (LDO) within one (1) year, Ministry of Power is directed to ensure switchover of all the thermal power plants in Delhi and NCR states viz. Uttar Pradesh, Haryana and Rajasthan from FO to LDO within prescribed timeline of one (1) year.

This issues with approval of the Competent Authority.

Encl: as above.

(Ritesh Kumar Singh)
Joint Secretary to Govt. of India
Tele: 011-24695129
Fax: 011-24695271

To:

The Secretary,
Ministry of Power
Shram Shakti Bhawan
New Delhi-110001

No. Q-15013/30/2007-CPW
Government of India
Ministry of Environment, Forest & Climate Change
CP Division

Indira Paryavaran Bhawan,
Jor Bagh Road,
New Delhi-110003
Dated 26th 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;

(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 beneficiatedcoal 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 tools. This shall be effective from a date not later

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

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 showsvariation 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 transfer where the complete stream can be intersected at regular intervals.

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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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 10th day of next month of each quarter ending on 31st day of March 30th day of June, 30th day of September and 31st 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.

26 Aug 2015

(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

Annexure-C

Tamil Nadu Pollution Control Board

From	To
Er. S. Rajan M.E District Environmental Engineer, Tamil Nadu Pollution Control Board, EPIP Building, A.O Block SIPCOT Industrial Complex Gummidipoondi - 601201	The Chief Executive officer M/s NTPCTAMILNADU ENERGY COMPANY LTD Vallur Thermal Power Project Vellivoyal Chavadi Post Ponneri Taluk Tiruvallur District - 600103

Lr. No. DEE/TNPCB/GMP/0055/2018/ Dated 29.06.2018

Sir,

Sub: TNPCB –O/o DEE, Gummidipoondi- Industries – M/s NTPC Tamil Nadu Energy Company Ltd, SF.No. 1556, Vallur Village, Ponneri Taluk, Tiruvallur District – construction of Ash dyke lagoon -1 – demarcation of CRZ area & other details – called for and to stop construction work – intimation - Reg

Ref

1	Board's Lr.No.TNPCB/F.0104/RL/AMB/NOC/2017, Dt. 12.07.2017
2	T/o Letter No.DEE/TNPCB/GMP/0055/2018 Dt. 16.2.2018
3	Meeting convened by District Collector, Tiruvallur on 29.06.2018 at Collectorate with TNPCB officials, RDO Ponneri and officials from M/s NTPC Tamil Nadu Energy Company Ltd.

I invite your kind attention to reference 1st cited above, wherein NOC has been issued to M/s NTPC Tamil Nadu Energy Company Ltd, SF.No. 1556, Vallur Village, Ponneri Taluk, Tiruvallur District for the construction of Ash dyke lagoon – I subject to the following conditions.

1. The NOC issued shall not be construed as Consent or Authorization of the Board
2. The unit shall carry out the study through MS Swaminathan Research Foundation as suggested by the expert committee.
3. The unit shall develop mangrove plantation as per Canal Bank planting methodology suggested by MS Swaminathan Research Foundation (MSSRF 2002) of an area 15.1 Ha in NTECL area. The unit shall ensure to monitor the Mangrove plantation for its success growth.
4. The unit shall maintain Buffer zone of 50 m width between the bund and mangrove plantation.
5. The unit shall made a toe drain around the ash dyke and the seepage water collected in the toe drain shall be totally reused in plant.
6. The unit shall ensure that the discharge of ash to the dyke should be in slurry form only and also to provide a adequate water cover to maintain the ash dyke to prevent fugitive emission.

Meanwhile based on the complaint received from Thiru Nityanadam Jayaraman, Chennai against the construction of Ash dyke lagoon –I in the said premises which falls under CRZ area, the District Collector, Tiruvallur has convened an urgent meeting vide reference 3rd cited at District Collectorate.

At the outcome of the meeting, the District Collector, Tiruvallur has directed the unit of M/s NTPC Tamil Nadu Energy Company Ltd, SF.No. 1556, Vallur Village, Ponneri Taluk, Tiruvallur District has to stop the construction work of Ash dyke lagoon –I in the said premises since the unit has not furnished the details as sought by TNPCB vide reference 2nd cited. Further the District Collector has instructed the RDO Ponneri & DEE, TNPCB, Gummidipoondi to issue the stoppage notice immediately to the above said unit and further advised the unit of M/s NTPC Tamil Nadu Energy Company Ltd to furnish the details as sought by RDO Ponneri & TNPCB . Until the unit of M/s NTPC Tamil Nadu Energy Company Ltd shall not carry out any construction work of Ash dyke lagoon –I in the above said premises.

Hence you are requested to furnish the following details immediately and also you are requested to stop the construction work of Ash dyke lagoon –I , so as to take further action.

1. The unit shall earmark the location of the proposed Ash dyke lagoon – I incorporating it's dimensions and other salient features in the approved CRZ map.
2. The unit shall earmark the boundary of HTL, HTL + 100M line of CRZ and also the dimensions of the Ash dyke lagoon – I in the proposed ash dyke lagoon area with stone pillar & furnish the certification to that effect from the competent Authority.
3. The unit shall furnish the point wise latest compliance report on the conditions mentioned in the Board's lr Dt. 12.7.2017 under reference 1st cited above regarding the construction of Ash dyke lagoon – I
4. The unit shall furnish the design details of the proposed construction ash dyke lagoon – I and also furnish the details on the safe handling & disposal of dredged material from the proposed Ash dyke lagoon –I.

28.10.19

District Environmental Engineer
Tamil Nadu Pollution Control Board
Gummidipoondi

Copy submitted to

1. The District Collector, Tiruvallur
2. The Member Secretary, TNPCB, Guindy, Chennai -32
3. The JCEEE(M), Chennai Zone, Chennai -58

For kind information please.

-JGM(TS)

7-4

TAMIL NADU POLLUTION CONTROL BOARD

From

Thiru. D. Sekar, M.Tech.
Member Secretary.
Tamil Nadu Pollution Control Board,
76, Mount Salai,
Guindy, Chennai – 32

To

The CEO,
M/s. NTPC TAMILNADU ENERGY COMPANY LIMITED,
Vallur Thermal Power Project,
Vellivoyal Chavadi Post,
Ponneri Taluk,
Tiruvallur Dt, Chennai -600103

Lr.No. T2/TNPCB/F.2812/GMP/W/2018 dated: 04.09.2018

Sir,

Sub: TNPCB – Industries – M/s. NTPC Tamil Nadu Energy Company Limited (NTECL) (A joint venture between National Thermal Power Corporation Ltd & Tamil Nadu Electricity Board), S.F.no. 1556, vallur village, Ponneri Taluk, Tiruvallur District – To resume the work in respect of construction of Ash Dyke lagoon – I - Instructions issued - Regarding.

Ref:
1. CTO Proc.No. T8/TNPCB/F-3141/AMB/RL/W&A/2009 dated 03.11.2009
2. Renewal of consent Proc. No. T2 / TNPCB / F.0318GMP /RL/GMP/W&A/ 2018 dated 21.02.2018
3. Board's NOC Lr.No. TNPCB/F.0104/RL/AMB/NOC/2017 dt 12.07.2017
4. Meeting attended by TNPCB Officials at RDO office Ponneri on 05.02.2018
5. Lr. No. DEE/TNPCB/GMP/0055/2018 dated 29.06.2018
6. Proceedings No. T2/TNPCB/F.2812/GMP/W/2018 dt 27.07.2018
7. Unit's letter dated 02.08.2018
8. Minutes of meeting conducted on 16.08.2018 at District Collectorate with the District Collector, RDO Ponneri
9. Lr.No. DEE/TNPCB/GMP/0055/2018 dated 20.08.2018

I am to invite your kind attention to the references cited above, wherein the unit of **M/s. NTPC Tamil Nadu Energy Company Limited (NTECL) (A joint venture between National Thermal Power Corporation Ltd & Tamil Nadu Electricity Board)**, S.F.no. 1556, Vallur village, Ponneri Taluk, Tiruvallur District has been issued with consent vide reference 1st cited and subsequently renewed vide reference 2nd cited valid upto 31.03.2018.

Meanwhile, NOC has been issued to the unit vide reference 3rd cited for the construction of Ash Dyke lagoon-I subject to the certain conditions to comply with. Subsequently the unit has started the preliminary work for the construction of Ash dyke lagoon – I.

Based on the public protest on the construction of ash dyke lagoon – I, a meeting was convened on 05.02.2018 by RDO Ponneri with representatives from the unit and

officials of TNPCB, Gummidipoondi and the unit was requested to furnish certain details.

Meanwhile a complaint has been received against the construction of Ash Dyke lagoon-I in the said premises which falls under CRZ area. To redress this complaint, the District Collector, Tiruvallur has convened an urgent meeting at District Collectorate and the District Collector has instructed the RDO Ponneri & DEE, TNPCB, Gummidipoondi to issue the stoppage notice immediately to the above said unit in respect of construction of Ash Dyke lagoon-I and further advised the unit of M/s. NTPC Tamil Nadu Energy Company Ltd to furnish the details as sought by RDO, Ponneri & DEE, TNPCB Gummidipoondi.

Subsequently a letter was sent to the unit to stop the construction work of Ash dyke lagoon-I by DEE, TNPCB, Gummidipoondi vide reference 5th cited.

Further Board has issued certain direction to the unit vide reference 6th cited under section 33A of the Water (P&CP) Act 1974 as amended for the reasons stated therein and instructed to comply with the same.

Now, the unit vide letter dated 02.08.2018 has furnished the reply to the O/o DEE, TNPCB, Gummidipoondi and District Collector, Tiruvallur District along with certification obtained from Institute of Remote Sensing, Anna University, Chennai which concluded that "The survey team of Institute of Remote Sensing Anna University has visited site on 13.07.2018 and carried out survey using DGPS survey to earmark the boundary of Ash Dyke lagoon – I. After super imposition of above DGPS survey outputs in the approved CZMP it is found that the proposed site for Ash Dyke lagoon – I is out of CRZ zone as per existing approved coastal zone management plan of Tamil Nadu" and the unit has requested to allow them to proceed with construction of ash dyke lagoon – I.

In the mean time, the District Collector, Tiruvallur District has convened as urgent meeting on 16.08.2018 at 4.30 pm at District Collectorate along with RDO, Ponneri, DEE, Gummidipoondi and officials from M/s. NTECL in respect of considering the unit's request to resume the construction of Ash dyke lagoon – I work.

During the meeting it was discussed & instructed by District Collector, Tiruvallur that since the unit has obtained certification from Institute of Remote sensing, Anna University stating that the proposed site for Ash dyke lagoon – I is out of CRZ Zone as per existing approved Coastal Zone Management may allow the

TAMIL NADU POLLUTION CONTROL BOARD

M/s. NTPC Tamil Nadu Energy Company Ltd to resume the work in respect of construction of Ash Dyke lagoon – I.

In this regard, DEE, Gummidipoondi vide reference 9th cited has requested the Board for necessary orders for issue of letter to the unit of M/s. Tamil Nadu Energy Company Limited (NTECL)to resume the work in respect of construction of Ash Dyke lagoon – I.

In view of the above, the unit is hereby permitted to resume the work in respect of construction of Ash Dyke lagoon – I subject to the following conditions.

1. The unit shall ensure that the Ash Dyke lagoon - I must be constructed so that wastewater in the lagoon cannot intersect any underlying seasonal water table.
2. The Ash Dyke lagoon -I must be constructed so as not to be liable, as far as practicable, to inundation or damage from flood waters
3. The Ash Dyke lagoon - I must be constructed to ensure that the contents of the lagoon do not overflow into waters or onto land in a place from which they are reasonably likely to enter any waters.
4. The unit shall ensure to monitor the mangrove plantation for its success growth.
5. The unit shall maintain Buffer zone of 50 m width between the bund and mangrove plantation.
6. The unit shall make a toe drain around the ash dyke and the seepage water collected in the toe drain shall be totally reused in power plant.
7. The unit shall ensure that the discharge of ash to the dyke should be in slurry form only and also to provide an adequate water cover to maintain the ash dyke to prevent fugitive emission.
8. Regular sampling and monitoring of wastewater quality is to be done to assess ongoing lagoon effectiveness and determine pollutant loads
9. The unit shall furnish photographs of the construction of the ash dyke lagoon – I at all stages to the Board
10. The unit shall ensure that the soil or other construction materials arising due to the construction shall not be stored or disposed in CRZ area.
11. The unit shall collect water samples from open wells and bore wells in the nearby areas (1 Km radius) and analyse the samples for all parameters before and after the construction of the ask dyke lagoon – I and furnish report of analysis to the Board

12. The unit shall provide monitoring wells around the ash dyke lagoon, so as to monitor the water quality before and after the construction of the lagoon -- I

13. The unit shall comply with the recommendations specified in the report of MS Swaminathan Research Foundation.

The receipt of the letter may be acknowledged

For Member Secretary

Copy to

1. The Joint Chief Environmental Engineer (Monitoring),
   Tamil Nadu Pollution Control Board,
   Chennai Region.

2. The District Environmental Engineer,
   Tamil Nadu Pollution Control Board,
   Gummidipoondi.

3. File.

→ GM(OPN)
→ CE(PE)/CME(HP)
→ AGM(Prod)/Asst CE(Env/Safety)

Copy for kind information

i) Director (operations), NLC Ltd.
ii) PED(SR)
iii) ED(Engg/Safety)

Annexure-D

BY RPAD

(This Document Contains 15 Pages)

TAMILNADU POLLUTION CONTROL BOARD

CONSENT ORDER NO: 22863 (EXPANSION)

PROC NO: T4/F31581/TVLR-AMB/RL/TNPCB/W/2014 DATED: 01.12.2014

Consent for Expansion/ discharge of sewage and trade effluent under section 25 of the Water (Prevention and Control of Pollution) Act 1974, as amended.

Sub: TAMIL NADU POLLUTION CONTROL BOARD – CONSENT – **M/S. NTPC TAMILNADU ENERGY COMPANY LTD.,** SF No. 1556 of Vallur Village., Ponneri Taluk, Tiruvallur District - for the discharge of sewage and / or trade effluent under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974, (Central Act, 6 of 1974) as amended.

Ref:
1. Your Application through CARE Centre Dated: 27.03.2013.
2. Proc.T8/TNPCB/F31481/AMB/RL/W/2009 Dated: 03.11.2009.
3. Proc No. T4/ TNPCB/ F-31481/ RL/ TVLR-AMB/ W/ 2013 Dated: 10.05.2013.
4. Proc No T4/ F-31481/ RL/ TVLR/ TNPCB/ W/ 2013 Dated: 02.07.2013.
5. IR No JCEE(M)/ CHN/ F.1081-02/ 17-CAT/ AMB-RL/ 2013 Dated: 14.11.2014.
6. Minutes of the 166th CCC Meeting of item No 166-2 Dated: 20.11.2014.

CONSENT is hereby granted under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974, (Central Act, 6 of 1974) as amended (hereinafter to as "The Act") and the rules and orders made there under to

The Chief Executive Officer,
M/S. NTPC TAMILNADU ENERGY COMPANY LTD.,
SF NO 1556 of Vallur Village., Ponneri Taluk,
Tiruvallur District.

(hereinafter referred to as "The Applicant") Authorising him/her/them to continue to or bring into make new discharge or use new /altered outlet for discharge of sewage and /or trade effluent.

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TAMILNADU POLLUTION CONTROL BOARD

This is subject to the provision of the Act and the rules and orders made there under and further subject to the terms and conditions incorporated in the Special and General Conditions annexed.

This **CONSENT** is valid for a period ending with the **31.03.2015**
(Thirty First March Two Thousand Fifteen)

Sd-xxxx
Chairman

To
The Chief Executive Officer.,
M/s. NTPC TAMILNADU ENERGY COMPANY LTD.,
No 123 & 123A, G Block, Anna Nagar (East),
Chennai -600 102.

Copy to

1. Joint Chief Environmental Engineer(M)-Chennai,
   Tamilnadu Pollution Control Board,
   Ambattur.
2. The District Environmental Engineer,
   Tamilnadu Pollution Control Board,
   Ambattur.
3. The Commissioner,
   Manjur Panchayat union.,
   Tiruvallur District.
4. BMS.
5. File.

//Forwarded by Order//

For Chairman

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TAMILNADU POLLUTION CONTROL BOARD

SPECIAL CONDITIONS

1. Details of the products manufactured:

Sl. No.	Description	Quantity
a	**Main Products manufactured:**	
1.	Power Generation.	3x500 MW
	By/Intermediate products manufactured: Nil	

This Consent is valid for the manufacture of Products and the rate of Production mentioned above. Any change in the quantity or quality of products has to be brought to the notice of the Board and fresh consent has to be obtained.

2. Discharge of effluent is permitted from the following outlets. The quantity of effluent discharged shall not exceed the figures mentioned below.

OUTLET NUMBER	DESCRIPTION OF OUTLET	MAXIMUM DAILY DISCHARGE (IN KLD)	POINT OF DISPOSAL
1.	Sewage	1680 KLD	On Industries own land
2.	Trade Effluent	243000 KLD	Marine Coastal Area

3. The effluent discharge shall not contain constituents in excess of the tolerance Limits as laid down hereunder.

Sl. NO	CHARACTERISTICS	UNIT	TOLERANCE LIMITS OUTLET NO.	
			1	2
01.	PH	Number	5.5-9	5.5-9
02.	Temperature	°C	-	40 degree C at the point of discharge

TAMILNADU POLLUTION CONTROL BOARD

03.	Particules size of Total Suspended Solids	mm/micron	-	Shall pass 850 Micron IS Sieve
04.	Total Suspended Solids	mg/l	30	100
05.	Total Dissolved Solids (in organics)	mg/1	-	2100
06.	Chloride as (Cl)	mg/1	-	1000
07.	Sulphide as (S)	mg/1	-	2
08.	Sulphate as (SO_4)	mg/1	-	1000
09.	Fluoride as (F)	mg/1	-	2
10.	Ammoniacal Nitrogen as (N)	mg/1	-	50
11.	Sodium	%	-	-
12.	Copper as (Cu)	mg/1	-	3
13.	Zinc as (Zn)	mg/1	-	1
14.	Phenolic Compoundsas (C_6H_5OH)	mg/1	-	1
15.	Oil and Grease	mg/1	-	10
16.	Boron as (B)	mg/1	-	2
17.	BOD 5 days @ 20 C	mg/1	20	30
18.	COD	mg/1	-	250
19.	Total Residual Chlorine	mg/1	-	1
20.	Arsenic as (AS)	mg/1	-	0.2
21.	Cadmium as (Cd)	mg/1	-	2
22.	Total Chromium as (cr)	mg/1	-	2
23.	Chromium as (Hexavalent Cr^{+6})	mg/1	-	0.1
24.	Lead as (Pb)	mg/1	-	0.1
25.	Selenium as (Se)	mg/1	-	0.05
26.	Mercury as (Hg)	mg/1	-	0.01
27.	Pesticides		-	Absent
28.	Alpha Emitters	Micro Curie/ml	-	10 to the power of -7
29.	Beta Emitters	Micro Curie/ml	-	10 to the power of -6
30.	Free Ammonnia as (NH_3)	mg/1	-	5

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31.	Dissolved Phosphatesas (P)	mg/1	-	5
32.	Total Kjeldahl Nitrogen as (N)	mg/1	-	100
33.	Cyanide as (CN)	mg/1	-	0.2
34.	Nickel as (Ni)	mg/1	-	3
35.	Residual Sodium Carbonate	mg/1	-	-

4. All units of the sewage / trade effluent treatment plant to achieve the quality of the effluent according to the tolerance limits prescribed above shall be completed along with the commissioning of production.
5. Meters must be affixed at the entrance of the water supply connection so that such meters are easily accessible for inspection and maintenance and for other purposes of the Act, provided that the place where it is affixed shall in no case be at a point before which water has been tapped by the consumer for utilization for any purposes whatsoever.
6. Separate Meters with necessary pipe-line for assessing the quantity of water used for each of the purposes mentioned below
   a. Industrial Cooling, Spraying in mine pits or boiler feed.
   b. Domestic purpose.
   c. Process.
7. The applicant shall take immediate action to install mechanical composting sampling equipment and continuous flow measuring/recording devices on the effluent drains of trade as well as sewage effluent within three months from the date of this Consent Order. A record of daily effluent discharge shall be maintained.
8. This Consent is given by the Board in consideration of the particulars given in the application. Any change or alteration or deviation made in actual practice from the particulars furnished in the application will also be ground for review/variation/revocation of the Consent Order under Section 27 of the Act and to make such variation as deemed fit for the purpose of the Act.
9. The Applicant shall not change or alter either the quality or quantity the rate of the discharge or temperature or the route of discharge without the previous written permission of the Board.

10. The applicant shall comply with the carryout directions/orders issued by the Board in this Consent Order and at all subsequent times without any negligence on his/her/their part. The applicant shall be liable for such legal action as per provisions of the Law/Act in case of non/compliance of any order/directions issued at any time and or violation of the terms and conditions of this Consent Order.
11. The following information shall be forwarded to the Member Secretary/DEE/AEE regularly on or before 10th of every month:
    a. Progress on the installation of effluent treatment plant.
    b. Progress on the installation of Mechanical Compost sampling equipment and continuous flow recording/measuring devices
    c. Monthly statement of daily discharge of sewage as well as trade effluent.
12. Any upset condition in any of the plant/plants of the factory which is, likely to result in increased effluent discharge and or result in violation of the standards mentioned above shall be reported to the Head Quarters and District Environmental Engineer's Office/Regional Joint Chief Environmental Engineer's Office of the Board telegraphically.
13. The applicant shall furnish to the visiting officer of the Board any information regarding the construction installation or operation of the plant or effluent treatment plant and any other particulars as may be pertinent to preventing and controlling pollution of Water.
14. Not withstanding anything contained in this conditional letter of Consent, the Board hereby reserves to it the right and power under Section 27(2) of the Water (Prevention and Control of Pollution) Act, 1974(as amended) to review any and/or all the conditions imposed herein above and to make such variation as deemed fit for the purpose of the Act by the Board.
15. The conditions imposed as above shall continue in force until revoked under Section 27(2) of the Act.
16. The industry has to ensure that minimum three varieties of trees (Eucalyptus, Subabul and any other suitable variety) are planted at the density of not less than 1,000 trees per acre of land. The trees may be planted along the boundaries of the industry or industrial premises. This plantation is stipulated over and above the bulk plantation of trees in that area and maintains them.

TAMILNADU POLLUTION CONTROL BOARD

ADDITIONAL CONDITIONS

1. The unit shall comply with all the conditions imposed in the Environmental Clearance issued by MoEF, GOI Dt 18.04.2007 & 03.06.2009.
2. The unit shall comply with all the conditions imposed in the Clearance issued by MoEF, GOI, Dt 14.07.2009 under the CRZ Notification.
3. The unit shall not draw ground water and meet its water requirement through desalination of sea water as reported.
4. The unit shall operate the Sewage Treatment Plant efficiently and continuously so as the treat the effluent to satisfy the standards prescribed by the Board.
5. The unit shall complete the effluent treatment plant and to operate and maintain the same efficiently and continuously so as to bring the quality treated effluent to satisfy the standards prescribed by the Board with in 3 months time.
6. The unit shall explore the possibility for the disposal of treated effluent directly in to the sea after achieving the standards with proper arrangements instead of disposing in the marine disposal facility of M/s North Chennai Thermal Power Plant.
7. The unit shall evolve action plan to medicate impact on Ennore creek due to discharge of trade effluent based on the study conducted through IIT, Madras.
8. The unit shall ensure that the water used for cooling purpose shall be kept under closed circuit system.
9. The unit shall operate and maintain the induced draft cooling towers efficiently so as to ensure that the temperature of the discharge effluent shall not exceed 5°C over and above the ambient water temperature of the receiving water body.
10. The unit shall strength the bund of the ash dyke with sufficient green cover all around, water recovery & reuse system and, closed pipe line for transport of ash slurry & recover water early and the ash dyke shall be used only in case of emergency.
11. The unit shall ensure that the storm water with in the premises shall be collected through storm water drain and to be used for recharging of ground water.
12. The unit shall ensure that the coal is stored in a completely paved area with provisions for leachate collection and the coal storage yard is provided with wind barriers of sufficient height. The height of the coal piles shall be lower than that of the wind barrier.

13. The coal movement within the plant shall be only through closed conveyors. All the transfer points of the conveyor shall be provided with bag filters to control dust emission.
14. The coal used shall not contain more then 34% of ash and 0.34% of sulphur
15. The unit shall complete and to commission the coal handling system with adequate air pollution control measures.
16. The unit shall ensure that the internal roads shall be paved with concrete/bitumen and provided with water sprinkling arrangement to arrest dust, and the speed of vehicles less than 10 km/hr so as to ensure ambient air quality standards.
17. Space provision shall be made for the installation of FDG of requisite efficiency of removal of SO_2 if required at a later stage.
18. The units activity shall not have any adverse impact to the Ennore creek.
19. The unit shall operate and maintain the induced draft cooling towers effectively and the same shall be kept under closed cycle system.
20. The unit shall use the ash dykes only in emergencies.
21. The unit shall ensure that the entire water recovered from the ash dyke shall be reused in the ash handling system.
22. The unit shall collect the fly ash from the ESP and transfer to the storage silo with pneumatic vacuum conveying system and to ensure proper operation to control the dust emission to satisfy the standards prescribed by the Board.
23. The unit shall maintain proper account for the fly ash generation and its disposal
24. The unit shall ensure 100% collection of dry ash so as to minimize the disposal of the same in the ash pond.
25. The unit shall operate the control measures provided for the coal handling system, leachate collection system at storage, wind barrier of sufficient height higher then coal piles, and dust suppression system/ water sprinklers operate efficiently so as to bring down the emission to satisfy the standards prescribed by the Board.
26. The coal movement within the plant shall be only through closed conveyor and all transfer points of the conveyor shall be provided with bag filters to control dust emission.

27. The unit shall operate the bag filter, cyclone separator in the coal handling and pulverizing area to contain the dust to satisfy the standards prescribed by the Board.
28. The unit shall operate and maintain the electrostatic precipitator provided to the coal fired boiler effectively so as to achieve the emission/ ambient air quality standards.
29. The unit shall ensure that the velocity of the exit gas from the stack shall be greater than 25 m/sec and the ratio of the exit gas velocity to wind velocity shall not be less than 1.5 to eliminate or reduce pollutant down wash.
30. The unit shall ensure provision of interlocking facility so that process can be automatically stopped in case emission level exceeds the limit
31. The unit shall operate and maintain low NOx burners effectively for control of NOx emission to satisfy the standards prescribed by the Board.
32. The unit shall provide online continuous stack monitors with data uploading facility for the parameters PM, SO_2 CO and NOx for the 3rd unit and to connect it to the Care Air Centre of the TNPCB with in 3 months.
33. The unit shall ensure that six continuous AAQ monitors are provided at suitable locations with uploading facility for the parameters SPM, NOx and SO_2 with in 3 months.
34. The unit shall ensure provision of adequate acoustic measures so as to satisfy the ambient noise level standards prescribed by the Board.
35. The unit shall have the Environmental Management Cell with full fledged laboratory facilities and qualified trained staff with environmental policy for regular monitoring of stack emission and ambient air quality and implementation of environmental management system and to preserve the ecology of that locality.
36. The unit shall monitor the storage facility for the auxiliary fuel such as LDO, LSHS, HFO in consultation with the department of explosives and Disaster Management plan shall be prepared and furnished to the Board.
37. The unit shall comply with the provision of Fly Ash Notification 1999 and the rules notified in the amended issued by the Ministry of Environment and Forests, Government of Indian Dt 03.11.2009.
38. The unit shall conduct AAQ and SM survey through the TNPCB laboratory and to furnish the ROA periodically.

39. Green belt of adequate width and density should be provided to mitigate the effects of fugitive emission all around the plant. A minimum of 33% of the total land acquired should be developed as green belt at the rate of 400 trees/hectare with species in consultation with the local District Forest Officer.

40. The unit shall maintain good house keeping.

Sd-xxxx
Chairman

//Forwarded by Order//

For Chairman

TAMILNADU POLLUTION CONTROL BOARD

GENERAL CONDITIONS

1. The applicant shall make an application for grant of fresh consent atleast 60 days before the date of expiry of this Consent Order.
2. The applicant shall display suitable caution board at the place where the effluent is entering any water-body or any other place to be indicated by the Board indicating therein that the area into which the effluents are being discharged is not fit for the domestic use/bathing.
3. The applicant shall either:
   a. **Not later than 30 days** from the date of issue of this Consent Order, Certify in writing to the Member-Secretary that the applicant has installed or provided for an alternate electric power source sufficient to operate all facilities installed by the applicant to maintain compliance with the terms and conditions of the Consent.
   b. **Not later than 30 days** from the date of this Consent, certify in writing to the Member Secretary that upon the reduction, loss or failure of any one or more of the primary sources of electric power to any facilities installed by the applicant to maintain compliance with the terms and conditions of this Consent, the applicant shall halt, reduce or otherwise control production and/or all discharges in order to maintain compliance with the terms and conditions of this Consent.
4. The applicant shall not allow the discharge from other premises to mix with the discharges from his/her/their premises.
5. Storm water shall not be allowed to mix the sewage and/or trade effluent on the upstream of the terminal manholes where the flow measuring devices will be installed
6. All Solid Wastes arising in the premises shall be properly classified and disposed off to the satisfaction of the Board by:
   i. Landfill, in case of inert material, care being taken to ensure that the material does not give rise to leachate which may percolate into ground water or carried away with storm run-off.
   ii. Controlled incineration, wherever possible in case of combustible organic material.

iii. Composting, in case of biodegradable material.

7. Any toxic material shall be detoxified otherwise be sealed in steel drums and buried in protected areas after obtaining approval of this Board in writing. The detoxification or sealing and burying shall be carried out in the presence of Board's authorized persons only.
8. The applicant shall maintain good house-keeping both within the factory and in the premises. All pipes, valves, sewers and drains shall be leak proof. Floor washings shall be admitted into the effluent collection system only and shall not be allowed to find their way in storm drains or open areas.
9. The applicant shall provide all facilities to the Board staff for collection of samples.
10. The applicant shall at all times maintain in good working order and operate efficiently all treatment or control facilities or systems installed or used by him to satisfy the terms and conditions of the Consent.
11. The issuance of this Consent does not convey any property right in either real personal property or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights nor any infringement of Central, State laws or regulation.
12. This Consent does not authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any natural water course.
13. Non-compliance with effluent limitations:
    a. If for any reason the applicant does not comply with or will be unable to comply with any effluent limitations specified in this Consent, the applicant, shall immediately notify the Consent issuing authority by telephone and provide the Consent issuing authority with the following in writing within 5 days of such notifications:
        i. Cause for Non – compliance.
        ii. A description of the non – compliled discharge including its impact upon the receiving waters.
        iii. Anticipated time of continuance of non-compliance if expected to continue or if such condition has been corrected the duration of period of non-compliance.

iv. Steps taken by the applicant to reduce and eliminate the non-complying discharge and

v. Steps to be taken by the applicant to prevent recurrence of condition of non-compliance.

b. The applicant shall take all reasonable steps to minimize any adverse impact to natural waters resulting from non-compliance with any effluent limitation specified in this Consent including such accelerated or additional monitoring as necessary to determine the natural and impact of the non-complying discharge.

c. Nothing in this Consent shall be construed to relieve the applicant from civil or criminal penalties for non-compliance whether or not such non – compliance is due to factors beyond his/her control, such as break-down, electric failure, accident or natural disaster.

14. The diversion or by-pass of any discharge from facilities utilized by the applicant to maintain compliance with the terms and conditions of this Consent is prohibited except:

i. Where unavoidable to prevent loss of life or severe property damage or

ii. Where excessive storm damage or run off would damage any facilities necessary for compliance with terms and conditions of this Consent. The applicant shall immediately notify the Board in writing of each diversion or by-pass in accordance with procedure specified as under item No:14.

15. The applicant shall at his own cost get the effluent samples collected both before and after treatment and get them analysed at an approved laboratory of the Board every month for the parameters indicated in Special Condition No:3 and shall submit in duplicate the report there of to the Board.

16. The addition of various treatment chemicals should be done only with mechanical dosers and proper equipment for regulation of correct dosages determined daily and for proper uniform feeding. Crude practices such as dumping of chemicals in drains or sumps or trickling of acids or alkalies arbitrarily and utilizing poles for stirring etc., should not be resorted to.

17. Care should be taken to keep the anaerobic lagoons, if any biologically active and not to utilize as mere stagnation ponds. The anaerobic lagoons should be fed with the required nutrients for effective digestion. Lagoons should be constructed with sides and bottom made impervious.
18. The utilization of treated effluent on factory's own lands, if any, should be complete and there should be no possibility of the effluent gaining access into any drainage channel or other water courses either directly or by overflow.
19. The effluent disposal on land, if any, should be done without creating any nuisance to the surroundings or inundation of the lands at any time.
20. If at any time the disposal of treated effluent on land becomes incomplete or unsatisfactory or create any problem or becomes a matter of dispute, the industry must adopt alternate satisfactory treatment and disposal measures.
21. The sludge from treatment units shall be dried in sludge drying beds and the drained liquid shall be taken to equalization tank.
22. In the disposal of treated effluent on land for irrigation, the industry shall keep in view of the need for:
    I. Rotation of crops.
    II. Change of point of application of effluent on land.
    III. A portion of land kept fallow.

    The adoption of these would avoid soil becoming sick or stale. The industry may ensure this is consultation with the Agricultural Department.
23. It is the sole responsibility of the industry to ensure that there are no complaints at any time from the ryots in the surrounding areas as a result of discharge of sewage or trade effluent.
24. The effluent treatment units and disposal measures shall become operative at the time of commencement of production.
25. The fact of commissioning of the industry shall be intimated to this Office within One week of commissioning.
26. The unit has to ensure that the agency to whom the disposal of solid waste/sludge arising from the process/treatment is entrusted, shall obtain the permission of TamilNadu Pollution Control Board under Section 24 of the Water (Prevention and Control of Pollution) Act, 1974 before the disposal.

27. The unit has to put up Effluent Treatment Plant within the specified period indicated in Special Condition No.4 by engaging any one of the consultants approved by the Board and operate and maintain the Effluent Treatment Plant continuously and efficiently so that treated effluent satisfied the standards prescribed by the Board.
28. The applicant shall display this consent granted to him in a prominent place for perusal of the inspecting Officers of this Board.

Sd-xxxx
Chairman

//Forwarded by Order//

For Chairman

TAMILNADU POLLUTION CONTROL BOARD

POLLUTION PREVENTION PAYS

அகம் தூய்மை வாய்மைக்கு! புறம் தூய்மை வாழ்வுக்கு!

BY RPAD

(This Document Contains 13 Pages)

(13)

Annexure-E

TAMILNADU POLLUTION CONTROL BOARD

AUTHORIZATION NO. 4402 DATED: 15.04.2014.

PROCEEDINGS NO.T4/HWM/F-043665/TVLR/ R/L/2014 DATED: 15.04.2014

Sub: TNPC Board - **M/S. NTPC TAMILNADU ENERGY COMPANY LIMITED.**, S.F.No.1556 to Vallur, Ponneri Taluk, Tiruvallur District - Authorization for operating a facility for Collection/Storage/Transport and Disposal of Hazardous Waste under Rule 3(b) and 5 (4) of Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 enacted under Environment (Protection) Act, 1986.

Ref: 1. Your Application Dated: 06.09.2013.
2. I.R No. F JCEE (M)/TNPCB/CHN/F-HWM/1081-02/AMB/2013 Dated: 12.12.2013.

In accordance with Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 authorization is issued to

The Chief Executive Director,
M/S. NTPC TAMILNADU ENERGY COMPANY LIMITED.,
S.F.No.1556 to Vallur, Ponneri Taluk,
Tiruvallur District.

He shall handle hazardous wastes as specified below:

Sl. No	Details of process generating hazardous waste as listed in column 2 of Schedule 1 of the amended rules / class of waste as per Schedule 2	Details of Waste Stream as indicated in column 3 of Schedule 1 / identity of waste as per Schedule 2	Quantity generated / handled per year	Activity for which authorization is issued
1	5.Industrial operations using mineral/synthetic oil as lubricant in hydraulic systems or other applications	5.1 Used/Spent oil	57 T/year	Collection, Storage Transport and Disposal to Authorized Recyclers.

TAMILNADU POLLUTION CONTROL BOARD

The authorization is issued subject to the terms and conditions specified in Form-2 and special conditions annexed.

Sd-xxx
Member Secretary

To
The Chief Executive officer,
M/s. NTPC Tamilnadu Energy Company Ltd.,
S.F. No. 1556 to Vallur, Ponneri Taluk,
Tiruvallur District.

Copy to

1. The Joint Chief Environmental Engineer,
   Tamill Nadu Pollution Control Board,
   Ambattur.
2. The District Environmental Engineer,
   Tamill Nadu Pollution Control Board,
   Tiruvallur.
3. BMS.
4. Technical File.

//Forwarded by Order//

For Member Secretary

TAMILNADU POLLUTION CONTROL BOARD

SPECIAL CONDITIONS

PART - 1

ON SITE GENERAL STORAGE REQUIREMENTS

1. Any increase in quantity change in category handling operations shall be brought to the notice of the Board and fresh authorization is to be obtained.
2. The unit may store hazardous waste on site for a maximum period of 90days a maximum quantity of 10,000kgs. or a truck load whichever is less.
3. The unit shall not store the hazardous waste on open ground. It shall be stored in closed containers in an isolated area earmarked for the purpose within the premises(it shall not be accessible to rain water)
4. The unit shall mark each container holding the hazardous wastes with marking "Hazardous Wastes" both in English and Tamil. The containers shall be labelled as per the rules prescribed in motor Vehicles Rules, 1989.
5. The storage area should be fenced properly and a sign of danger should be placed at the storage site.
6. The containers holding the hazardous wastes should be kept in good condition and made of materials which can withstand the physical and environmental conditions during storage and transportation.
7. The unit shall provide requisite safety devices like safety mask, goggles, hand gloves, gumboots, fire fighting systems and maintain the same in working condition.
8. The containers holding the hazardous waste should be closed with lids during storage, except when it is necessary to add or remove wastes.
9. Only properly cleaned containers should be used for storage of hazardous wastes.
10. The unit shall notify to the Tamilnadu Pollution Control Board in Form -1 at least once in 90 days as per the permitted on site storage period regarding the quantity of waste generated and total accumulated quantity. A containment system should be provided at the area of storage of hazardous waste within three months from the date of issue of authorization. It shall be designed and operated as follows.
    a) The base underlying the containers should be constructed in such a way that it is free of cracks or gaps and it is sufficiently impervious to contain leaks spills and accumulated precipitation until the collected material is detected and removed.
    b) The system should be designed and operated to drain and remove liquids which may result from leak, spillage or precipitation unless the containers are elevated or otherwise protected from contact with accumulated solids.

c) The containment system should have sufficient capacity to contain 10% of the volume of containers or the largest container whichever is greater. Containers that do not contain free liquids need not be considered in this determination.

d) Run-on into the containment systems should be prevented unless the collection system has sufficient excess capacity in addition to that mentioned in paragraph (c) of this section to contain any run-on which might enter the system.

e) The containment should have a sump to collect any leak, spillage or precipitation. Spilled or leaked waste and accumulated precipitation should be removed from sump or collection area timely as it is necessary to prevent overflow of the collection system.

11.

a. Containers holding ignitable or reactive waste should be stored atleast 15meters (50feet) away from the plant operational area. "No Smoking" signs should be placed conspicuously wherever ignitable or reactive waste is stored.

b. Container holding the wastes other than ignitable or reactive should be stored atleast 6 meters (20feet) away from the plant operation area.

12. Special Requirement for Non-compatible Wastes:

Non- Compatible hazardous wastes and materials, should not be mixed int eh same transportation or storage container.

Hazardous wastes should not be placed in an unwashed container that previously held any chemical material or non-compatible wastes. A storage container holding hazardous waste that is non-compatible with any waste or other materials stored near by in other containers, piles, open tanks or surface impoundments should be separated from other materials or protected from them by means of a dike, beam, wall or other suitable devices.

13. The unit shall analyse the hazardous wastes for the parameters such as specific gravity, percentage solids, chemical composition, flash point, reactivity, toxicity, explosivity, calorific value and bio-degradability whichever is applicable. In addition the leachate generated shall also be analysed. The report of analysis is to be maintained at the facility.

(9) 4/10)

Annexure - F

Tamil Nadu Pollution Control Board

From	To
Er. S. Rajan M.E District Environmental Engineer, Tamil Nadu Pollution Control Board, EPIP Building, A.O Block SIPCOT Industrial Complex Gummidipoondi - 601201	The Chief Executive officer M/s NTPCTAMILNADU ENERGY COMPANY LTD Vallur Thermal Power Project Vellivoyal Chavadi Post Ponneri Taluk Tiruvallur District - 600103

Lr. No. DEE/TNPCB/GMP/0055/2018/ Dated 29.06.2018

Sir,

Sub: TNPCB --O/o DEE, Gummidipoondi– Industries – M/s NTPC Tamil Nadu Energy Company Ltd, SF.No. 1556, Vallur Village, Ponneri Taluk, Tiruvallur District – construction of Ash dyke lagoon -1 – demarcation of CRZ area & other details – called for and to stop construction work – intimation - Reg

Ref

1	Board's Lr.No.TNPCB/F.0104/RL/AMB/NOC/2017, Dt. 12.07.2017
2	T/o Letter No.DEE/TNPCB/GMP/0055/2018 Dt. 16.2.2018
3	Meeting convened by District Collector, Tiruvallur on 29.06.2018 at Collectorate with TNPCB officials, RDO Ponneri and officials from M/s NTPC Tamil Nadu Energy Company Ltd.

I invite your kind attention to reference 1st cited above, wherein NOC has been issued to M/s NTPC Tamil Nadu Energy Company Ltd, SF.No. 1556, Vallur Village, Ponneri Taluk, Tiruvallur District for the construction of Ash dyke lagoon – I subject to the following conditions.

1. The NOC issued shall not be construed as Consent or Authorization of the Board
2. The unit shall carry out the study through MS Swaminathan Research Foundation as suggested by the expert committee.
3. The unit shall develop mangrove plantation as per Canal Bank planting methodology suggested by MS Swaminathan Research Foundation (MSSRF 2002) of an area 15.1 Ha in NTECL area. The unit shall ensure to monitor the Mangrove plantation for its success growth.
4. The unit shall maintain Buffer zone of 50 m width between the bund and mangrove plantation.
5. The unit shall made a toe drain around the ash dyke and the seepage water collected in the toe drain shall be totally reused in plant.
6. The unit shall ensure that the discharge of ash to the dyke should be in slurry form only and also to provide a adequate water cover to maintain the ash dyke to prevent fugitive emission.

Meanwhile based on the complaint received from Thiru Nilyanadam Jayaraman, Chennai against the construction of Ash dyke lagoon –I in the said premises which falls under CRZ area, the District Collector, Tiruvallur has convened an urgent meeting vide reference 3rd cited at District Collectorate.

At the outcome of the meeting, the District Collector, Tiruvallur has directed the unit of M/s NTPC Tamil Nadu Energy Company Ltd, SF.No. 1556, Vallur Village, Ponneri Taluk, Tiruvallur District has to stop the construction work of Ash dyke lagoon –I in the said premises since the unit has not furnished the details as sought by TNPCB vide reference 2nd cited. Further the District Collector has instructed the RDO Ponneri & DEE, TNPCB, Gummidipoondi to issue the stoppage notice immediately to the above said unit and further advised the unit of M/s NTPC Tamil Nadu Energy Company Ltd to furnish the details as sought by RDO Ponneri & TNPCB . Until the unit of M/s NTPC Tamil Nadu Energy Company Ltd shall not carry out any construction work of Ash dyke lagoon –I in the above said premises.

Hence you are requested to furnish the following details immediately and also you are requested to stop the construction work of Ash dyke lagoon –I , so as to take further action.

1. The unit shall earmark the location of the proposed Ash dyke lagoon – I incorporating it's dimensions and other salient features in the approved CRZ map.
2. The unit shall earmark the boundary of HTL, HTL + 100M line of CRZ and also the dimensions of the Ash dyke lagoon – I in the proposed ash dyke lagoon area with stone pillar & furnish the certification to that effect from the competent Authority.
3. The unit shall furnish the point wise latest compliance report on the conditions mentioned in the Board's lr Dl. 12.7.2017 under reference 1st cited above regarding the construction of Ash dyke lagoon – I
4. The unit shall furnish the design details of the proposed construction ash dyke lagoon – I and also furnish the details on the safe handling & disposal of dredged material from the proposed Ash dyke lagoon – I.

District Environmental Engineer
Tamil Nadu Pollution Control Board
Gummidipoondi

Copy submitted to

1. The District Collector, Tiruvallur
2. The Member Secretary, TNPCB, Gunidy, Chennai -32
3. The JCEEE(M), Chennai Zone, Chennai -58

For kind information please.

TAMIL NADU POLLUTION CONTROL BOARD

From

Thiru. D. Sekar, M.Tech.
Member Secretary.
Tamil Nadu Pollution Control Board.
76, Mount Salai,
Guindy, Chennai – 32

To

The CEO,
M/s. NTPC TAMILNADU ENERGY COMPANY LIMITED.
Vallur Thermal Power Project,
Vellivoyal Chavadi Post,
Ponneri Taluk,
Tiruvallur Dt, Chennai -600103

Lr.No. T2/TNPCB/F.2812/GMP/W/2018 dated: 04.09.2018

Sir,

Sub: TNPCB – Industries – M/s. NTPC Tamil Nadu Energy Company Limited (NTECL) (A joint venture between National Thermal Power Corporation Ltd & Tamil Nadu Electricity Board), S.F.no. 1556, vallur village, Ponneri Taluk, Tiruvallur District – To resume the work in respect of construction of Ash Dyke lagoon – I - Instructions issued - Regarding.

Ref:
1. CTO Proc.No. T8/TNPCB/F-3141/AMB/RL/W&A/2009 dated 03.11.2009
2. Renewal of consent Proc. No. T2 / TNPCB / F.0318GMP /RL/GMP/W&A/ 2018 dated 21.02.2018
3. Board's NOC Lr.No. TNPCB/F.0104/RL/AMB/NOC/2017 dt 12.07.2017
4. Meeting attended by TNPCB Officials at RDO office Ponneri on 05.02.2018
5. Lr. No. DEE/TNPCB/GMP/0055/2018 dated 29.06.2018
6. Proceedings No. T2/TNPCB/F.2812/GMP/W/2018 dt 27.07.2018
7. Unit's letter dated 02.08.2018
8. Minutes of meeting conducted on 16.08.2018 at District Collectorate with the District Collector, RDO Ponneri
9. Lr.No. DEE/TNPCB/GMP/0055/2018 dated 20.08.2018

I am to invite your kind attention to the references cited above, wherein the unit of **M/s. NTPC Tamil Nadu Energy Company Limited (NTECL) (A joint venture between National Thermal Power Corporation Ltd & Tamil Nadu Electricity Board)**, S.F.no. 1556, Vallur village, Ponneri Taluk, Tiruvallur District has been issued with consent vide reference 1st cited and subsequently renewed vide reference 2nd cited valid upto 31.03.2018

Meanwhile, NOC has been issued to the unit vide reference 3rd cited for the construction of Ash Dyke lagoon-I subject to the certain conditions to comply with. Subsequently the unit has started the preliminary work for the construction of Ash dyke lagoon – I.

Based on the public protest on the construction of ash dyke lagoon – I, a meeting was convened on 05.02.2018 by RDO Ponneri with representatives from the unit and

officials of TNPCB, Gummidipoondi and the unit was requested to furnish certain details.

Meanwhile a complaint has been received against the construction of Ash Dyke lagoon-I in the said premises which falls under CRZ area. To redress this complaint, the District Collector, Tiruvallur has convened an urgent meeting at District Collectorate and the District Collector has instructed the RDO Ponneri & DEE, TNPCB, Gummidipoondi to issue the stoppage notice immediately to the above said unit in respect of construction of Ash Dyke lagoon-I and further advised the unit of M/s. NTPC Tamil Nadu Energy Company Ltd to furnish the details as sought by RDO, Ponneri & DEE, TNPCB Gummidipoondi.

Subsequently a letter was sent to the unit to stop the construction work of Ash dyke lagoon-I by DEE, TNPCB, Gummidipoondi vide reference 5th cited.

Further Board has issued certain direction to the unit vide reference 6th cited under section 33A of the Water (P&CP) Act 1974 as amended for the reasons stated therein and instructed to comply with the same.

Now, the unit vide letter dated 02.08.2018 has furnished the reply to the O/o DEE, TNPCB, Gummidipoondi and District Collector, Tiruvallur District along with certification obtained from Institute of Remote Sensing, Anna University, Chennai which concluded that "The survey team of Institute of Remote Sensing Anna University has visited site on 13.07.2018 and carried out survey using DGPS survey to earmark the boundary of Ash Dyke lagoon – I. After super imposition of above DGPS survey outputs in the approved CZMP it is found that the proposed site for Ash Dyke lagoon – I is out of CRZ zone as per existing approved coastal zone management plan of Tamil Nadu" and the unit has requested to allow them to proceed with construction of ash dyke lagoon – I.

In the mean time, the District Collector, Tiruvallur District has convened as urgent meeting on 16.08.2018 at 4.30 pm at District Collectorate along with RDO, Ponneri, DEE, Gummidipoondi and officials from M/s. NTECL in respect of considering the unit's request to resume the construction of Ash dyke lagoon – I work.

During the meeting it was discussed & instructed by District Collector, Tiruvallur that since the unit has obtained certification from Institute of Remote sensing, Anna University stating that the proposed site for Ash dyke lagoon – I is out of CRZ Zone as per existing approved Coastal Zone Management may allow the

TAMIL NADU POLLUTION CONTROL BOARD

M/s NTPC Tamil Nadu Energy Company Ltd to resume the work in respect of construction of Ash Dyke lagoon – I

In this regard, DEE, Gummidipoondi vide reference 9th cited has requested the Board for necessary orders for issue of letter to the unit of M/s. Tamil Nadu Energy Company Limited (NTECL)to resume the work in respect of construction of Ash Dyke lagoon – I.

In view of the above, the unit is hereby permitted to resume the work in respect of construction of Ash Dyke lagoon – I subject to the following conditions.

1. The unit shall ensure that the Ash Dyke lagoon - I must be constructed so that wastewater in the lagoon cannot intersect any underlying seasonal water table.
2. The Ash Dyke lagoon -I must be constructed so as not to be liable, as far as practicable, to inundation or damage from flood waters
3. The Ash Dyke lagoon - I must be constructed to ensure that the contents of the lagoon do not overflow into waters or onto land in a place from which they are reasonably likely to enter any waters.
4. The unit shall ensure to monitor the mangrove plantation for its success growth.
5. The unit shall maintain Buffer zone of 50 m width between the bund and mangrove plantation.
6. The unit shall make a toe drain around the ash dyke and the seepage water collected in the toe drain shall be totally reused in power plant.
7. The unit shall ensure that the discharge of ash to the dyke should be in slurry form only and also to provide an adequate water cover to maintain the ash dyke to prevent fugitive emission.
8. Regular sampling and monitoring of wastewater quality is to be done to assess ongoing lagoon effectiveness and determine pollutant loads
9. The unit shall furnish photographs of the construction of the ash dyke lagoon – I at all stages to the Board
10. The unit shall ensure that the soil or other construction materials arising due to the construction shall not be stored or disposed in CRZ area
11. The unit shall collect water samples from open wells and bore wells in the nearby areas (1 Km radius) and analyse the samples for all parameters before and after the construction of the ask dyke lagoon – I and furnish report of analysis to the Board.

12. The unit shall provide monitoring wells around the ash dyke lagoon, so as to monitor the water quality before and after the construction of the lagoon – I

13. The unit shall comply with the recommendations specified in the report of MS Swaminathan Research Foundation.

The receipt of the letter may be acknowledged

For Member Secretary

Copy to

1. The Joint Chief Environmental Engineer (Monitoring),
   Tamil Nadu Pollution Control Board,
   Chennai Region.

2. The District Environmental Engineer,
   Tamil Nadu Pollution Control Board,
   Gummidipoondi.

3. File.

→ GM(OPN)
→ GM(TS)/GM(HR)
→ AGM(Prod)/AGM(Env/Safety)

Copy for kind information

i) Director (operations), NTPC Ltd.
ii) ED(SR)
iii) ED(Env/Safety)

TAMILNADU POLLUTION CONTROL BOARD

The authorization is issued subject to the terms and conditions specified in Form-2 and special conditions annexed.

Sd-xxx
Member Secretary

To

The Chief Executive officer,
M/s. NTPC Tamilnadu Energy Company Ltd.,
S.F. No. 1556 to Vallur, Ponneri Taluk,
Tiruvallur District.

Copy to

1. The Joint Chief Environmental Engineer,
   Tamill Nadu Pollution Control Board,
   Ambattur.

2. The District Environmental Engineer,
   Tamill Nadu Pollution Control Board,
   Tiruvallur.

3. BMS.

4. Technical File.

//Forwarded by Order//

For Member Secretary

TAMILNADU POLLUTION CONTROL BOARD

SPECIAL CONDITIONS

PART - 1

ON SITE GENERAL STORAGE REQUIREMENTS

1. Any increase in quantity change in category handling operations shall be brought to the notice of the Board and fresh authorization is to be obtained.
2. The unit may store hazardous waste on site for a maximum period of 90days a maximum quantity of 10,000kgs. or a truck load whichever is less.
3. The unit shall not store the hazardous waste on open ground. It shall be stored in closed containers in an isolated area earmarked for the purpose within the premises(it shall not be accessible to rain water)
4. The unit shall mark each container holding the hazardous wastes with marking "Hazardous Wastes" both in English and Tamil. The containers shall be labelled as per the rules prescribed in motor Vehicles Rules, 1989.
5. The storage area should be fenced properly and a sign of danger should be placed at the storage site.
6. The containers holding the hazardous wastes should be kept in good condition and made of materials which can withstand the physical and environmental conditions during storage and transportation.
7. The unit shall provide requisite safety devices like safety mask, goggles, hand gloves, gumboots, fire fighting systems and maintain the same in working condition.
8. The containers holding the hazardous waste should be closed with lids during storage, except when it is necessary to add or remove wastes.
9. Only properly cleaned containers should be used for storage of hazardous wastes.
10. The unit shall notify to the Tamilnadu Pollution Control Board in Form -1 at least once in 90 days as per the permitted on site storage period regarding the quantity of waste generated and total accumulated quantity. A containment system should be provided at the area of storage of hazardous waste within three months from the date of issue of authorization. It shall be designed and operated as follows.
    a) The base underlying the containers should be constructed in such a way that it is free of cracks or gaps and it is sufficiently impervious to contain leaks spills and accumulated precipitation until the collected material is detected and removed.
    b) The system should be designed and operated to drain and remove liquids which may result from leak, spillage or precipitation unless the containers are elevated or otherwise protected from contact with accumulated solids.

c) The containment system should have sufficient capacity to contain 10% of the volume of containers or the largest container whichever is greater. Containers that do not contain free liquids need not be considered in this determination.

d) Run-on into the containment systems should be prevented unless the collection system has sufficient excess capacity in addition to that mentioned in paragraph (c) of this section to contain any run-on which might enter the system.

e) The containment should have a sump to collect any leak, spillage or precipitation. Spilled or leaked waste and accumulated precipitation should be removed from sump or collection area timely as it is necessary to prevent overflow of the collection system.

11.

a. Containers holding ignitable or reactive waste should be stored atleast 15meters (50feet) away from the plant operational area. "No Smoking" signs should be placed conspicuously wherever ignitable or reactive waste is stored.

b. Container holding the wastes other than ignitable or reactive should be stored atleast 6 meters (20feet) away from the plant operation area.

12. Special Requirement for Non-compatible Wastes:

Non- Compatible hazardous wastes and materials, should not be mixed int eh same transportation or storage container.

Hazardous wastes should not be placed in an unwashed container that previously held any chemical material or non-compatible wastes. A storage container holding hazardous waste that is non-compatible with any waste or other materials stored near by in other containers, piles, open tanks or surface impoundments should be separated from other materials or protected from them by means of a dike, beam, wall or other suitable devices.

13. The unit shall analyse the hazardous wastes for the parameters such as specific gravity, percentage solids, chemical composition, flash point, reactivity, toxicity, explosivity, calorific value and bio-degradability whichever is applicable. In addition the leachate generated shall also be analysed. The report of analysis is to be maintained at the facility.

Annexure-G

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: 23rd 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,

23/10/19

(Praveen Kumar)
Under Secretary to the Govt. of India
Tel.No.23715507 ext. 281
e-mop@nic.in

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