

## **Summary of Issues: MTPS-II (2x195 MW)**

**(In compliance with CERC notice dated 07.06.2024)**

The major highlights of the MTPS-II (390 MW) Truing up petition are as follows: -

- 1) The present petition is being filed Under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-III of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 and Chapter-3, Regulation-13 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 for **revision of tariff of MTPS Stage-II (2x195 MW) for the period from 01.04.2024 to 31.03.2029** after the truing up exercise based on actual expenditures as on 31.03.2024.
- 2) Kanti Bijlee Utpadan Nigam Limited (hereinafter called KBUNL), fully owned subsidiary company of NTPC Ltd. has amalgamated with NTPC Ltd. on 26.08.2022. NTPC Limited has now taken over the business of KBUNL.
- 3) MTPS-II is located at Muzaffarpur District of Bihar and comprises of two units of 195 MW each with their respective COD's as 18.03.2017 & 01.07.2017. The power generated from MTPS-II is being supplied to various discoms as per MoP allocation and respective PPAs including Bihar State Power Holding Company Ltd (BSPHCL); North Bihar Power Distribution Company Ltd (NBPDC), South Bihar Power Distribution Company Ltd. (SBPDCL), Jharkhand Bijlee Vitaran Nigam Ltd., Grid Corporation of Orissa Limited (GRIDCO), Damodar Valley Corporation (DVC), Power Department, Govt of Sikkim and West Bengal State Electricity Distribution Company Ltd.(WBSEDCL).
- 4) The tariff determination for MTPS-II for the period from 01.04.2019 to 31.3.2024 is under consideration of Hon'ble Commission in Petition No. 446/GT/2020 and the order is awaited. The capital cost claimed in 446/GT/2020 for tariff determination includes the projected additional capital expenditure for the

period 2019-24. The order of said petition is still pending with Hon'ble Commission. Further, the petitioner vide affidavit dated 22.11.2024 had filed a separate true up petition for the period 01.04.2019 to 31.03.2024 for revision of tariff in line with the applicable provisions of Tariff Regulations 2019.

- 5) Hon'ble Commission may please allow the claims of water charges, capital spares and security expenses for the instant station as per projected, as claimed by the Petitioner in Form 3A of Appendix-I.
- 6) Further, It is submitted that the expenditure towards the ash transportation charges is recurring in nature and the Petitioner has been incurring ash transportation expenditure in its stations in the current tariff period also. In case the same is permitted to be recovered after the issuance of the tariff order for the period 2024-29, there will be additional liability on the beneficiary on account of the interest payment for the period till the time the tariff petitions for the period 2024-29 is decided. To avoid the interest payment liability of the beneficiaries, it is prayed that the petitioner may be allowed to recover/ pass on the ash transportation charges on a monthly basis based on auditor certificates subject to true-up at the end of the 2024-29 period.
- 7) The Petitioner further respectfully submits that the wage/ salary revision of the employees of the Petitioner will be due with effect from 1.1.2027. As per Regulation 36(1)(8) of the Tariff Regulations 2024, the impact on account of implementation of wage/ pay revision shall be allowed at the time of truing up of tariff. The Petitioner therefore craves liberty to approach the Hon'ble Commission for allowing the impact on account of implementation of wage/ pay revision of the employees of the Petitioner with effect from 1.1.2027, based on the actual payments whenever paid by it.

- 8) The capitalization of certain original scope balance works of CHP, AHP, AWRS, Ash Dyke, Civil works, Township, Railway siding/MGR etc. under original scope were projected in instant petition 446/GT/2020 and envisaged to be capitalized in 2024-29 period. However, these works have got spilled over on account of unforeseen circumstances such as impact of Covid-19 Pandemic, land acquisition issues, Closure of Mahatma Gandhi Setu and Rajendra Setu for plying of heavy vehicles, Excess rainfall during & Ban on Mining of Sand in Bihar etc.. These had affected the work progress as same was beyond the reasonable control of the petitioner.. Hon'ble Commission may please to grant liberty to petitioner for capitalization of balance works of original scope after Cut-off date.
- 9) It is respectfully submitted that since the format for Form 15 has been changed in Tariff Regulations, 2024 and was notified in the month of June'2024, the Petitioner could not have been aware about the said changes earlier, hence the Petitioner did not maintain the data required in new format of Form 15 of Tariff Regulations, 2024. Therefore, this Hon'ble Commission may kindly exempt the Petitioner from furnishing the data of coal in terms of new format of Form 15 of the Tariff Regulations, 2024 & may be allowed to furnish the details of coal for FY 2023-24 in terms of the prescribed format of Form-15 of the Tariff Regulations, 2019.
- 10) Further the petitioner has installed Emission Control (ECS) System for controlling Nox emissions and the tariff for the same has been claimed as a separate stream under regulation 29 of Central Electricity Regulatory Commission (Terms and Condition of Tariff) Regulations, 2024. The tariff forms for the ECS (DeNox) System are attached as **Appendix-IA**.

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

**PETITION NO.....**

**IN THE MATTER OF** : Petition Under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-III of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 and Chapter-3, Regulation-9 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 for approval of tariff of **Muzaffarpur Thermal Power Station, Stage-II (2x195 MW)** (hereinafter referred to as '**MTPS Stage-II**' ) for the period from **01.04.2024 to 31.03.2029**.

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

**PETITION NO.....**

**IN THE MATTER OF** : Petition Under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-III of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 and Chapter-3, Regulation-9 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 for approval of tariff of **Muzaffarpur Thermal Power Station, Stage-II (2x195 MW)** (hereinafter referred to as '**MTPS Stage-II**') for the period from **01.04.2024 to 31.03.2029.**

**AND**  
**IN THE MATTER OF**

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

Respondents	1.	Bihar State Power Holding Company Ltd (BSPHCL), Vidyut Bhawan, Bailey Road Patna - 800021.
	2.	North Bihar Power Distribution Company Ltd (NBPDC), Vidyut Bhawan, Bailey Road Patna- 800021.
	3.	South Bihar Power Distribution Company Ltd (SBPDCL), Vidyut Bhawan, Bailey Road Patna - 800021.
	4.	Jharkhand Bijlee Vitaran Nigam Ltd., Engineering Building, HEC Township, Dhurwa, Ranchi – 834 004
	5	GRIDCO Ltd., Janpath, Bhubaneshwar – 751 022

	6	West Bengal State Electricity Distribution Company Ltd., Vidyut Bhawan, Bidhannagar, Block DJ, Sector-II, Salt Lake City, Kolkata – 700 091
	7	Power Department, Govt. of Sikkim, Kazi Road, Gangtok, Sikkim – 737 101
	8	Damodar Valley Corporation (DVC), DVC Towers, VIP Road, Kolkata, West Bengal – 700 054

The Petitioner humbly states that:

- 1) The Petitioner herein NTPC Ltd. (hereinafter referred to as '**Petitioner**' or '**NTPC**'), is a company incorporated under provisions of the Company Act, 1956 and a Government Company as defined under Section 2(45) of the Companies Act, 2013. Further, NTPC is a 'Generating Company' as defined under Section 2(28) of the Electricity Act, 2003.
- 2) In terms of Section 79(1)(a) of Electricity Act, 2003, the Hon'ble Commission has been vested with the functions to regulate the tariff of NTPC, being a Generating Company owned and controlled by the Central Government. The regulation of the tariff of NTPC is as provided under Section 79(1)(a) read with Section 61, 62 and 64 of the Electricity Act, 2003 and the Regulations notified by the Hon'ble Commission in exercise of powers under Section 178 read with Section 61 of the Electricity Act, 2003.
- 3) The Petitioner is having power stations/ projects at different regions and places in the country. **Muzaffarpur Thermal Power Station, Stage-II (2x195 MW)** (hereinafter referred to as **MTPS Stage-II**) is one such station located in the State of Maharashtra. The power generated from **MTPS Stage-II** is being supplied to the respondents herein above.
- 4) The Hon'ble Commission has notified the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2024 (hereinafter 'Tariff Regulations 2024') which came

into force from 01.04.2024, specifying the terms & conditions and methodology of tariff determination for the period 01.04.2024 to 31.03.2029.

5) Regulation 9(2) of Tariff Regulations 2024 provides as follows:

*“(2) In case of an existing generating station or unit thereof, or transmission system or element thereof, the application shall be made by the generating company or the transmission licensee, as the case may be, by 30.11.2024 , based on admitted capital cost including additional capital expenditure already admitted and incurred up to 31.3.2024 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the tariff period 2024-29 along with the true up petition for the period 2019-24 in accordance with the CERC (Terms and Conditions of Tariff) Regulations, 2019.”*

In terms of above, the Petitioner is filing the present petition for determination of tariff for **MTPS Stage-II'** for the period from 01.04.2024 to 31.03.2029 as per the Tariff Regulations 2024.

6) The tariff of the **MTPS Stage-II'** for the tariff period 1.4.2019 to 31.3.2024 was filed by petitioner before the Hon'ble Commission in Petition No. 446/GT/2020 in accordance with the CERC (Terms & Conditions of Tariff) Regulations 2019. The order is yet to be issued by Hon'ble Commission. Further, the petitioner vide affidavit dated 22.11.2024 had filed a separate true up petition for the period 01.04.2019 to 31.03.2024 for revision of tariff in line with the applicable provisions of Tariff Regulations 2019.

7) It is submitted that no order has been issued by Hon'ble Commission in main petition 446/GT/2020 for tariff period 2019-24. The projected capital cost of Rs 3288.15 Cr. as on 31.03.2024 based on the projected capital expenditure for the 2019-24 period in the aforesaid petition. However, the actual closing capital cost as on 31.03.2024 has been worked out in the true-up petition filed vide affidavit dated 22.11.2024 as Rs 3586.72 Crs based on the actual expenditure after truing up exercise for the period 2019-24. Accordingly, the Petitioner has adjusted an amount of Rs. 298.57 Cr from the admitted capital cost as on 31.03.2024 and accordingly the opening capital cost as on 01.04.2024 has been considered as Rs 3586.72 Cr. in the instant petition. The Hon'ble Commission may be pleased to accordingly

adopt this adjustment in the projected capital cost as on 31.3.2024 and determine the tariff in the present petition for the period 2024-29.

- 8) The capital cost claimed in the instant petition is based on the opening capital cost as on 01.04.2024 considered as above and projected estimated capital expenditures claimed for the period 2024-29 under Regulation 19 and Regulation 24, 25 and 26 of the Tariff Regulations, 2024.
- 9) The Petitioner further respectfully submits that as per Regulation 36(1)(6) of the Tariff Regulations 2024, the water charges, security expenses, ash transportation expenses and capital spares consumed for thermal generating stations are to be allowed separately. The details in respect of water charges such as type of cooling water system, water consumption, rate of water charges as applicable for 2023-24 have been furnished below. Water charges claimed may be allowed in tariff based on the same for the 2024-29. In accordance with provision of the Regulations, the petitioner shall be furnishing the details of actual for the relevant year at the time of truing up and the same shall be subject to retrospective adjustment.

Description	Remarks
Type of Plant	Coal based station
Type of cooling water system	Induced type cooling Water
Consumption of Water	45 Cusecs (allocated)
Rate of Water charges	3.9595 Rs/m <sup>3</sup>
Total Water Charges	As per Form-3A

- 10) Similarly, the Petitioner is claiming the security & ash transportation expenses based on the estimated expenses for the period 2024-29, the same shall be subject to retrospective adjustment based on actuals at the time of 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 36(1)(6) based on actual consumption of spares during the period 2024-29.
- 11) However, it is submitted that the expenditure towards the ash transportation charges is recurring in nature and the Petitioner has been incurring ash transportation expenditure in its



stations in the current tariff period also. In case the same is permitted to be recovered after the issuance of the tariff order for the period 2024-29, there will be additional liability on the beneficiary on account of the interest payment for the period till the time the tariff petitions for the period 2024-29 is decided. To avoid the interest payment liability of the beneficiaries, it is prayed that the petitioner may be allowed to recover/ pass on the ash transportation charges on a monthly basis subject to true-up at the end of the 2024-29 period.

- 12) The petitioner humbly submits that petition no. 227/MP/2024 has been filed by the petitioner concerning Ash Transport Expenditure for its stations which is under active consideration of this Hon'ble Commission and the outcome of the said petition will be applicable to the instant petition also.
- 13) The Petitioner further respectfully submits that the wage/ salary revision of the employees of the Petitioner will be due with effect from 1.1.2027. As per Regulation 36(1)(8) of the Tariff Regulations 2024, the impact on account of implementation of wage/ pay revision shall be allowed at the time of truing up of tariff. The Petitioner therefore craves liberty to approach the Hon'ble Commission for allowing the impact on account of implementation of wage/ pay revision of the employees of the Petitioner with effect from 1.1.2027, based on the actual payments whenever paid by it.
- 14) The Petitioner humbly submits that the pay/wage revision for the employees of the Petitioner will be due w.e.f. 01.01.2027. Further, the wage/pay revision of CISF and Kendriya Vidyalaya employees will also be due for revision during the tariff period 2024-29. Regulation-36(1)(8) of CERC (Terms & Conditions of Tariff) Regulations-2024 provides as below:

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

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

be pleased to consider the impact of wage/pay revision as an additional impact on O&M and allow the same as additional O&M over and above the normative O&M.

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

16) It is submitted that the capitalization of certain works under original scope / change in Law projected earlier to be capitalized within cut off date (31.07.2020), got spilled on account of unforeseen circumstances beyond the reasonable control of the Petitioner despite regular monitoring & follow-up by the Petitioner. It is submitted that the unavoidable and uncontrollable reason like onset of global pandemic COVID-19 first and second , delay due to shortage of oxygen supply during COVID-19, has delayed the completion of balance works beyond above projection submitted for consideration to the Hon'ble Commission.

(i) It is humbly submitted that the majority of above mentioned works were not COD related, the balance works were pertaining mainly to FDPS, AC/ Ventilation, AWRS, LT Switchgear, HT Switchgear, Balance work of SG &TG, Lighting package, C&I works, Lighting package, , MGR/Railway siding Works, Township related works, Main plant Civil works, etc.

(ii) The unavoidable and uncontrollable are briefly stated as –

- a) COVID-19 pandemic first wave
- b) COVID-19 pandemic second wave
- c) Delay due to shortage of oxygen supply during COVID-19, second wave
- d) COVID-19 impact in totality
- e) Land related issue
- f) Closure of Mahatma Gandhi Setu and Rajendra Setu for plying of heavy vehicles.
- g) Excess rainfall during the period from May & September 2016, May 2017 and April 2018.
- h) Ban on Mining of Sand in Bihar in compliance to the hon'ble National Green Tribunal Eastern Zone Bench, finance centre, Kolkata office order no. 07/2016/EZ dated 19.01.2016.

## COVID-19 PANDEMIC FIRST WAVE & SECOND WAVE

- (i) It is submitted that the Year 2020 witnessed an unprecedented health and humanitarian crisis arising because of Novel COVID Viral epidemic not only in India but around the Globe. The various restrictions imposed in relation to it, have resulted in the adverse impact on the performance of the industrial activities. The COVID-19 epidemic has affected many countries and the World Health Organization has declared it 'Pandemic'. Government of India (GOI) has been taking several proactive preventive and mitigating measures starting with progressive tightening of international travel, issue of advisories for the members of the public, setting up quarantine facilities, contact tracing of persons infected by the virus, vaccination on mass scale and various social distancing measures. Several advisories have been issued to States and Union Territories (UTs) for taking necessary measures to contain the spread of this virus.
  
- (ii) It is submitted that due to the complete lockdown from 25.03.2020 to 31.05.2020 (68 days )during the above-mentioned period the workers/ laborer's left the site and there was complete demobilization of workers/ laborer's bringing the balance construction activities to the standstill. Further, the supply of the material / equipment's from manufacturers was also completely disrupted due to issues on supplies as well as logistics.
  
- (iii) Subsequently, the Government of India ('**GoI**') declared unlocking of lockdown in phased manner w.e.f. 01.06.2020. The Petitioner followed up the case with contractors and other agencies for mobilization of workforce but could not succeeded due to ongoing fear / panic due to Covid-19 among the laborers and restrictions at borders for any interstate / inter-district movements. Various documents pertaining to COVID-19 guidelines issued by GoI / Government of Bihar are attached are enclosed at **Annexure-1(Colly)**..
  
- (iv) It is submitted that the Petitioner was in continuous touch with the contracting agency for re-mobilization of workforce. Petitioner efforts in this regard comprises of regular

and timely communication with Project Manager of the various agencies for mobilization of work force and ensuring payment of applicable wages in line with GOI directives. However, from 22.07.2020 to 31.08.2020, there was ban on inter-district travel in the entire state as per Assam State Disaster Management Authority Order dated 18.07.2020. Hence again manpower mobilization reduced below May 2020 level. Since, most works are in completion stage and requires short period of deployment of such manpower, the persons are unable to come due to the mandatory home quarantine period on arrival.

- (v) After relaxation in some of the restrictions (imposed during Covid-19 1st wave) by Central governments and State Governments, manpower was partially mobilized by some of the agencies after the rigorous follow ups by Petitioner. As evident from data from table 1, even 5 months after the advent of first wave in Mar-20, manpower never come on the level which was before covid-19 outbreak.
- (vi) It is also submitted that significant number of persons were affected during Covid-19 1st wave after the unlock was initiated. In Order to curb the infection effectively and save precious human life, NTPC management had to impose local level restrictions at project site in line with central government and state guidelines. This led to complete stoppage of erection activities at site.
- (vii) While India had not fully recovered from the first wave, the second wave hit the country the hardest in terms of fatalities. The pandemic not only resulted in large number of persons getting infected which consequently at the same time resulted in severe reduction of manpower at site. Also, the available manpower was required to practice COVID appropriate behavior and other precautions due to which work progress was severally hampered. Copies of various Orders and guidelines issued by Gol and letters from Contractors during the second wave of Covid-19 are attached at **Annexure--2 (Colly)**.

- (viii) The second wave has led to further State-imposed restrictions, impacting the economy while putting several restrictions in place on key businesses. This was followed by a slowdown in labor-intensive industries involving manufacturing, real estate, construction, and infrastructure, on account of the reduced labor availability during this period. Damaging effects of Covid-19 on Indian economy were such that Indian economy shrunk by over 7% in first quarter of 2020-21. Also, manufacturing output contracted by half from March 2020- March 2021. Further the index for Industrial production (IIP) nosedived to (-) 9.6% in year 2020-21 as depicted below:-



### **SHORTAGE OF OXYGEN SUPPLY DURING COVID-19, SECOND WAVE**

- (ix) It is submitted that during second wave of Covid-19, there was huge demand for oxygen by hospitals for saving the precious life of people. There was shortfall in supply of oxygen across the country and any impediment in the supply of medical oxygen would have critically impacted the management of patients suffering from COVID-19 disease across the country. Accordingly, GOI vide Order dated 22.04.2021 restricted the supply of oxygen for industrial purpose by manufactures and suppliers wef 22.04.2021. A copy of Notification is attached hereto and marked as **Annexure-3**.
- (x) It is further submitted that the Industrial oxygen is a critical input for erection activities such as metal cutting and welding and shortage of same resulted in stoppage of erection activities. This also resulted in delay in manufacturing of Materials Ordered to various sub vendors by KBUNL / Main Contractors. With the fall in daily cases of

Covid-19 with effect from end of July 2021 the oxygen supply to industries improved gradually.

- (xi) It is also submitted that on account of this pandemic, manufacturing units of various vendors worked at part capacity, causing the delay in supply of material at site. A lot of critical items and supplies from vendors, falling in red/containment zones, could not be dispatched on time. Due to suspension of public transport services, the periodic visits of technical advisors/ experts for supervision of the Erection / commissioning of various equipments / systems could not take place promptly. Moreover, the non-availability of technical advisors for some of the systems/subsystems and disruption in the supply chain management also resulted in delay in the work.
- (xii) Further, petitioner has also suffered many other hurdles beyond control as predicted in para 16(ii) ( e) to (h). Petitioner will submit detail reasons for these reasons through additional submission.
- (xiii) That in view of the above, the Petitioner prays before this Hon'ble Commission to consider the expected delay in completion of above works and allow the capitalization of the same for the tariff purpose during the tariff period 2019-24 by relaxing the cut-off date beyond 31.03.2022 up to 31.03.2024 exercising its powers under 'Power to Relax' under Regulation-76 and 'Power to Remove Difficulty' under Regulation-77 of Hon'ble Commission Tariff Regulations, 2019, which state as under:

**Quote**

**76. Power to Relax:**

*The Commission, for reasons to be recorded in writing, may relax any of the provisions of these regulations on its own motion or on an application made before it by an interested person.*

**77. Power to Remove Difficulty:**

*If any difficulty arises in giving effect to the provisions of these regulations, the Commission may, by Order, make such provision not inconsistent with the*

*provisions of the Act or provisions of other regulations specified by the Commission, as may appear to be necessary for removing the difficulty in giving effect to the objectives of these regulations.*

**Unquote**

- (xiv) The situation is completely beyond the control of the Petitioner. In view of above submissions, it is prayed that Hon'ble Commission may be please to allow these works after the cut-off date of the station and allow the capitalization of works under original scope / change in law during 2024-29.
- 17) It is submitted that in terms of Regulation 60 (5) of the Tariff Regulations 2024, the Petitioner is required to furnish details qua providing the details of Landed Price & Gross Calorific Value ("GCV") of coal in Form 15. It is further submitted that the Petitioner in terms of Regulation 40 of the Tariff Regulations 2019 was required to furnish the details for Landed Price & GCV of coal also as per Form 15 of the Tariff Regulations, 2019.
- 18) However, in so far as the present Petition is concerned, the Petitioner has prepared & submitted the data of coal as per Form 15 of the Tariff Regulations, 2019. The same is because of the following reasons:-
- (a) This Hon'ble Commission had notified the Tariff Regulations, 2019 on 07.03.2019 and the same was in effect till 31.03.2024.
  - (b) The Petitioner being a diligent utility has been seamlessly providing the said data of coal in terms of the prescribed format (i.e. Form 15 of Annexure-I (Part I)) of the Tariff Regulations, 2019 to this Hon'ble Commission for computation of Interest on Working Capital.
  - (c) Thereafter, this Hon'ble Commission on 15.03.2024 notified the Tariff Regulations, 2024, wherein the format of Form 15 was changed/ amended by this Hon'ble

Commission and a new format was placed in the Tariff Regulations 2024 in the month of June'2024.

(d) By virtue of the said change, the Petitioner has been obligated to furnish the data of coal for its existing plants month wise for the preceding 12 months i.e. for FY 2023-24 for computation of Interest on Working Capital.

- 19)** It is humbly submitted that by virtue of the Tariff Regulations, 2024, this Hon'ble Commission has added a new format/ revised the format of Form-15 which has not prescribed in the past Tariff Regulations i.e. of 2019. Hence, it is only now (in the Tariff Regulations 2024) that the Petitioner has been obligated to furnish the data of coal as per the new format of Form-15.
- 20)** It is respectfully submitted that since the format for Form 15 has been changed in Tariff Regulations, 2024 and was notified in the month of June'2024, the Petitioner could not have been aware about the said changes earlier, hence the Petitioner did not maintain the data required in new format of Form 15 of Tariff Regulations, 2024.
- 21)** Therefore, this Hon'ble Commission may kindly exempt the Petitioner from furnishing the data of coal in terms of new format of Form 15 of the Tariff Regulations, 2024 & may be allowed to furnish the details of coal for FY 2023-24 in terms of the prescribed format of Form-15 of the Tariff Regulations, 2019.
- 22)** In light of the above submissions, it may kindly be noted that no prejudice shall be caused to any party if the Petitioner is allowed for providing the details of Landed Price & GCV of coal to this Hon'ble Commission in terms of Form 15 of the Tariff Regulations, 2019 as the value of Landed Price & GCV of coal will remains unaffected.
- 23)** It is submitted the Petitioner has served the copy of the Petition on to the Respondents mentioned herein above and has posted the Petition on the company website i.e. [www.ntpc.co.in](http://www.ntpc.co.in).



- 24) In accordance with the 'Conduct of Business Regulations 2023' of the Hon'ble Commission, the Petitioner shall publish a notice about such filing in at least two daily leading digital newspapers one in English language and another in any of the Indian languages, having wide circulation in each of the States and Union Territories where the beneficiaries are situated, as per Form 14 appended to these regulations. Subsequently, the Petitioner shall submit the proof of publications as soft copies of the publications under an affidavit through the e-filing portal of the Hon'ble Commission within one week from the date of publication. Further, the Petitioner shall also submit the detail of expenses incurred for publication of the notice along with the prayer for recovery of Publication Expenses as per Regulation-94 of CERC Tariff Regulations 2024.
- 25) The present petition is filed on the basis of norms specified in the Tariff Regulations 2024. It is submitted that the petitioner is in the process of installing the Emission Control Systems (ECS) in compliance of the Revised Emission Standards as notified by MOEF vide notification dated 07.12.2015. Completion of these schemes in compliance of revised emission norms will affect the Station APC, Heat Rate, O&M expenses etc. In addition the availability of the unit/ station would be also affected due to shutdown of the units for installation of ECS. The petitioner would be filing the details of the same in terms of the Regulation 29 of CERC (Terms & Conditions of Tariff) Regulations 2024.

Further the petitioner has installed Emission Control (ECS) System for controlling Nox emissions and the tariff for the same has been claimed as a separate stream under regulation 29 of Central Electricity Regulatory Commission (Terms and Condition of Tariff) Regulations, 2024. The tariff forms for the ECS (DeNox) System are attached as **Appendix-IA**.

- 26) The filing fee for the instant Petition has been paid for FY 2024-25 vide Payment Reference No **UTR No. 37c568eba62158b7b321** dated 24.04.2024 as per Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012, as amended from time to time. For subsequent years, it shall be paid as per the provisions of CERC (Payment of Fee) Regulations 2012. Further, the proof of payment of fees is being submitted in Form I specified under Regulation 12 of the Central Electricity Regulatory Commission (Payment of Fees)

Regulations, 2012, as amended from time to time. Hon'ble Commission may be pleased to take the above into consideration and allow the recovery of filing fee for the instant station as per Regulation-94 of CERC Tariff Regulations 2024.

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

### **Prayers**

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

- i) Approve tariff of **MTPS Stage-II** for the tariff period 01.04.2024 to 31.03.2029.
- ii) Allow the work beyond cut-off date for the instant station under Regulation-102 of CERC Tariff Regulations 2024 i.e. Power to relax
- iii) Allow the recovery of filing fees as & when paid to the Hon'ble Commission and publication expenses from the beneficiaries.
- iv) Allow reimbursement of Ash Transportation Charges directly from the beneficiaries on monthly basis subject to true up.
- v) Allow the recovery of pay/wage revision as additional O&M over and above the normative O&M.
- vi) Approve Supplementary Tariff of MTPS-II for the DeNOx System from 01.04.2024 to 31.03.2024
- vii) Pass any other order as it may deem fit in the circumstances mentioned above.

**Petitioner**

**Noida**

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

**PETITION NO.....**

**IN THE MATTER OF**

: Petition Under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-III of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 and Chapter-3, Regulation-9 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 for approval of tariff **Muzaffarpur Thermal Power Station, Stage-II (2x195 MW)** (hereinafter referred to as '**MTPS Stage-II**' ) for the period from 01.04.2024 to 31.03.2029



**AND**  
**IN THE MATTER OF**

**Petitioner:**

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

**Respondents:**

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

**AFFIDAVIT**

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

1. That the deponent is the Additional General Manager (Commercial) of the Petitioner NTPC Ltd. and is well conversant with the facts and the circumstances of the case and therefore competent to swear this affidavit.

प्रशान्त चतुर्वेदी / PRASHANT CHATURVEDI  
अपर महाप्रबन्धक (वाणिज्यिक)  
Additional General Manager (Commercial)  
एन टी पी सी लिमिटेड / NTPC LIMITED

2. That the accompanying Petition under Section 62 and 79 (1) (a) of the Electricity Act, 2003, has been filed by my authorized representative under my instruction and the contents of the same are true and correct to the best of my knowledge and belief
3. That the contents of Para 1 to 27 of the facts as mentioned in the Petition are true and correct based on the my personal knowledge, belief and records maintained in the office and the contents of Para .... to .... of the Petition are believed to be true on the basis of the legal advice received.
4. That the annexures annexed to the Petition are correct and true copies of the respective originals.
5. That the Deponent has not filed any other Petition or Appeal before any other forum or court of law with respect to the subject matter of the dispute.



प्रशान्त चतुर्वेदी/PRASHANT CHATURVEDI  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED

**Verification:**

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

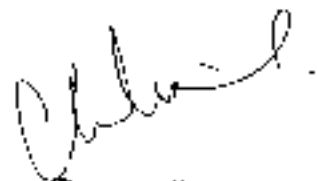
Verified at Noida (UP) on this ..... day of ..... 2024.



**ATTESTED**

YOGENDRA SINGH  
 NOTARY NOIDA  
 R. NAGAR (U.P.) INDIA

12.17 NOV 2024  
 20



(Deponent)  
 प्रशान्त चतुर्वेदी/PRASHANT CHATURVEDI  
 अपर महाप्रबन्धक (वाणिज्यिक)  
 Addl. General Manager (Commercial)  
 एन टी पी सी लिमिटेड/NTPC LIMITED

**TARIFF FILING FORMS (THERMAL)**

**FOR DETERMINATION OF TARIFF**

**FOR**

**MTPS-II (2x195 MW)**

(From 01.04.2024 to 31.03.2029)

**PART-I**

**APPENDIX-I**

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

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

## Provided yearwise for the period 2019-24

\*\* Additional Forms

PART-I

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

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

Form No.	Title of Tariff Filing Forms (Thermal)	Tick
FORM-A	Abstract of Capital Cost Estimates	NA
FORM-B	Break-up of Capital Cost for Coal/Lignite based projects	NA
FORM-C	Break-up of Capital Cost for Gas/Liquid fuel based Projects	NA
FORM-D	Break-up of Construction/Supply/Service packages	NA
FORM-E	Details of variables , parameters , optional package etc. for New Project	NA
FORM-F	Details of cost over run	NA
FORM-G	Details of time over run	NA
FORM -H	Statement of Additional Capitalisation during end of the useful life	✓
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

(Petitioner)

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

## Summary of Tariff

<b>Name of the Petitioner:</b>	<b>NTPC Limited</b>
<b>Name of the Generating Station:</b>	<b>MTPS-II (2x195 MW)</b>
<b>Place (Region/District/State):</b>	<b>Eastern Region /Bihar</b>

Amount in Rs. Lakhs

S. No.	Particulars	Unit	Existing 2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7	8	9
1.1	Depreciation	Rs Lakh	17,244.87	17,471.35	17,898.55	18,624.31	19,297.11	20,070.88
1.2	Interest on Loan	Rs Lakh	11,679.26	10,526.72	9,613.41	8,998.56	8,267.04	7,594.46
1.3	Return on Equity	Rs Lakh	20,135.27	20,399.71	20,890.02	21,718.26	22,488.84	23,378.86
1.4	Interest on Working Capital	Rs Lakh	4,164.45	4,192.37	4,253.71	4,326.04	4,403.37	4,502.77
1.5	O&M Expenses	Rs Lakh	19,534.39	19845.02	21092.88	22281.03	23703.26	25363.40
1.6	Special Allowance (If applicable)	Rs Lakh	NA					
	<b>Total</b>	Rs Lakh	<b>72758.24</b>	<b>72435.16</b>	<b>73748.57</b>	<b>75948.20</b>	<b>78159.62</b>	<b>80910.38</b>
2.1	Landed Fuel Cost (coal/gas/RLNG/liquid)	Rs/Ton		3,832.06				
	(%) of Fuel Quantity	(%)						
2.2	Landed Fuel Cost (coal from Integrated mine) as per FSA, if any, approved by beneficiaries or as per allocation of coal quantity	Rs/Ton						
	(%) of Fuel Quantity	(%)						
2.3	Landed Fuel Cost Imported Coal			NA				
	(%) of Fuel Quantity							
2.4	Landed Fuel Cost (coal/gas/RLNG/liquid) other than FSA	Rs/Ton		NA				
	(%) of Fuel Quantity	(%)						
2.5	Landed Fuel Cost Imported Coal other than FSA.			NA				
	(%) of Fuel Quantity							
3	Secondary Fuel							
	Secondary fuel oil cost	Rs/Unit		0.046				
	Energy Charge Rate ex-bus (Paise/kWh)	Rs/Unit		3.001				

(Petitioner)



Name of the Petitioner: NTPC Limited  
Name of the Generating Station: MTPS-II (2x195 MW)

Amount in Rs. Lakhs

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

S. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7
1	Opening Capital Cost	3,58,672.87	3,65,414.37	3,76,377.93	3,95,492.93	4,04,261.35
2	Add: Addition during the year/period	6,741.50	10,963.56	19,115.00	8,768.42	23,300.00
3	Less: De-capitalisation during the year/period	-	-	-	-	-
4	Less: Reversal during the year / period	-	-	-	-	-
5	Add: Discharges during the year/ period	-	-	-	-	-
6	Closing Capital Cost	3,65,414.37	3,76,377.93	3,95,492.93	4,04,261.35	4,27,561.35
7	<b>Average Capital Cost</b>	<b>3,62,043.62</b>	<b>3,70,896.15</b>	<b>3,85,935.43</b>	<b>3,99,877.14</b>	<b>4,15,911.35</b>

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

S. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7
1	Opening Capital Cost	358672.87	365414.37	374981.93	392345.93	400405.93
2	Add: Addition during the year / period	6741.50	9567.56	17364.00	8060.00	21800.00
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	365414.37	374981.93	392345.93	400405.93	422205.93
7	<b>Average Capital Cost</b>	<b>362043.62</b>	<b>370198.15</b>	<b>383663.93</b>	<b>396375.93</b>	<b>411305.93</b>

**Statement showing claimed capital cost eligible for RoE at one year MCLR + 350 bps subject to ceiling of 14.00% (B)**

S. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7
1	Opening Capital Cost	0.00	0.00	1396.00	3147.00	3855.42
2	Add: Addition during the year / period	0.00	1396.00	1751.00	708.42	1500.00
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	1396.00	3147.00	3855.42	5355.42
7	<b>Average Capital Cost</b>	<b>0.00</b>	<b>698.00</b>	<b>2271.50</b>	<b>3501.21</b>	<b>4605.42</b>

(Petitioner)

<b>Name of the Petitioner:</b>	<b>NTPC Limited</b>
<b>Name of the Generating Station:</b>	<b>MTPS-II (2x195 MW)</b>

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

**Amount in Rs. Lakhs**

S. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7
	<b>Return on Equity</b>					
1	Gross Opening Equity (Normal)	1,07,601.86	1,09,624.31	1,12,494.58	1,17,703.78	1,20,121.78
2	Less: Adjustment in Opening Equity	-	-	-	-	-
3	Adjustment during the year	-	-	-	-	-
4	Net Opening Equity (Normal)	1,07,601.86	1,09,624.31	1,12,494.58	1,17,703.78	1,20,121.78
5	Add: Increase in equity due to addition during the year / period	2022.45	2870.27	5209.20	2418.00	6540.00
7	Less: Decrease due to De-capitalisation during the year / period	0.00	0.00	0.00	0.00	0.00
8	Less: Decrease due to reversal during the year / period	0.00	0.00	0.00	0.00	0.00
9	Add: Increase due to discharges during the year / period	0.00	0.00	0.00	0.00	0.00
10	Net closing Equity (Normal)	1,09,624.31	1,12,494.58	1,17,703.78	1,20,121.78	1,26,661.78
11	Average Equity (Normal)	1,08,613.09	1,11,059.45	1,15,099.18	1,18,912.78	1,23,391.78
12	Rate of ROE (%)	18.782	18.782	18.782	18.782	18.782
13	<b>Total ROE</b>	<b>20,399.71</b>	<b>20,859.19</b>	<b>21,617.93</b>	<b>22,334.20</b>	<b>23,175.44</b>

**(Petitioner)**

**Name of the Petitioner:** NTPC Limited

**Name of the Generating Station:** MTPS-II (2x195 MW)

**Statement showing Return on Equity linked to SBI MCLR**

**Amount in Rs. Lakhs**

S. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7
	<b>Works eligible for RoE linked to SBI MCLR+350 basis points:</b>					
1	Gross Opening Equity (Normal)	0.00	0.00	418.80	944.10	1156.63
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)	-	-	418.80	944.10	1,156.63
5	Add: Increase in equity due to addition during the year / period	0.00	418.80	525.30	212.53	450.00
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	418.80	944.10	1156.63	1606.63
11	Average Equity (Normal)	0.00	209.40	681.45	1050.36	1381.63
12	Effective Tax Rate	17.47	17.47	17.47	17.47	17.47
13	Rate of ROE (%) - Post Tax	12.15	12.15	12.15	12.15	12.15
14	Rate of ROE (%) - Pre Tax	14.723	14.723	14.723	14.723	14.723
15	<b>Total ROE</b>	<b>0.00</b>	<b>30.83</b>	<b>100.33</b>	<b>154.64</b>	<b>203.42</b>

**(Petitioner)**

## Plant Characteristics

Name of the Petitioner		NTPC Limited	
Name of the Generating Station		MTPS Stage-II (2x195 MW)	
Unit(s)/Block(s)/Parameters		Unit-I	Unit-II
Installed Capacity ( MW)		195	195
Schedule COD as per Investment Approval		N.A	N.A
Actual COD		18 March 2017	01 July 2017
Pit Head or Non Pit Head or Integrated mine		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/Cm <sup>2</sup> ) abs <sup>1</sup> .		147.1	147.1
Main Steam Temperature at Turbine inlet (°C) <sup>1</sup>		537	537
Reheat Steam Pressure at Turbine inlet (kg/Cm <sup>2</sup> ) <sup>1</sup>		33.89	33.89
Reheat Steam Temperature at Turbine inlet (°C) <sup>1</sup>		537	537
Main Steam flow at Turbine inlet under MCR condition (tons /hr) <sup>2</sup>		582.616	582.616
Main Steam flow at Turbine inlet under VWO condition (tons /hr) <sup>2</sup>		680	680
Unit Gross electrical output under MCR /Rated condition (MW) <sup>2</sup>		195	195
Unit Gross electrical output under VWO condition (MW) <sup>2</sup>		204.9	204.9
Guaranteed Design Gross Turbine Cycle Heat Rate (kCal/kWh) <sup>3</sup>		1971	1971
Conditions on which design turbine cycle heat rate guaranteed ( kcal/kwhr)			
% MCR		100%	100%
% Makeup Water Consumption		0.00%	0.00%
Design Capacity of Make up Water System(% of throttle steam flow)		2000 M <sup>3</sup> /Hr (for Stage-II)	
Design Capacity of Inlet Cooling System		23300 M3/Hr	23300 M3/Hr
Design Cooling Water Temperature (°C)		33	33
Back Pressure(Average condenser pressure in mmHg(A))		77 mm Hg	77 mm Hg
Steam flow at super heater outlet under BMCR condition (tons/hr)		680	680
Steam Pressure at super heater outlet under BMCR condition) (kg/Cm <sup>2</sup> )		157	157
Steam Temperature at super heater outlet under BMCR condition (°C)		540	540
Steam Temperature at Reheater outlet at BMCR condition (°C)		542.25	542.25
Design Fuel with and without Blending of domestic/imported coal (GCV) Domestic Design coal		Domestic coal of GCV – 2850 Kcal/Kg	
Type of Cooling Tower		IDCT	IDCT
Type of cooling system <sup>5</sup>		Closed Circuit	Closed Circuit
Type of Boiler Feed Pump <sup>6</sup>		Motor Driven	Motor Driven
Type of Boiler		Tangential fired	
Type of Coal Mill		Bowl Mill XRP 883	
Fuel Details <sup>7</sup>			
-Primary Fuel		Coal	Coal
-Secondary Fuel		LDO	LDO
-Alternate Fuels		-	-
Special Features/Site Specific Features <sup>8</sup>		NA	NA
Special Technological Features <sup>9</sup>		ESP, Combustion Modification (DeNox) (under implementation)	
Environmental Regulation related features <sup>10</sup>		NA	NA
Any other special features		Intake well is located at River Buri Gandak for make up water at approximately 5 KM from plant site.	
1: At Turbine MCR condition.			
2: with 0% (Nil) make up and design Cooling water temperature			
3: at TMCR output based on gross generation, 0% (Nil) makeup and design Cooling water temperature.			
4: With Performance coal based on Higher Heating Value (HHV) of fuel and at BMCR) out put			
5: Closed circuit cooling, once through cooling, sea cooling, natural draft cooling, induced draft cooling etc.			
6: Motor driven, Steam turbine driven etc.			
7: Coal or natural gas or Naptha or lignite etc.			
8: Any site specific feature such as Merry-Go-Round, Vicinity to sea, Intake /makeup water systems etc. scrubbers etc. Specify all such			
9: Any Special Technological feature like Advanced class FA technology in Gas Turbines, etc.			
10: Environmental Regulation related features like FGD, ESP etc.,			
(PETITIONER)			

**Normative parameters considered for tariff computations**

<b>Name of the Petitioner:</b>		<b>NTPC Limited</b>					
<b>Name of the Generating Station:</b>		<b>MTPS-II (2x195 MW)</b>					
<b>(Year Ending March)</b>							
Particulars	Unit	Existing 2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7	8
Base Rate of Return on Equity \$\$	%	15.50	15.50	15.50	15.50	15.50	15.50
Base Rate of Return on Equity on Add. Capitalization	%	-	12.15	12.15	12.15	12.15	12.15
Effective Tax Rate	%	17.4720	17.4720	17.4720	17.4720	17.4720	17.4720
Target Availability	%	85.00	85.00	85.00	85.00	85.00	85.00
Peak Hours	%	85.00	85.00	85.00	85.00	85.00	85.00
Off Peak Hours	%	85.00	85.00	85.00	85.00	85.00	85.00
β- Average Monthly Frequency Response Performance ##	0-1		To be submitted at the time of truing up				
Auxiliary Energy Consumption ***	%	9.00	9.00	9.00	9.00	9.00	9.00
Gross Station Heat Rate	kCal/kWh	2512.81	2500.00	2500.00	2500.00	2500.00	2500.00
Specific Fuel Oil Consumption	ml/kWh	0.50	0.50	0.50	0.50	0.50	0.50
Cost of Coal/Lignite for WC1	in Days	50	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	37.84	40.92	43.07	45.33	47.71	50.21
Maintenance Spares for WC	% of O&M	20.00	20.00	20.00	20.00	20.00	20.00
Receivables for WC	in Days	45	45	45	45	45	45
Storage capacity of Primary fuel *	MT				4.5		
SBI 1 Year MCLR plus 325 basis point	%	12.00	11.90	11.90	11.90	11.90	11.90
SBI 1 Year MCLR plus 350 basis point	%		12.15	12.15	12.15	12.15	12.15
Blending ratio of domestic coal/imported coal							
Norms for consumption of reagent							
Specific Limestone consumption for Wet Limestone FGD							
Specific Limestone consumption for Lime Spray Dryer or Semi-dry FGD							
Specific consumption of sodium bicarbonate							
Specific Limestone consumption for CFBC based generating station							
specific urea consumption of the SNCR							
Specific ammonia consumption of the SCR							
Transit and Handling Losses of coal or lignite, as applicable							

**(Petitioner)**

**Calculation of O&M Expenses**

<b>Name of the Company :</b>	<b>NTPC Limited</b>
<b>Name of the Power Station :</b>	<b>MTPS-II (2x195 MW)</b>

**Amount in Rs. Lakhs**

S.No	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7
1	<b>O&amp;M expenses under Reg.36(1)</b>					
1a	Normative	15958.80	16797.30	17678.70	18606.90	19581.90
2	<b>O&amp;M expenses under Reg.36(1)(6)</b>					
2a	Water Charges	402.58	402.58	402.58	402.58	402.58
2b	Security expenses	3275.49	3893.00	4199.75	4693.78	5378.92
2c	Capital Spares*	0.00	0.00	0.00	0.00	0.00
	<b>Subtotal (1+2)</b>	19636.88	21092.88	22281.03	23703.26	25363.40
3	O&M expenses-Ash Transportation**	208.14	0.00	0.00	0.00	0.00
	<b>Total O&amp;M Expenses</b>	<b>19845.02</b>	<b>21092.88</b>	<b>22281.03</b>	<b>23703.26</b>	<b>25363.40</b>

\* Shall be provided at the truing up

**(Petitioner)**

<b>Name of the Company :</b>	<b>NTPC Limited</b>	<b>Part-I</b>
<b>Name of the Power Station :</b>	<b>MTPS-II (2x195 MW)</b>	<b>Form-8</b>

**Form 8  
TRANCHE NO  
T00001**

**BP NO 5050000791**

**D00006**

<b>Unsecured Loan From HDFC Bank Ltd. VII</b>		
Source of Loan :	<b>HDFC Bank Ltd. VII</b>	
Currency :	INR	
Amount of Loan :	25,00,00,00,000	
Total Drawn amount :	50,00,00,00,000	
Date of drawl	27-Apr-23	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	8.01%	
Margin, If Floating Interest :	NIL	
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	MONTHLY	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	6 Years	
Moratorium effective from :	11.02.2020	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	9 Yearly Instalment	
Repayment Type :	AVG	
First Repayment Date :	11.06.2026	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	Muzaffarpur (KANTI-II)	50,00,00,000.00
		27-04-2023
<b>Total Allocated Amount</b>		<b>50,00,00,000</b>

**(Petitioner)**

Name of the Company :	NTPC Limited	Part-I
Name of the Power Station :	MTPS-II (2x195 MW)	Form-8

**Form 8  
TRANCHE NO  
T00001**

**BP NO 5050000931**

**D00005**

Unsecured Loan From Punjab National Bank-V		
Source of Loan :	Punjab National Bank-V	
Currency :	INR	
Amount of Loan :	25,20,00,00,000	
Total Drawn amount :	14,83,32,00,000	
Date of Drawl	27-04-2023	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	7.90%	
Margin, If Floating Interest :	0.00%	
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	MONTHLY	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	3 Years	
Moratorium effective from :	14.07.2021	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	12 Yearly Instalment	
Repayment Type :	AVG	
First Repayment Date :	27.03.2024	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	Muzaffarpur (KANTI-II)	14,83,32,00,000.00
		27-04-2023
<b>Total Allocated Amount</b>		<b>14,83,32,00,000.00</b>

(Petitioner)



Name of the Company :	NTPC Limited	Part-I
Name of the Power Station :	MTPS-II (2x195 MW)	Form-8

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

Form 8

TRANCHE NO

BP NO 50500001121

T00001

D00001

**Unsecured Loan From Bank Of India-V A**

Source of Loan :	<b>Bank Of India-V A</b>	
Currency :	INR	
Amount of Loan :	11,89,13,00,000	
Total Drawn amount :	5,55,54,00,000	
Date of Drawal :	09.08.2021	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	5.65%	
Margin, If Floating Interest :	NIL	
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	3 Years	
Moratorium effective from :	09.08.2021	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	Yearly	
Repayment Type :	AVG	
First Repayment Date :	05.03.2025	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :		

Project Code	Project Name	Amount	
	TAPOVAN VISHNUGARH (4X130	26,19,10,826.00	27-04-2023
	RAMMAM (3X40MW)	6,00,00,000.00	27-04-2023
	TELANGANA (2X800MW)	2,55,17,00,000.00	27-04-2023
	TTPS III (2X660MW)	1,63,00,00,000.00	27-04-2023
	SIMHADRI-I-IDCT	84,00,00,000.00	27-04-2023
	MUZAFFARPUR (KANTI-II)	21,17,89,174.00	27-04-2023
	<b>Total Allocated Amount</b>	<b>5,55,54,00,000</b>	

(Petitioner)

Name of the Company :	NTPC Limited	Part-I
Name of the Power Station :	MTPS-II (2x195 MW)	Form-8

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

**Form 8**

**TRANCHE NO**

**BP NO 5050001342**

**T00001**

**D00006**

Unsecured Loan From UCO BANK IV		
Source of Loan :	<b>UCO BANK IV</b>	
Currency :	INR	
Amount of Loan :	10,00,00,00,000	
Total Drawn amount :	80,00,00,000	
Date of Drawal:	27-04-2023	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	7.70%	
Margin, If Floating Interest :	NIL	
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	MONTHLY	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	3 Years	
Moratorium effective from :	27-Apr-23	
Repayment Period (Inc Moratorium) :	12 Years	
Repayment Frequency :	12 Yearly	
Repayment Type :	AVG	
First Repayment Date :	11.11.2026	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	BONGAIGAON	48,44,77,567.00
	<b>KANTI-II</b>	<b>31,55,22,433.00</b>
<b>Total Allocated Amount</b>		<b>80,00,00,000.00</b>

**(Petitioner)**

**WAR Sheet**

<b>WAR Sheet</b>					
	<b>Name of the Petitioner</b>		<b>NTPC Limited</b>		
	<b>Name of the Generating Station</b>		<b>Muzaffarpur TPS Stage-II (2x195 MW)</b>		
	<b>Weighted Average interest rate details:</b>				
	<b>BP No</b>	<b>BANK</b>	<b>RATE OF INTEREST</b>	<b>FROM</b>	<b>TO</b>
	5050000791	HDFC Bank Limited-VII	7.95%	01-Jun-23	31-Mar-24
	5050000931	PNB-V	7.90%	01-Apr-23	31-Mar-24
	<b>5050001121</b>	Bank of India-V-A	8.00%	01-Apr-23	31-Mar-24
	<b>5050001342</b>	UCO Bank-IV	7.70%	01-Apr-23	31-Mar-24

Refinancing Gain on prepayment of Loans

Station MTPS-II (2x195 MW)

Sr. No.	Bank	ROI on refinancing date	Date of refinancing	Refinanced amount (Rs. In lakh)	Refinanced with Bank	ROI of replaced Loan	Redployed amount (Rs. In lakh)	Savings %	Savings to be shared (%)
1	CANARA BANK-II-KBUNL	8.00%	27-Apr-23	53565.27	Bank of India-V-A	8.00%	2117.89	0.0000%	-
2	CANARA BANK-I-KBUNL	8.00%	27-Apr-23	34468.62	HDFC Bank Limited-VII	8.01%	5000.00	-0.0100%	-
3	IIFCL-I-(KBUNL)	8.00%	27-Apr-23	17990.06	PNB-V	7.90%	148332.00	0.1000%	0.00050
4	IIFCL-II-(KBUNL)	8.00%	27-Apr-23	5695.90	UCO Bank-IV	7.70%	3155.22	0.3000%	0.15000
5	PNB-II-KBUNL	8.00%	27-Apr-23	2612.10					
6	PNB-I-KBUNL	8.00%	27-Apr-23	694.56					
7	SBI-II-KBUNL	8.00%	27-Apr-23	42330.00					
8	SBI-I-KBUNL	8.00%	27-Apr-23	1248.60					
			<b>Total</b>	<b>158605.12</b>		<b>Total</b>	<b>158605.12</b>		

## Summary of projected additional Capatilization for 2024-29

Name of the Generating Station : Muzaffarpur Thermal Power Station, Kanti Stage-II (2 x 195 MW)

Sl. No	Description of Work	Additional Capital Expenditure Claimed (Projected) (in Rs. Lakhs)					(in Lakhs) Total	Regulation under which claimed	Justifications
		2024-25	2025-26	2026-27	2027-28	2028-29			
<b>Original Scope of Work</b>									
<b>A. Works eligible for RoE at Normal Rate</b>									
1	<b>Total Land &amp; Site Development</b>	587					587	25 (1) with Reg 102	As per repsective years tariff forms
<b>BOP Mechanical</b>									
2	Ash Handling System	4828	270	1055			6153	25 (1) with Reg 102	As per repsective years tariff forms
3	Ash Water Recirculation System (AWRS)			1700			1700	25 (1) with Reg 102	As per repsective years tariff forms
4	Coal Handling Plant		4000	6000	8000	16700	34700	25 (1) with Reg 102	As per repsective years tariff forms
5	MGR					2000	2000	25 (1) with Reg 102	As per repsective years tariff forms
6	Air Conditioning & Ventilation System		36				36	25 (1) with Reg 102	As per repsective years tariff forms
7	Fire fighting System	60	240	200			500.4	25 (1) with Reg 102	As per repsective years tariff forms
8	HP/LP Piping (Station Piping pkg)			157			157	25 (1) with Reg 102	As per repsective years tariff forms
<b>BOP Electrical</b>									
9	BOP Electrical works	280	140	52			471.65	25 (1) with Reg 102	As per repsective years tariff forms
10	<b>C &amp; I Package</b>		131		60		191	25 (1) with Reg 102	As per repsective years tariff forms
11	HMI/DCS Upgradation	187					187	25 (2) (c)	As per repsective years tariff forms
<b>Civil Works</b>									
15	Main Plant Civil Package		150			2500	2650	25 (1) with Reg 102	As per repsective years tariff forms
16	Civil Infrastructure Pacakge		2000	1000			3000	25 (1) with Reg 102	As per repsective years tariff forms
17	CW system-Makeup water civil		1000				1000	25 (1) with Reg 102	As per repsective years tariff forms
18	Ash disposal area development/Ash Dyke			5000			5000	25 (1) with Reg 102	As per repsective years tariff forms
19	Township & Colony & Associated Facilities	800	1600	2200		600	5200	25 (1) with Reg 102	As per repsective years tariff forms
	<b>Total (A)</b>	<b>6741.5</b>	<b>9567.6</b>	<b>17364.0</b>	<b>8060.0</b>	<b>21800.0</b>	<b>63533.1</b>		
<b>B. Works eligible for RoE linked to SBI MCLR:</b>									
1	Lagoon-I Reclammaation and Boundary wall construction		650	500			1150	26 (1) (b)	As per repsective years tariff forms
2	CLO2 system		746	180			926	26(1)(b) & (d)	As per repsective years tariff forms
3	Biomethanation Plant			27			27	26 (1) (b)	As per repsective years tariff forms
4	Compost Pit (Plant & Township)			44			44	26 (1) (b)	As per repsective years tariff forms
5	Procurement of Cast Basalt Pipeline for Ash Disposal Pipe Line			1000			1000	26 (1) (e) & (i)	As per repsective years tariff forms
6	CISF Barrack					1500	1500	26 (1) (b) & (d)	As per repsective years tariff forms
7	Additional Facilities for Ash utilization /Ash Handling system				708.42		708.42	19( 3) (d) & 26 (1) (b) & (e)	As per repsective years tariff forms
	<b>Total (B)</b>	<b>0.0</b>	<b>1396.0</b>	<b>1751.0</b>	<b>708.4</b>	<b>1500.0</b>	<b>5355.4</b>		
	<b>Total Add. Cap (A+B)</b>	<b>6741.5</b>	<b>10963.6</b>	<b>19115.0</b>	<b>8768.4</b>	<b>23300.0</b>	<b>68888.5</b>		

(Petitioner)

Year wise Statement of Additional Capitalisation after COD								
Name of the Petitioner			NTPC Limited					
Name of the Generating Station			Muzaffarpur Thermal Power Station Stage-II (2 x 195 MW)					
COD			01.07.2017					
For Financial Year			2024-25					
Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed (Projected)			Regulations under which claimed	Justification	Amount in Rs Lakh
			Un-discharge d Liability included in col. 3	Cash basis	IDC included in col. 3			
<b>A. Works eligible for RoE at Normal Rate</b>								
1	<b>Total Land &amp; Site Development</b>	587		587		25 (1) with Reg 102	Projected additional capital expenditure pertains to Original Scope. The amount for Land Compensation has been deposited in Land Tribunal, which has not been received by Land Owners, shall be capitalised. Further, some expenditure are on account of Community Ddevelopment works, which were of deposit nature to State Govt. and will be capitalised after completion of work. The delay in capitalisation of the said amount is solely due to delay in land acquisition. The Hon'ble commision may be pleased to allow the same.	
<b>BOP Mechanical</b>								
2	Ash Handling System	4828		4827.74		25 (1) with Reg 102	Projected additional capital expenditure pertains to Original Scope. Original Agency M/s Techpro has gone in NCLT. The Pending works are being executed by breaking the left-over package into several small packages. Further, the outbreak of Covid pandemic has lead to delay in execution and demobilisation of agency manpower which further lead to delay in restoration of work & award of left over works. Additionally, Weigh Bridge installation In Ash Silo Area is to be done as Dry Ash Extraction System is near to completion. It is submitted that the work of Pedestal construction is largely affected due to Land Aquisition issue. The Land acquisition case is also sub-judice due to farmers demand of high compensation. The Hon'ble commision may be pleased to allow the same.	
3	Fire fighting System	60		60		25 (1) with Reg 102	Projected additional capital expenditure pertains to Original Scope. However, Original Erection agency M/s Unitech Machines Ltd has been admitted in NCLT. Later-on, the outbreak of Covid pandemic has lead to delay in execution and demobilisation of agency manpower and further lead to delay in restoration of work.The balance work is needed to ensure fire safety of the equipments which are being commissioned like Main Plant, CHP conveyors and associated equipments. Hon'ble Commission may be pleased to allow the same.	
<b>BOP Electrical</b>								
4	BOP Electrical works	280		280		25 (1) with Reg 102	Projected additional capital expenditure pertains to Original Scope. However, the original Agency M/s GET Power has gone in NCLT and a fresh contract of left-over works was awarded to M/s S.N.Singh. Later-on, the outbreak of Covid pandemic has lead to delay in execution and demobilisation of agency manpower and further lead to delay in restoration of work. The Hon'ble commision may be pleased to allow the same.	
5	<b>C &amp; I Package</b>					25 (1) with Reg 102	Projected additional capital expenditure pertains to Original Scope. These works have been delayed due to delay in inter-connected CHP Package on account of above-mentioned reasons. It is submitted that these works shall be executed post completion of CHP Package left-over works. The Hon'ble commision may be pleased to allow the same.	

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner		NTPC Limited							
Name of the Generating Station		Muzaffarpur Thermal Power Station Stage-II (2 x 195 MW)							
COD		01.07.2017							
For Financial Year		2024-25							
Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed (Projected)			Regulations under which claimed	Justification	Amount in Rs Lakh	Admitted Cost by the Commission, if any
			Un-discharge d Liability included in col. 3	Cash basis	IDC included in col. 3				
6	HMI/DCS Upgradation	187		187		25 (2) (b) & (c)	<p>Guidelines on Cyber security features in Power Sector was issued by the Hon'ble CEA, CEA (Cyber Security in Power Sector) Guideleins 2021, on Oct'21 (<b>Annex-A</b>). The HMI system previously deployed at Station relied on the Windows XP operating system. Since Microsoft no longer supports Windows XP, this created significant cybersecurity risks. To address these concerns and ensure continued functionality of the system, an upgrade project was necessary.</p> <p>The Windows XP/ Windows 7 based workstation hardware and Microsoft Operating System available at Bongaigaon is out of mainstream support from OEM and Microsoft respectively. Also the support for Antivirus version has been withdrawn by the OEM and no more security updates / virus definitions are available for that version. Hence the HMIs-Stations are prone to vulnerabilities which can tamper the operation of plant. In lieu of this HMI upgradation was necessary to ensure cyber security for the plant and overcome obsolescence issues. Obsolescence certificate from BHEL attached as <b>Annexure B</b>. HMI Upgrade for the projects is due to various obsolescence in the DCS components such as Hardware, Operating System, maxDNA software, Antivirus Software etc. (1) Hardware is obsolete due to Lower Processor cores and speed, lower HDD capacity and RAM requirements incompatible for latest software requirements; Lower network bandwidth of 10Mbps restricting communication speed capability of latest DCS components and attributing to latency. (2) Operating Systems were declared End of Support by the OEM-Microsoft as mentioned below: Windows XP - April' 2014 Windows 7 - Jan' 2020 Windows Server 2008 R2 - Jan' 2020 (3) maxDNA software versions were not compatible with latest Operating Systems; more improved version of maxDNA- release 7.x is made available suiting the latest OS. (4) Antivirus Software from Symantec 10.x / Symantec 11.x / Symantec 12.x was declared obsolete by the OEM-Broadcom and no longer updates or virus definitions were available.</p> <p>Hon'ble Commission has allowed the similar additional capital expenditure incurred on HMI upgradation in Anta gas power station and Meja thermal power station vide its order dated 05.09.2023 (in petition no. 432-GT-2020) and order dated 27.04.2023 (in petition no. 568-GT-2020) respectively.</p> <p>Further Hon'ble SC in its judgement dated 20.04.23 declared "94. Perusal of the definition of the term "Law" itself would clearly show that the term "Law" would mean all laws including in view of the same, Electricity Laws in force in India and any statute, ordinance, regulation, Notification or code, rule, or any interpretation of any of them by an Indian Governmental Instrumentality and having force of law. It would further reveal that the term "Law" shall also include all applicable rules, regulations, orders, Notifications by an Indian Governmental Instrumentality and shall also include all rules, regulations, decisions and orders of the CERC and the MERC." SC order has been attached as <b>Annexure C</b>. Therefore, for continued and efficient operation of the system, it is humbly requested that Hon'ble Commission may be pleased to allow the same under Regulation 26(1)(b) of</p>		
	<b>Civil Works</b>								
7	Township & Colony & Associated Facilities	800		800		25 (1) with Reg 102	Projected additional capital expenditure pertains to Original Scope. However, the outbreak of Covid pandemic has lead to delay in execution and demobilisation of agency manpower and further lead to delay in restoration of work. Hon'ble commission may be pleased to allow the same.		
	<b>Total (A)</b>	<b>6741.5</b>		<b>6741.5</b>					
	<b>B. Works eligible for RoE linked to SBI MCLR:</b>								
	<b>Total (B)</b>	<b>0.0</b>		<b>0.0</b>					
	<b>Total Add. Cap. Claimed (A+B)</b>	<b>6741.5</b>		<b>6741.5</b>					

(Petitioner)

Year wise Statement of Additional Capitalisation after COD							
Name of the Petitioner		NTPC Limited					
Name of the Generating Station		Muzaffarpur Thermal Power Station Stage-II (2 x 195 MW)					
COD		01.07.2017					
For Financial Year		2025-26					
Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed (Projected)		Regulations under which claimed	Justification	Admitted Cost by the Commission, if
			Un-discharged Liability included in col. 3	Cash basis			
<b>A. Works eligible for RoE at Normal Rate</b>							
<b>BOP Mechanical</b>							
1	Ash Handling System	270		270	25 (1) with Reg 102	Please refer Justification in Form 9 of 2024-25	
2	Coal Handling Plant	4000		4000	25 (1) with Reg 102	Projected additional capital expenditure pertains to Original Scope. However, contract with original Agency M/s Techpro was terminated due to very poor performance and the agency having gone into NCLT. Later-on, a fresh contract of left-over works was awarded to M/s Indure. However, due to the vehicles movement ban on Gandhi Setu, sand mining ban/restrictions in the State of Bihar, abnormal rainfall during some years etc. have contributed to delay in completion of CHP works. Later-on, the outbreak of Covid pandemic has lead to delay in execution and demobilisation of agency manpower and further lead to delay in restoration of work. The Hon'ble commission may be pleased to allow the same.	
3	Air Conditioning & Ventilation System	36		36	25 (1) with Reg 102	Projected additional capital expenditure pertains to Original Scope. However, the outbreak of Covid pandemic has lead to delay in execution and demobilisation of agency manpower and further lead to delay in restoration of work. The Hon'ble commission may be pleased to allow the same.	
4	Fire fighting System	240		240	25 (1) with Reg 102	Please refer Justification in Form 9 of 2024-25	
<b>BOP Electrical</b>							
5	BOP Electrical works	140		140	25 (1) with Reg 102	Please refer Justification in Form 9 of 2024-25	
6	<b>C &amp; I Package</b>	131		131	25 (1) with Reg 102	Projected additional capital expenditure pertains to Original Scope. These works have been delayed due to delay in inter-connected CHP Package on account of above-mentioned reasons. It is submitted that these works shall be executed post completion of CHP Package left-over works. The Hon'ble commission may be pleased to allow the same.	
<b>Civil Works</b>							
7	Main Plant Civil Package	150		150	25 (1) with Reg 102	Projected additional capital expenditure pertains to Original Scope. However, the original agency M/s HCC is under arbitration, and the left over works will be completed through fresh contracts. The Service Building in Stage-II was part of approved Feasibility Report. But initially the work was not done for project cost reduction, as Stage-I Service Building was already there to cater to the requirement. Since, Stage-I has been decommissioned, new Service Building for Stage-II is required to be constructed. Therefore, the expenditure of Rs. 2500 Lakhs is estimated to be capitalised by 2028-29. Hon'ble commission may be pleased to allow the same.	
8	Civil Infrastructure Pacakge	2000		2000	25 (1) with Reg 102	Projected additional capital expenditure pertains to Original Scope. However, due to the vehicles movement ban on Gandhi Setu, sand mining ban/restrictions in the State of Bihar, abnormal rainfall during some years etc. have contributed to delay in completion of some of the civil infrastructure works. Later-on, the outbreak of Covid pandemic has lead to delay in execution and demobilisation of agency manpower and further lead to delay in restoration of work. The Hon'ble commission may be pleased to allow the same.	



Year wise Statement of Additional Capitalisation after COD							Regulations under which claimed	Justification	Admitted Cost by the Commission, if
SI. No.	Head of Work /Equipment	Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3	ACE Claimed (Projected)			
Name of the Petitioner		NTPC Limited							
Name of the Generating Station		Muzaffarpur Thermal Power Station Stage-II (2 x 195 MW)							
COD		01.07.2017							
For Financial Year		2025-26							
9	CW system-Makeup water civil	1000		1000			25 (1) with Reg 102	Projected additional capital expenditure pertains to Original Scope. However, the Agency M/s IVRCL is in NCLT. Post commissioning of Makeup water in 2017, balance work of slope protection is very much related with water level in river and therefore the work is being executed only when river level is low which is leading to delay in completion. Moreover, the outbreak of Covid pandemic has lead to delay in execution and demobilisation of agency manpower and further lead to delay in restoration of work. Hon'ble commission may be pleased to allow the same.	
10	Township & Colony & Associated Facilities	1600		1600			25 (1) with Reg 102	Please refer Justification in Form 9 of 2024-25	
<b>Total (A)</b>		<b>9567.6</b>		<b>9567.6</b>					
<b>B. Works eligible for RoE linked to SBI MCLR:</b>									
1	Lagoon-I Reclamation and Boundary wall construction	650		650			26 (1) (b)	Presently Ash dyke of Kanti consists of lagoon 1, 2 & 3 which are enclosed by dense population. The Lagoon 1 & 2 are non engineered dyke, inherited from erstwhile Bihar State Electricity Board. The lagoon 3 was constructed by MTPS as per latest engineering practice. One (01) pollution original application No.138/2023/EZ case has also been registered in Hon'ble NGT based on complaints by local residents regarding fugitive and other related issues from Ash dyke (Lagoon 1 & 2). Accordingly ash discharge & utilization has been stopped from Lagoon-I and it was proposed to reclaim Ash Dyke Lagoon-1. As per MOEF &CC Gazette notification dated 31.12.2021 (Attached as <b>Annexure-D</b> ) and its amendment dated 30.12.2022, the ash dyke has to be reclaimed with Green Belt or plantation or Solar PV Plant or Wind Power Plant. For ensuring MOEF Notification & environmental Laws, the Reclamation of Ash dyke is being done. Further, for facilitating reclamation of Ash Dyke, Boundary wall along the periphery of dyke is also being constructed. Hon'ble commission may be pleased to allow the same.	
2	CLO2 system	746		746			26(1)(b) & (d)	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. 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.  Installation of CIO2 system by replacing chlorine gas injecting system is being undertaken at all NTPC stations to enhance safety of personnel engaged in power plant operation. Work taken-up in accordance to the various provisions and objectives of the "National Disaster Management Guidelines – Chemical Disasters" which provides that industrial systems shall be continuously improved and upgraded for the prevention and management of chemical accidents. It is also pertinent that the action for inslation of CLO2 system is also in compliance with the duties necessitated for an employer (NTPC) under the clause 6(1)(a) and 6(1)(d) of "The Occupational Safety, Health and Working Conditions Code, 2020" notified by Ministry of Law & Justice, Gol vide Gazette Notification dated 29.09.2020 relevant extracts of which are reproduced below:(Attached as <b>Annexure-E</b> )  "DUTIES OF EMPLOYER AND EMPLOYEES, ETC. 6.(1) Every employer shall: (a)ensure that workplace is free from hazards which cause or are likely to cause injury or occupational disease to the employees; ... (e)Provide and maintains, as far as is reasonably practicable, a working environment that is safe and without risk to the health of the employees"  Some of the major benefits of installation of CLO2 system are as under (a) Avoid possible accidents due to leakage of chlorine while handling (b) Improves safety of personnel and plant & equipment (c) Increases the shelf life of water retaining structures/ equipment such as clarifiers, storage tanks, cooling towers, condenser tubes & piping etc thereby reduces the replacement cost. (d) Helos in complvina with statutory direction of some states that have already made it mandatory.	
<b>Total (B)</b>		<b>1396.0</b>		<b>1396.0</b>					
<b>Total Add. Cap. Claimed (A+B)</b>		<b>10963.6</b>		<b>10963.6</b>					

(Petitioner)

Year wise Statement of Additional Capitalisation after COD							
Name of the Petitioner		NTPC Limited					
Name of the Generating Station		Muzaffarpur Thermal Power Station Stage-II (2 x 195 MW)					
COD		01.07.2017					
For Financial Year		2026-27					
Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)			Regulations under which claimed	Justification	Amount in Rs Lakh Admitted Cost by the Commission, if any
		Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis			
<b>A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate</b>							
<b>BOP Mechanical</b>							
1	Ash Handling System	1055		1055		25 (1) with Reg 102	Please refer Justification in Form 9 of 2024-25
2	Ash Water Recirculation System (AWRS)	1700		1700		25 (1) with Reg 102	Projected additional capital expenditure pertains to Original Scope. It is submitted that the AWRS is located around 12km from the Plant and lies in lowline flood area and thus was majorly affected due to waterlogging in lagoon areas due to heavy and continuous rainfall over a period. This has lead to the delay in package works. Further, the outbreak of Covid pandemic has lead to delay in execution and demobilisation of agency manpower which further lead to delay in restoration of work. The Hon'ble commission may be pleased to allow the same.
3	Coal Handling Plant	6000		6000		25 (1) with Reg 102	Please refer Justification in Form 9 of 2025-26
4	Fire fighting System	200		200		25 (1) with Reg 102	Please refer Justification in Form 9 of 2024-25
5	HP/LP Piping (Station Piping pkg)	157		157		25 (1) with Reg 102	Projected additional capital expenditure pertains to Original Scope. These works have been delayed due to delay in inter-connected CHP Package on account of above-mentioned reasons. It is submitted that these works shall be executed post completion of CHP Package left-over works. The Hon'ble commission may be pleased to allow the same.
<b>BOP Electrical</b>							
6	BOP Electrical works	52		52		25 (1) with Reg 102	Please refer Justification in Form 9 of 2024-25
<b>Civil Works</b>							
7	Civil Infrastructure Pacakge	1000		1000		25 (1) with Reg 102	Please refer Justification in Form 9 of 2024-25
8	Ash disposal area development/Ash Dyke	5000		5000		25 (1) with Reg 102	Projected additional capital expenditure pertains to Original Scope. However, the Agency M/s GSCO has gone in arbitration during the working period. The agency was terminated in 2019 due to slow progress and fresh contract was awarded for balance jobs to M/s Aneja Construction. Moreover, the outbreak of Covid pandemic has lead to delay in execution and demobilisation of agency manpower and further lead to delay in restoration of work. Hon'ble commission may be pleased to allow the same.
9	Township & Colony & Associated Facilities	2200		2200		25 (1) with Reg 102	Please refer Justification in Form 9 of 2024-25
<b>Total (A)</b>		<b>17364.0</b>		<b>17364.0</b>			
<b>B. Works beyond Original scope exluding add-cap due to Change in Law eligible for RoE at Wtd. Average rate of Interest</b>							
1	Lagoon-I Reclammaation and Boundary wall construction	500		500		26 (1) (b)	Please refer Justification in Form 9 of 2025-26
2	CLO2 system	180		180		26(1)(b) & (d)	Please refer Justification in Form 9 of 2025-26

							PART-I FORM-9
Year wise Statement of Additional Capitalisation after COD							
Name of the Petitioner		NTPC Limited					
Name of the Generating Station		Muzaffarpur Thermal Power Station Stage-II (2 x 195 MW)					
COD		01.07.2017					
For Financial Year		2026-27					
Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)			Regulations under which claimed	Justification	Amount in Rs Lakh Admitted Cost by the Commission, if any
		Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis			
3	Biomethanation Plant	27		27		26 (1) (b)	
4	Compost Pit (Plant & Township)	44		44		26 (1) (b)	
5	Procurement of Cast Basalt Pipeline for Ash Disposal Pipe Line	1000		1000		26 (1) (e) & (i)	
	<b>Total (B)</b>	<b>1751.0</b>		<b>1751.0</b>			
	<b>Total Add. Cap. Claimed (A+B)</b>	<b>19115.0</b>		<b>19115.0</b>			

Year wise Statement of Additional Capitalisation after COD							
Name of the Petitioner		NTPC Limited					
Name of the Generating Station		Muzaffarpur Thermal Power Station Stage-II (2 x 195 MW)					
COD		01.07.2017					
For Financial Year		2027-28					
Sl. No.	Head of Work /Equipment	ACE Claimed (Projected)			Regulations under which claimed	Justification	Amount in Rs Lakh
		Accrual basis as per IGAAP	Un-discharged Liability included in	Cash basis			
<b>A. Works eligible for RoE at Normal Rate</b>							
1	Coal Handling Plant	8000		8000		25 (1) with Reg 102	Please refer Justification in Form 9 of 2025-26
2	C & I Package	30		30		25 (1) with Reg 102	Please refer Justification in Form 9 of 2025-26
<b>Civil Works</b>							
<b>Total (A)</b>		<b>8030.0</b>		<b>8030.0</b>			
<b>B. Works eligible for RoE linked to SBI MCLR:</b>							
1	Additional Facilities for Ash utilization /Ash Handling system	708.42		708.42		19( 3) (d) & 26 (1) (b) & (e)	For mitigation of potential IR issues Additional New facilities at Dry Ash Extraction Ssystem Silo is required. Dry Ash Silo which is expected to be fully operational in FY 2024-25. The Additional associated works like Boundary Wall along the Road Connecting Silo from NH, Control Room for Weigh Bridge, Bulker Washing Facilities & Watch Tower are needed to be completed fro smooth Bulker weighment & movement. Since the Road connecting Silo to NH has dense residential buildings in the proximity. The Bulker movement and Fugitive Ash Emission can cause IR issues, so Boundary Wall along the Road is a necessity. The Other Facilities like Weigh Bridge Control Room and Bukler washing Facilities are also needed for smooth Bulker operation without causing any Environmental issues due to Ash Vehicles movement. Hon'ble commision may be pleased to allow the same.
<b>Total (B)</b>		<b>708.4</b>		<b>708.4</b>			
<b>Total Add. Cap. Claimed (A+B)</b>		<b>8738.4</b>		<b>8738.4</b>			

(Petitioner)

Year wise Statement of Additional Capitalisation after COD								
Name of the Petitioner		NTPC Limited						
Name of the Generating Station		Muzaffarpur Thermal Power Station Stage-II (2 x 195 MW)						
COD		01.07.2017						
For Financial Year		2028-29						
Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed (Projected)			Regulations under which claimed	Justification	Admitted Cost by the Commission, if any
			Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3			
<b>A. Works eligible for RoE at Normal Rate</b>								
1	Coal Handling Plant	16700		16700		25 (1) with Reg 102	Please refer Justification in Form 9 of 2025-26	
2	MGR	2000		2000		25 (1) with Reg 102	Projected additional capital expenditure pertains to Original Scope. These works have been delayed due to delay in inter-connected CHP Package on account of above-mentioned reasons. It is submitted that these works shall be executed post completion of CHP Package left-over works. The Hon'ble commission may be pleased to allow the same.	
<b>Civil Works</b>								
3	Main Plant Civil Package	2500		2500		25 (1) with Reg 102	Please refer Justification in Form 9 of 2024-25	
4	Township & Colony & Associated Facilities	600		600		25 (1) with Reg 102	Please refer Justification in Form 9 of 2024-25	
<b>Total (A)</b>		<b>21800.0</b>		<b>21800.0</b>				
<b>B. Works eligible for RoE linked to SBI MCLR:</b>								
1	CISF Barrack	1500		1500		26 (1) (b) & (d)	Since, Kanti is take over plant from erstwhile Bihar State Electricity Board, the CISF Barracks inside Township are very Old and in depleted condition. As assessed by CISF and jointly by Civil (O&M) & HR, for better Safety & Security of CISF personnels residing there, a new Barrak is an urgent need. Hon'ble commission may be pleased to allow the same.	
<b>Total (B)</b>		<b>1500.0</b>		<b>1500.0</b>				
<b>Total Add. Cap Claimed (A+B)</b>		<b>23300.0</b>		<b>23300.0</b>				
(Petitioner)								

<b>Name of the Petitioner</b>	<b>NTPC Limited</b>
<b>Name of the Generating Station</b>	<b>MTPS-II (2x195 MW)</b>
<b>Date of Commercial Operation</b>	<b>01-07-2017</b>

Amount in Rs Lakh										
Financial Year (Starting from COD)1	Actual					Admitted				
	2024-25	2025-26	2026-27	2027-28	2028-29	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7	8	9	10	11

Amount capitalised in Work/ Equipment

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

**(Petitioner)**

## Calculation of Depreciation

Name of the Petitioner: NTPC Limited

Name of the Generating Station : MTPS Stage - II ( 2X660 MW)

(Amount in Rs Lakh)

Sl.No.	Name of the Assets	Gross Block as on 01.04.2024	Depreciation Rates as per CERC's Depreciation Rate Schedule	Depreciation Amount on Gross Block as on 01.04.2024
1	2	3	4	5=Col.3 X Col.4
1	Freehold Land	17189.12	0.00%	0
2	Leasehold Land	4641.62	3.34%	155.03
3	Roads bridges culverts & helipads	12695.11	3.34%	424.02
4	Main Plant Buildings	29561.18	3.34%	987.34
5	Other Buildings	1315.30	3.34%	43.93
6	Temporary erection	0.00	100.00%	0
7	Water supp, drain etc	50.25		0
8	MGR track and signalling system	5977.83	5.28%	315.63
9	Plant and machinery	314390.02	5.28%	16599.79
10	Furniture and fixtures	300.96	6.33%	19.05
11	Other Office Equipments	174.66	6.33%	11.06
12	EDP WP machines & SATCOM equipm	208.38	15.00%	31.26
13	Vehicles including speedboats	1.52	9.50%	0.14
14	Construction equipment	508.21	5.28%	26.83
15	Electrical installations	1633.77	5.28%	86.26
16	Communication equipment	60.05	6.33%	3.8
17	Hospital equipment	9.50	6.33%	0.6
18	Lab & Workshop Equip	43.29	6.33%	2.74
19	Software	9.49	15.00%	1.42
20	Capital Spares	11491.65	5.28%	606.76
	<b>TOTAL</b>	<b>4,00,261.91</b>		<b>19315.66</b>
	<b>Weighted Average Rate of Depreciation (%)</b>			4.8258

(Petitioner)

**Statement of Depreciation**

**Name of the Company :** NTPC Limited  
**Name of the Power Station :** MTPS-II (2x195 MW)

(Amount in Rs Lakh)

S. No.	Particulars	Existing 2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7	8
1	Opening Capital Cost	356028.23	3,58,672.87	3,65,414.37	3,76,377.93	3,95,492.93	4,04,261.35
2	Closing Capital Cost	358672.87	3,65,414.37	3,76,377.93	3,95,492.93	4,04,261.35	4,27,561.35
3	Average Capital Cost	357350.55	3,62,043.62	3,70,896.15	3,85,935.43	3,99,877.14	4,15,911.35
1a	Cost of IT Equipments & Software included in (1) above ^	217.73	333.47	333.47	333.47	333.47	333.47
2a	Cost of IT Equipments & Software included in (2) above ^	111.81	333.47	333.47	333.47	333.47	333.47
3a	Average Cost of IT Equipments & Software	164.77	333.47	333.47	333.47	333.47	333.47
4	Freehold land	18,401.77	18,401.77	18,401.77	18,401.77	18,401.77	18,401.77
5	Rate of depreciation	4.83%	4.83%	4.83%	4.83%	4.83%	4.83%
6	Depreciable value	3,05,081.27	3,09,311.01	3,17,278.29	3,30,813.64	3,43,361.18	3,57,791.97
7.	Balance useful life at the beginning of the period	19.05	18.05	17.05	16.05	15.05	14.05
8	Remaining depreciable value	2,09,957.97	1,97,025.57	1,87,521.49	1,83,158.29	1,77,081.52	1,72,215.20
9	Depreciation (for the period)	17,244.87	17,471.35	17,898.55	18,624.31	19,297.11	20,070.88
10	Depreciation (annualised)	17,244.87	<b>17,471.35</b>	<b>17,898.55</b>	<b>18,624.31</b>	<b>19,297.11</b>	<b>20,070.88</b>
11	Cumulative depreciation at the end of the period	112368.18	1,29,756.80	1,47,655.35	1,66,279.67	1,85,576.77	2,05,647.65
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	82.73	-	-	-	-	-
15	Net Cumulative depreciation at the end of the period after adjustments	1,12,285.45	1,29,756.80	1,47,655.35	1,66,279.67	1,85,576.77	2,05,647.65

^ Shall be revsed at the time of true up

(Petitioner)



## Calculation of Weighted Average Rate of Interest on Actual Loans

Name of the Petitioner		NTPC Limited (Formerly Kanti Bijlee Utpadan Nigam Limited)				
Name of the Generating Station		Muzaffarpur TPS Stage-II (2x195 MW)				
(Amount in Rs. Lakh)						
SL No	Loan	2024-25	2025-26	2026-27	2027-28	2028-29
1	<b>Loan-3</b>					
	<b>HDFC Bank Limited-VII - Refinancing of Consortium Loans</b>					
	Gross loan - Opening	5000.00	5000.00	5000.00	5000.00	5000.00
	Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	555.56	1111.11
	Net Loan Opening	5000.00	5000.00	5000.00	4444.44	3888.89
	add: Drawal(s) during the year					
	Less: Repayment(s) during the year			555.56	555.56	555.56
	Net Loan Closing	5000.00	5000.00	4444.44	3888.89	3333.33
	Average Net Loan	5000.00	5000.00	4722.22	4166.67	3611.11
	Rate of Interest on loan on annual basis	<b>7.9500%</b>	<b>7.9500%</b>	<b>7.9500%</b>	<b>7.9500%</b>	<b>7.9500%</b>
	Interest on Loan Annualised	397.50	397.50	375.42	331.25	287.08
2	<b>Loan-4</b>					
	<b>PNB-V - Refinancing of Consortium Loans</b>					
	Gross loan - Opening	148332.00	148332.00	148332.00	148332.00	148332.00
	Cumulative repayments of Loans upto previous period	12361.00	24722.00	37083.00	49444.00	61805.00
	Net Loan Opening	135971.00	123610.00	111249.00	98888.00	86527.00
	add: Drawal(s) during the year					
	Less: Repayment(s) during the year	12361.00	12361.00	12361.00	12361.00	12361.00
	Net Loan Closing	123610.00	111249.00	98888.00	86527.00	74166.00
	Average Net Loan	129790.50	117429.50	105068.50	92707.50	80346.50
	Rate of Interest on loan on annual basis	<b>7.9500%</b>	<b>7.9500%</b>	<b>7.9500%</b>	<b>7.9500%</b>	<b>7.9500%</b>
	Interest on Loan Annualised	10318.34	9335.65	8352.95	7370.25	6387.55
3	<b>Loan-5</b>					
	<b>Bank of India-V-A - Refinancing of consortium Loans</b>					
	Gross loan - Opening	2117.89	2117.89	2117.89	2117.89	2117.89
	Cumulative repayments of Loans upto previous period	0.00	176.49	352.98	529.47	705.96
	Net Loan Opening	2117.89	1941.40	1764.91	1588.42	1411.93
	add: Drawal(s) during the year					
	Less: Repayment(s) during the year	176.49	176.49	176.49	176.49	176.49
	Net Loan Closing	1941.40	1764.91	1588.42	1411.93	1235.44
	Average Net Loan	2029.65	1853.16	1676.66	1500.17	1323.68
	Rate of Interest on loan on annual basis	<b>8.00000%</b>	<b>8.00000%</b>	<b>8.00000%</b>	<b>8.00000%</b>	<b>8.00000%</b>
	Interest on Loan Annualised	162.37	148.25	134.13	120.01	105.89
4	<b>Loan-6</b>					
	<b>UCO Bank-IV - Refinancing of consortium Loans</b>					
	Gross loan - Opening	3155.22	3155.22	3155.22	3155.22	3155.22
	Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	262.94	525.87
	Net Loan Opening	3155.22	3155.22	3155.22	2892.29	2629.35
	add: Drawal(s) during the year					
	Less: Repayment(s) during the year	0.00	0.00	262.94	262.94	262.94
	Net Loan Closing	3155.22	3155.22	2892.29	2629.35	2366.42
	Average Net Loan	3155.22	3155.22	3023.76	2760.82	2497.89
	Rate of Interest on loan on annual basis	<b>7.8500%</b>	<b>7.8500%</b>	<b>7.8500%</b>	<b>7.8500%</b>	<b>7.8500%</b>
	Interest on Loan Annualised	247.69	247.69	237.36	216.72	196.08

## Calculation of Weighted Average Rate of Interest on Actual Loans

Name of the Petitioner		NTPC Limited (Formerly Kanti Bijlee Utpadan Nigam Limited)				
Name of the Generating Station		Muzaffarpur TPS Stage-II (2x195 MW)				
(Amount in Rs. Lakh)						
SL No	Loan	2024-25	2025-26	2026-27	2027-28	2028-29
<b>Grand Total</b>	<b>Loan- (Consortium Loans, NTPC Loans (prior to merger with NTPC Ltd) and Bank Loans (after merger with NTPC Ltd)</b>					
	Gross loan - Opening	158605.12	158605.12	158605.12	158605.12	158605.12
	Cumulative repayments of Loans upto previous period	12361.00	24898.49	37435.98	50791.96	64147.95
	Net Loan Opening	146244.12	133706.63	121169.13	107813.15	94457.17
	add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
	Less: Repayment(s) during the year	12537.49	12537.49	13355.98	13355.98	13355.98
	Net Loan Closing	133706.63	121169.13	107813.15	94457.17	81101.19
	Average Net Loan	139975.37	127437.88	114491.14	101135.16	87779.18
	Rate of Interest on loan on annual basis	7.9500%	7.9500%	7.9500%	7.9500%	7.9500%
	Interest on Loan Annualised	11125.90	10129.08	9099.86	8038.23	6976.61

(Petitioner)

Name of the Petitioner: NTPC Limited  
Name of the Generating Station : KANTI ( 2X110 MW)

SL.N O.	PARTICULARS	Unit	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23
			Domestic Coal	Domestic Coal	Domestic Coal	Domestic Coal	Domestic Coal	Domestic Coal
			Domestic (NTPC Mines)	Domestic (NTPC Mines)	Domestic (NTPC Mines)	Domestic (NTPC Mines)	Domestic (NTPC Mines)	Domestic (NTPC Mines)
<b>A OPENING QUANTITY</b>								
1	Opening Quantity of Coal	(MT)	17406.46024	53859.3584	46125.73	19843.55	48,088.92	19037.75
2	Value of Stock	Rs.	63171057.52	202154571.1	169101539.56	75861651.26	17,50,56,250.82	72943512.59
<b>B QUANTITY</b>								
3	Quantity of Coal/Lignite supplied by Coal / Lignite Company	(MT)	206885	181662.4	150782.23	211507.15	187606.93	178952.14
	- Qty Received (Pit Head)	(MT)	0	0	0.00	0.00	0.00	0.00
	- Qty Received (Non Pit Head)	(MT)	0	0	0.00	0.00	0.00	0.00
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	(MT)	-3645.02	-3209.39	-1768.12	0.00	-6900.72	-5398.29
5	Coal supplied by Coal / Lignite Company(3+/-4)	(MT)	203239.98	178453.01	149014.11	211507.15	180706.21	173553.85
6	Normative Transit & Handling Losses (for Coal / Lignite based projects)	(MT)	1625.92	1427.62	1192.11	1692.060	1445.65	1388.43
	- Normative Loss (Pit Head)	(MT)	0	0	0.00			0.00
	- Normative Loss (Non Pit Head)	(MT)	0	0	0.00			0.00
7	Net Coal / Lignite supplied (5-6)	(MT)	201614.06	177025.39	147822.00	209815.09	179260.56	172165.42
<b>C PRICE</b>								
8	Amount charged by the Coal / Lignite Company	(Rs.)	514932784.00	450491499.67	386054115.78	551284267.36	480662771.77	504433355.00
9	Adjustment (+/-) in amount charged by Coal / Lignite Company	(Rs.)	-8805105.37	-7749439.25	-4449933.93	0.00	3237719.50	-37815467.93
10	Handling Sampling and such other similar Charges	(Rs.)	44316180.90	15197102.08	35118854.69	2489346.31	24646058.78	27388890.91
11	Total amount charged (8+9+10)	(Rs.)	550443859.53	457939162.50	416723036.54	553773613.67	508546550.05	494006777.98
<b>D TRANSPORTATION</b>								
12	Transportation charges by Rail/Ship/Road Transport	(Rs.)		188113585.77	156339734.07	207617806.49	189495220.77	176241420.00
	By Rail	(Rs.)	208452049.00	188113585.77	156339734.07	207617806.49	189495220.77	176241420.00
	By Road	(Rs.)						
13	Adjustment (+/-) in amount charged by Railways / Transport Company	(Rs.)						
14	Demurrage charges, if any	(Rs.)		1760705	704563	1235453	2003885	980428
15	Cost of diesel in transporting coal through MGR system, if applicable	(Rs.)						
16	Total Transportation Charges (12+/-13 - 14 + 15)	(Rs.)	208452049.00	186352880.77	155635171.07	206382353.49	187491335.77	175260992.00
17	Other Charges	(Rs.)						
18	Total amount charged for coal / Lignite supplied including transportation (11 +16)	(Rs.)	758895908.53	644292043.27	572358207.61	760155967.16	696037885.82	669267769.98
<b>E TOTAL COST</b>								
18	Landed Cost of Coal/Lignite. (2+17)/(1+7)	(Rs./MT)	3753.38	3666.10	3822.99	3640.26	3831.52	3881.79
19	Blending Ratio (Domestic/Imported)	%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
20	Weighted Average Cost of Coal or Lignite	(Rs./MT)	3,753.38	3666.10	3822.99	3640.26	3831.52	3881.79
<b>F QUALITY</b>								
21	GCV of Domestic Coal of the Opening Coal Stock as per Bill of Coal Company	(Kcal / Kg)	4598	4590	4598	4570	4575	4599
22	GCV of Domestic Coal Supplied as per Bill of Coal Company	(Kcal / Kg)	4589	4601	4561	4575	4605	4676
23	GCV of Imported Coal of the Opening Stock as per Bill of Coal Company	(Kcal / Kg)						
24	GCV of Imported Coal Supplied as per Bill of Coal Company	(Kcal / Kg)						
25	Weighted average GCV of coal/ Lignite as Billed	(Kcal / Kg)	4590	4598	4570	4575	4599	4668
26	GCV of Domestic Coal of the Opening Stock as Received at Station	(Kcal / Kg)	3612	3598	3562	3543	3332	3309
27	GCV of Domestic Coal Supplied as Received at Station	(Kcal / Kg)	3596	3551	3537	3312	3354	3829
28	GCV of Imported Coal of the Opening Stock as Received at Station	(Kcal / Kg)						
29	GCV of Imported Coal Supplied as Received at Station	(Kcal / Kg)						
30	Weighted average GCV of coal/ Lignite as Received	(Kcal / Kg)	3598	3562	3543	3332	3350	3778

(Petitioner)

Name of the Petitioner: NTPC Limited  
Name of the Generating Station : KANTI ( 2X110 MW)

SL.N O.	PARTICULARS	Unit	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24
			Domestic Coal	Domestic Coal	Domestic Coal	Domestic Coal	Domestic Coal	Domestic Coal
			Domestic (NTPC Mines)	Domestic (NTPC Mines)	Domestic (NTPC Mines)	Domestic (NTPC Mines)	Domestic (NTPC Mines)	Domestic (NTPC Mines)
<b>A OPENING QUANTITY</b>								
1	Opening Quantity of Coal	(MT)	15115.34	23659.19	41475.29	89468.27	106516.87	103569.95
2	Value of Stock	Rs.	58674628.21	97709483.09	161791093.96	355509716.99	402087442.34	387560377.88
<b>B QUANTITY</b>								
3	Quantity of Coal/Lignite supplied by Coal / Lignite Company	(MT)	185166.59	182056.48	142481.47	165979.44	175032.49	1,71,191.63
	- Qty Received (Pit Head)	(MT)	0.00	0.00	0.00	0.00	0.00	-
	- Qty Received (Non Pit Head)	(MT)	0.00	0.00	0.00	0.00	0.00	-
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	(MT)	-3731.49	-5030.14	-4699.87	-3810.85	-4426.74	-5840.62
5	Coal supplied by Coal / Lignite Company(3+/-4)	(MT)	181435.10	177026.34	137781.60	162168.59	170605.75	165351.01
6	Normative Transit & Handling Losses (for Coal / Lignite based projects)	(MT)	1451.48	1416.21	1102.25	1297.35	1364.85	1322.81
	- Normative Loss (Pit Head)	(MT)	0.00	0.00	0.00	0.00	0.00	0.00
	- Normative Loss (Non Pit Head)	(MT)	0.00	0.00	0.00	0.00	0.00	0.00
7	Net Coal / Lignite supplied (5-6)	(MT)	179983.62	175610.13	136679.35	160871.24	169240.90	164028.20
<b>C PRICE</b>								
8	Amount charged by the Coal / Lignite Company	(Rs.)	526808319.00	503552728.72	358321824.00	415221643.00	446495169.00	455282093.00
9	Adjustment (+/-) in amount charged by Coal / Lignite Company	(Rs.)	-10199301.29	-12611839.50	31636711.59	-7228025.99	-10843852.24	-14704834.66
10	Handling Sampling and such other similar Charges	(Rs.)	39831537.41	1822877.62	9863738.39	8139767.30	7431814.08	30439056.40
11	Total amount charged (8+9+10)	(Rs.)	556440555.12	492763766.84	399822273.98	416133384.31	443083130.84	471016314.74
<b>D TRANSPORTATION</b>								
12	Transportation charges by Rail/Ship/Road Transport	(Rs.)	192186042.00	188107521.81	147318117.00	174397047.00	187762058.00	177686305.00
	By Rail	(Rs.)	192186042.00	188107521.81	147318117.00	174397047.00	187762058.00	177686305.00
	By Road	(Rs.)	0.00	0.00	0.00	0.00	0.00	0.00
13	Adjustment (+/-) in amount charged by Railways / Transport Company	(Rs.)		0.00	0.00			
14	Demurrage charges, if any	(Rs.)	1567054	1250523	1018965	1040795	1042720	1334770
15	Cost of diesel in transporting coal through MGR system, if applicable	(Rs.)		0.00				0
16	Total Transportation Charges (12+/-13 - 14 + 15)	(Rs.)	190618988.00	186856998.81	146299152.00	173356252.00	186719338.00	176351535.00
17	Other Charges	(Rs.)						
18	Total amount charged for coal / Lignite supplied including transportation (11 +16)	(Rs.)	747059543.12	679620765.65	546121425.98	589489636.31	629802468.84	647367849.74
<b>E TOTAL COST</b>								
18	Landed Cost of Coal/Lignite. (2+17)/(1+7)	(Rs./MT)	4129.87	3900.90	3973.58	3774.87	3742.02	3867.47
19	Blending Ratio (Domestic/Imported)	%	100.00%	100.00%	100.00%	100%	100.00%	100.00%
20	Weighted Average Cost of Coal or Lignite	(Rs./MT)	4129.87	3900.90	3973.58	3774.87	3742.02	3867.47
<b>F QUALITY</b>								
21	GCV of Domestic Coal of the Opening Coal Stock as per Bill of Coal Company	(Kcal / Kg)	4668	4673	4688	4571	4561	4526
22	GCV of Domestic Coal Supplied as per Bill of Coal Company	(Kcal / Kg)	4673	4690	4536	4556	4504	4690
23	GCV of Imported Coal of the Opening Stock as per Bill of Coal Company	(Kcal / Kg)						
24	GCV of Imported Coal Supplied as per Bill of Coal Company	(Kcal / Kg)						
25	Weighted average GCV of coal/ Lignite as Billed	(Kcal / Kg)	4673	4688	4571	4561	4526	4627
26	GCV of Domestic Coal of the Opening Stock as Received at Station	(Kcal / Kg)	3779	3867	3870	3622	3649	3688
27	GCV of Domestic Coal Supplied as Received at Station	(Kcal / Kg)	3875	3871	3548	3664	3712	3923
28	GCV of Imported Coal of the Opening Stock as Received at Station	(Kcal / Kg)						
29	GCV of Imported Coal Supplied as Received at Station	(Kcal / Kg)						
30	Weighted average GCV of coal/ Lignite as Received	(Kcal / Kg)	3867	3870	3622	3649	3688	3833

(Petitioner)

**PART-I**  
**FORM-15A (ADDITIONAL FORM)**

Name of the Petitioner: NTPC Limited						
Name of the Generating Station : KANTI ( 2X110 MW)						
	Month		Apr-23	May-23	Jun-23	Jul-23
<b>S.No.</b>	<b>Particulars</b>	<b>Unit</b>	<b>LDO</b>	<b>LDO</b>	<b>LDO</b>	<b>LDO</b>
1	Opening Stock of Oil	KL	924.46	786.61	801.79	859.39
2	Value of Opening Stock	Rs.	80141951.40	68191523.89	68640227.28	71160889.34
3	Quantity of Oil supplied by Oil Company	KL	0.00	100.00	228.00	0.00
4	Adjustment (+/-) in quantity supplied by Oil Company	KL	0.00	0.00	0.00	0.00
5	Qty. of Oil supplied by Oil Company (3+4)	KL	0.00	100.00	228.00	0.00
6	Normative Transit & Handling Losses	KL	0.00	0.00	0.00	0.00
7	Net Oil Supplied ( 5 - 6 )	KL	0.00	100.00	228.00	0.00
8	Amount charged by the Oil Company	Rs.	0.00	7709744.76	16630489.25	0.00
9	Adjustment (+/-) in amount charged by Oil Company	Rs.	0.00	0.00	0.00	0.00
10	Handling, Sampling and such other similar charges	Rs.	0.00	0.00	0.00	0.00
11	Total amount charged (8+9+10)	Rs.	0.00	7709744.76	16630489.25	0.00
12	Transportation charges by rail/ship/road transport	Rs.				
13	Adjustment (+/-) in amount charged by Railways/Transport Company.	Rs.	inclusive	inclusive	inclusive	inclusive
14	Demurrage charges, if any	Rs.				
15	Total Transportation Charges (12+13+14+15)	Rs.				
16	Others	Rs.	0.00	0.00	0.00	0.00
17	<b>Total amount charged for Oil supplied including Transportation (11+15+16)</b>	Rs.	<b>0.00</b>	<b>7709744.76</b>	<b>16630489.25</b>	<b>0.00</b>
18	<b>Weighted average cost of Oil</b>	Rs./ KL	86690.31	85608.35	<b>82803.69</b>	<b>82803.70</b>
19	GCV of Oil of the opening stock as per Oil Company	Kcal/KL	9297.00	9300.00	9300.00	<b>9300.00</b>
20	<b>Weighted average GCV of Oil</b>	<b>Kcal/KL</b>	9297.00	9300.00	9300.00	<b>9300.00</b>

(Petitioner)

**PART-I**  
**FORM-15A (ADDITIONAL FORM)**

Name of the Petitioner: NTPC Limited						
Name of the Generating Station : KANTI ( 2X110 MW)						
Month						
S.No.	Particulars	Unit	Aug-23 LDO	Sep-23 LDO	Oct-23 LDO	Nov-23 LDO
1	Opening Stock of Oil	KL	787.82	829.27	826.13	825.41
2	Value of Opening Stock	Rs.	65234051.48	68602143.81	68342962.80	68860280.72
3	Quantity of Oil supplied by Oil Company	KL	51.00	0.00	73.00	73.00
4	Adjustment (+/-) in quantity supplied by Oil Company	KL	0.00	0.00	0.00	0.00
5	Qty. of Oil supplied by Oil Company (3+4)	KL	51.00	0.00	73.00	73.00
6	Normative Transit & Handling Losses	KL	0.00	0.00	0.00	0.00
7	Net Oil Supplied ( 5 - 6 )	KL	51.00	0.00	73.00	73.00
8	Amount charged by the Oil Company	Rs.	4144696.50	0.00	6665828.47	6370014.27
9	Adjustment (+/-) in amount charged by Oil Company	Rs.	0.00	0.00	0.00	0.00
10	Handling, Sampling and such other similar charges	Rs.	0.00	0.00	0.00	0.00
11	Total amount charged (8+9+10)	Rs.	4144696.50	0.00	6665828.47	6370014.27
12	Transportation charges by rail/ship/road transport	Rs.	inclusive	inclusive	inclusive	inclusive
13	Adjustment (+/-) in amount charged by Railways/Transport Company.	Rs.				
14	Demurrage charges, if any	Rs.				
15	Total Transportation Charges (12+13+14+15)	Rs.				
16	Others	Rs.	0.00	0.00	0.00	0.00
17	<b>Total amount charged for Oil supplied including Transportation (11+15+16)</b>	Rs.	<b>4144696.50</b>	<b>0.00</b>	<b>6665828.47</b>	<b>6370014.27</b>
18	<b>Weighted average cost of Oil</b>	Rs./ KL	<b>82710.37</b>	<b>82726.18</b>	<b>83423.32</b>	<b>83737.00</b>
19	GCV of Oil of the opening stock as per Oil Company	Kcal/KL	<b>9302.00</b>	<b>9302.00</b>	<b>9292.00</b>	<b>9285.00</b>
20	<b>Weighted average GCV of Oil</b>	<b>Kcal/KL</b>	<b>9302.00</b>	<b>9302.00</b>	<b>9292.00</b>	<b>9285.00</b>

(Petitioner)

**PART-I**  
**FORM-15A (ADDITIONAL FORM)**

Name of the Petitioner: NTPC Limited						
Name of the Generating Station : KANTI ( 2X110 MW)						
Month			Dec-23	Jan-24	Feb-24	Mar-24
S.No.	Particulars	Unit	LDO	LDO	LDO	LDO
1	Opening Stock of Oil	KL	833.36	829.75	832.13	882.53
2	Value of Opening Stock	Rs.	69934523.71	69631159.27	69432169.17	73410961.70
3	Quantity of Oil supplied by Oil Company	KL	0.00	210.86	120.86	0.00
4	Adjustment (+/-) in quantity supplied by Oil Company	KL	0.00	0.00	0.00	0.00
5	Qty. of Oil supplied by Oil Company (3+4)	KL	0.00	210.86	120.86	0.00
6	Normative Transit & Handling Losses	KL	0.00	0.00	0.00	0.00
7	Net Oil Supplied ( 5 - 6 )	KL	0.00	210.86	120.86	0.00
8	Amount charged by the Oil Company	Rs.	0.00	17196808.56	9839914.08	0.00
9	Adjustment (+/-) in amount charged by Oil Company	Rs.	0.00	0.00	0.00	0.00
10	Handling, Sampling and such other similar charges	Rs.	0.00	0.00	0.00	0.00
11	Total amount charged (8+9+10)	Rs.	0.00	17196808.56	9839914.08	0.00
12	Transportation charges by rail/ship/road transport	Rs.				
13	Adjustment (+/-) in amount charged by Railways/Transport Company.	Rs.				
14	Demurrage charges, if any	Rs.				
15	Total Transportation Charges (12+13+14+15)	Rs.				
16	Others	Rs.	0.00	0.00	0.00	0.00
17	<b>Total amount charged for Oil supplied including Transportation (11+15+16)</b>	Rs.	<b>0.00</b>	<b>17196808.56</b>	<b>9839914.08</b>	<b>0.00</b>
18	<b>Weighted average cost of Oil</b>	Rs./ KL	<b>83918.28</b>	<b>83439.52</b>	<b>83182.53</b>	<b>83182.53</b>
19	GCV of Oil of the opening stock as per Oil Company	Kcal/KL	<b>9285.00</b>	<b>9306.00</b>	<b>9267.00</b>	<b>9267.00</b>
20	<b>Weighted average GCV of Oil</b>	<b>Kcal/KL</b>	<b>9285.00</b>	<b>9306.00</b>	<b>9267.00</b>	<b>9267.00</b>

(Petitioner)

**Computation of Energy Charges**

**Form-15B  
ADDITIONAL FORM**

Name of the Petitioner: **NTPC Limited**  
Name of the Generating Station : **MTPS Stage - II ( 2X195 MW)**

		2024-25	2025-26	2026-27	2027-28	2028-29
<b>Computation of Energy Charges</b>						
No of Days in the year	Days	365	365	365	366	365
Sp. Oil consumption	ml/kwh	0.5	0.5	0.5	0.5	0.5
Auxiliary consumption	%	9.00	9.00	9.00	9.00	9.00
Heat Rate	Kcal/Kwh	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00
1 Rate of Energy Charge from Sec. Fuel Oil/ Alternate Fuel (p/kwh) $(REC)_s$	$= (Q_s)_n \times P_s$	4.184				
<b>Computation of Variable Charges</b>						
Variable Charge (Coal)	p/kwh	295.503	295.503	295.503	295.503	295.503
Variable Charge (Oil)	p/kwh	4.598	4.598	4.598	4.598	4.598
<b>Total</b>	p/kwh	300.101	300.101	300.101	300.101	300.101
<b>Price of fuel from Form-15/15A</b>						
Coal Cost	(Rs./MT)	3832.06	3832.06	3832.06	3832.06	3832.06
Oil Cost	(Rs./KL)	83685.48	83685.48	83685.48	83685.48	83685.48
<b>Computation of Fuel Expenses for Calculation of IWC:</b>						
ESO in a year	(MUs)	2642.59	2642.59	2642.59	2649.83	2642.59
ESO for 50 days	(MUs)	361.998	361.998	361.998	361.998	361.998
Cost of coal for 50 Day	(Rs. Lakh)	10697.15	10697.15	10697.15	10697.15	10697.15
Cost of oil for 2 month	(Rs. Lakh)	202.51	202.51	202.51	203.07	202.51
Energy Expenses for 4	(Rs. Lakh)	9777.24	9777.24	9777.24	9777.24	9777.24
2 Heat Contribution from SFO / Alternate Fuel $(H_s)$	$= (Q_s)_n \times (GCV)_s$	4.646				
3 Heat Contribution from coal $(H_p)_s$	$= GHR - H_s$	2495.35				
4 Specific Primary Fuel Consumption $(Q_p)_n$	$= H_p / (GCV)_p$	0.702				
5 Rate of Energy charge from Primary Fuel $(REC)_p$ (p/kwh)		268.908				
6 Rate of Energy charge $ex_{(REC)}$ bus (p/kWh)	$= ((REC)_s + (REC)_p) / (1-(AUX))$	300.101				

Coal		April '23	May'23	June'23	July'23	Aug'23	Sep'23	Oct'23	Nov'23	Dec'23	Jan'24	Feb'24	Mar'24	Wtd. Avg.
Wtd. Avg. Price of Coal	Rs./MT	3753.38	3666.10	3822.99	3640.26	3831.52	3881.79	4129.87	3900.90	3973.58	3774.87	3742.02	3867.47	3832.06
Wtd. Avg. GCV of Coal as received	kCal/Kg	3598.00	3562.00	3543.00	3332.00	3350.00	3778.00	3867.00	3870.00	3622.00	3649.00	3688.00	3833.00	3641.00
<b>Wtd. Avg. GCV of Coal as received after adjustment of 85 kcal/kg</b>	kCal/Kg	3513	3477	3458	3247	3265	3693	3782	3785	3537	3564	3603	3748	3556.00
<b>Secondary Oil</b>														
Wtd. Avg. Price of Secondary Fuel	Rs/KL	86690.31	85608.35	82803.69	82803.70	82710.37	82726.18	83423.32	83737.00	83918.28	83439.52	83182.53	83182.53	83685.48
Wtd. Avg. GCV of Secondary Fuel	kCal/L	9297.00	9300.00	9300.00	9300.00	9302.00	9302.00	9292.00	9285.00	9285.00	9306.00	9267.00	9267.00	9291.92

(Petitioner)



Name of the Petitioner	NTPC Ltd
Name of the Generating Station	MTPS-II (2x195 MW)

**Statement of Capital cost**

		(Amount in Rs. Lakh)		
S. No.	Particulars	As on 31.03.2024		
		Accrual Basis	Un-discharged Liabilities	Cash Basis
A	a) Opening Gross Block Amount as per books	410783.56	7031.56	403752.00
	b) Amount of IDC in A(a) above	92970.06	0.00	92970.06
	c) Amount of FC in A(a) above	0.00	0.00	0.00
	d) Amount of FERV in A(a) above	0.00	0.00	0.00
	e) Amount of Hedging Cost in A(a) above	0.00	0.00	0.00
	f) Amount of IEDC in A(a) above	16922.96	0.00	16922.96
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			

SHALL BE PROVIDED AT THE TIME OF TRUE-UP.

(Petitioner)

<b>Name of the Petitioner</b>	<b>NTPC Ltd</b>
<b>Name of the Generating Station</b>	<b>MTPS-II (2x195 MW)</b>

**Statement of Capital Woks in Progress**

(Amount in Rs. Lakh)

S. No.	Particulars	As on 31.03.24		
		Accrual Basis	Un-discharged Liabilities	Cash Basis
A	a) Opening CWIP as per books	50172.22	12683.63	37488.59
	b) Amount of IDC in A(a) above	11127.99		11127.99
	c) Amount of FC in A(a) above	0.00		0.00
	d) Amount of FERV in A(a) above	0.00		0.00
	e) Amount of Hedging Cost in A(a) above	0.00		0.00
	f) Amount of IEDC in A(a) above	2605.11		2605.11
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			

SHALL BE PROVIDED AT THE TIME OF TRUE-UP.

(Petitioner)

**Calculation of Interest on Normative Loan**

<b>Name of the Company :</b>	<b>NTPC Limited</b>
<b>Name of the Power Station :</b>	<b>MTPS-II (2x195 MW)</b>

(Amount in Rs Lakh)

S. No.	Particulars	Existing 2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7	8
1	Gross Normative loan – Opening	2,49,219.76	2,51,071.01	2,55,790.06	2,63,464.55	2,76,845.05	2,82,982.95
2	Cumulative repayment of Normative loan up to previous year	95,123.30	1,12,283.33	1,29,754.68	1,47,653.23	1,66,277.55	1,85,574.65
<b>3</b>	<b>Net Normative loan – Opening</b>	<b>1,54,096.46</b>	<b>1,38,787.68</b>	<b>1,26,035.38</b>	<b>1,15,811.32</b>	<b>1,10,567.51</b>	<b>97,408.30</b>
4	Add: Increase due to addition during the year / period	1517.93	4,719.05	7,674.49	13,380.50	6,137.89	16,310.00
5	Less: Decrease due to de-capitalisation during the year / period	-199.64	-	-	-	-	-
6	Less: Decrease due to reversal during the year / period		-	-	-	-	-
7	Add: Increase due to discharges during the year / period	532.95	-	-	-	-	-
8	Net addition in loan during the period (4+5+6+7)	1851.25	4719.05	7674.49	13380.50	6137.89	16310.00
<b>9</b>	<b>Less: Repayment of Loan</b>	<b>17244.87</b>	<b>17,471.35</b>	<b>17,898.55</b>	<b>18,624.31</b>	<b>19,297.11</b>	<b>20,070.88</b>
10	Repayment adjustment on account of de capitalisation	82.73	-	-	-	-	-
11	Repayment adjustment on account of discharges/reversals corresponding to un discharged liabilities deducted as on 1.4.2009	-	-	-	-	-	-
12	<b>Net Normative loan - Closing</b>	<b>1,38,620.11</b>	<b>1,26,035.38</b>	<b>1,15,811.32</b>	<b>1,10,567.51</b>	<b>97,408.30</b>	<b>93,647.42</b>
13	<b>Average Normative loan</b>	<b>1,46,358.28</b>	<b>1,32,411.53</b>	<b>1,20,923.35</b>	<b>1,13,189.41</b>	<b>1,03,987.90</b>	<b>95,527.86</b>
14	Weighted average rate of interest	7.9754	7.9500	7.9500	7.9500	7.9500	7.9500
<b>15</b>	<b>Interest on Loan</b>	<b>11672.66</b>	<b>10526.72</b>	<b>9613.41</b>	<b>8998.56</b>	<b>8267.04</b>	<b>7594.46</b>

(Petitioner)

**Calculation of Interest on Working Capital**

<b>Name of the Company :</b>		<b>NTPC Ltd</b>					
<b>Name of the Power Station :</b>		<b>MTPS-II (2x195 MW)</b>					
<b>(Amount in Rs Lakh)</b>							
<b>S. No.</b>	<b>Particulars</b>	<b>2023-24</b>	<b>2024-25</b>	<b>2025-26</b>	<b>2026-27</b>	<b>2027-28</b>	<b>2028-29</b>
<b>1</b>	<b>2</b>						
1	Cost of Coal/Lignite	10497.11	10697.15	10697.15	10697.15	10697.15	10697.15
2	Cost of Main Secondary Fuel Oil	210.84	202.51	202.51	202.51	203.07	202.51
3	Fuel Cost						
4	Liquid Fuel Stock						
5	O & M Expenses	1609.90	1653.75	1757.74	1856.75	1975.27	2113.62
6	Maintenance Spares	3863.76	3969.00	4218.58	4456.21	4740.65	5072.68
7	Receivables	18522.11	18707.57	18869.49	19140.68	19387.00	19752.46
8	Total Working Capital	34703.72	35229.98	35745.47	36353.30	37003.13	37838.42
9	Rate of Interest	12.0000	11.9000	11.9000	11.9000	11.9000	11.9000
10	<b>Interest on Working Capital</b>	<b>4164.45</b>	<b>4192.37</b>	<b>4253.71</b>	<b>4326.04</b>	<b>4403.37</b>	<b>4502.77</b>

**(Petitioner)**

**Summary of issue involved in the petition**

<b>Name of the Company :</b>		<b>NTPC Limited</b>
<b>Name of the Power Station :</b>		<b>MTPS-II (2x195 MW)</b>
<b>1</b>	<b>Petitioner:</b>	<b>NTPC Limited</b>
<b>2</b>	<b>Subject</b>	Petition Under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-III of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 and Chapter-3, Regulation-9 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 for approval of tariff of Muzzaffarpur Thermal Power Station, Stage-II (2 X 195 MW) for the period from 01.04.2024 to 31.03.2029.
<b>3</b>	Prayers In the light of the above submissions, the Petitioner, therefore, prays that the Hon'ble Commission may be pleased to: i) Approve tariff of MTPS Stage-II for the tariff period 01.04.2024 to 31.03.2029. ii) Allow the work beyond cut-off date for the instant station under Regulation-102 of CERC Tariff Regulations 2024 i.e. Power to relax iii) Allow the recovery of filing fees as & when paid to the Hon'ble Commission and publication expenses from the beneficiaries. iv) Allow reimbursement of Ash Transportation Charges directly from the beneficiaries on monthly basis subject to true up. v) Allow the recovery of pay/wage revision as additional O&M over and above the normative O&M. vi) Approve Supplementary Tariff of MTPS-II for the DeNOx System from 01.04.2024 to 31.03.2024 vii) Pass any other order as it may deem fit in the circumstances mentioned above.	
<b>4</b>	<b>Respondents:</b>	
	<b>Name of Respondents</b>	
	a. North Bihar Power Distribution Company Ltd.	
	b. South Bihar Power Distribution Company Ltd.	
	c. Jharkhand Bijlee Vitran Nigam Ltd.	
	d. Power Department, Govt. of Sikkim	
	e. Kerala State Electricity Board Ltd. (KSEBL)	
<b>5</b>	<b>Project Scope</b>	<b>(2x195) MW</b>
	<b>Cost</b>	
	<b>Commissioning</b>	
	<b>Claim</b>	<b>As per Petition</b>
	<b>AFC (lakhs)</b>	<b>Refer Form-1</b>
	<b>Capital cost (lakhs) as on 01.04.2024</b>	<b>Refer Form-1(1)</b>
	<b>NAPAF (Gen)</b>	<b>85%</b>
	<b>Any Specific</b>	
		<b>(Petitioner)</b>

**SUPPLEMENTARY TARIFF FILING FORMS  
(THERMAL)**

**FOR DETERMINATION OF SUPPLEMENTARY TARIFF  
OF**

**MTPS-II (2x195 MW)**

**(For ECS- DeNOx System for 2024-29 Period)**

**PART-I**

**APPENDIX-IA**

<b>Checklist of Main Tariff Forms and other information for supplementary tariff filing for Thermal Stations</b>		
<b>Form No.</b>	<b>Title of Tariff Filing Forms (Thermal)</b>	<b>Tick</b>
FORM- 1	Summary of Supplementary Tariff	✓
FORM -1 (I)	Statement showing claimed capital cost	✓
FORM -1 (II)	Statement showing Return on Equity	✓
FORM-2	Plant Characteristics	✓
FORM-3	Normative parameters considered for tariff computations	✓
FORM-3A	Statement showing O&M Expenses	✓
FORM-3B**	Statement of Special Allowance	NA
FORM- 4	Details of Foreign loans	NA
FORM- 4A	Details of Foreign Equity	NA
FORM-5	Abstract of Admitted Capital Cost for the existing Projects	NA
FORM- 6	Financial Package upto COD	NA
FORM- 7	Details of Project Specific Loans	NA
FORM- 8	Details of Allocation of corporate loans to various projects	NA
FORM-9A	Summary of Statement of Additional Capitalisation claimed during the period	✓
FORM-9	Statement of Additional Capitalisation after COD	✓
FORM- 10	Financing of Additional Capitalisation	NA
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	NA
FORM- Oi	Computation of Supplementary Energy Charges	✓
FORM- 16	Details of Reagent for Computation of Energy Charge Rate	NA
FORM-17	Details of Capital Spares	NA
FORM- 18	Non-Tariff Income	NA
FORM-19	Details of Water Charges	NA
FORM-20	Details of Statutory Charges	NA
<b>PART-I</b>		
<b><u>List of Supporting Forms / documents for supplementary tariff filing for Thermal Stations</u></b>		
<b>Form No.</b>	<b>Title of Tariff Filing Forms (Thermal)</b>	<b>Tick</b>
FORM-A	Abstract of Capital Cost Estimates	NA
FORM-B	Break-up of Capital Cost for Coal/Lignite based projects	✓
FORM-C	Break-up of Capital Cost for Gas/Liquid fuel based Projects	NA
FORM-D	Break-up of Construction/Supply/Service packages	✓
FORM-E	Details of variables , parameters , optional package etc. for New Project	NA
FORM-F	Details of cost over run	NA
FORM-G	Details of time over run	NA
FORM –H	Statement of Additional Capitalisation during end of the useful life	NA
FORM –I	Details of Assets De-capitalised during the period	NA
FORM –J	Reconciliation of Capitalisation claimed vis-à-vis books of accounts	NA
FORM –K	Statement showing details of items/assets/works claimed under Exclusions	NA
FORM-L	Statement of Capital cost	***
FORM-M	Statement of Capital Woks in Progress	NA
FORM-N	Calculation of Interest on Normative Loan	✓
FORM-O	Calculation of Interest on Working Capital	✓
FORM-Oi	Additional Form	✓
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	✓
<b>(Petitioner)</b>		

**Summary of Supplementary Tariff (DeNOx System)**

<b>Name of the Petitioner:</b>	<b>NTPC Ltd.</b>
<b>Name of the Generating Station:</b>	<b>MTPS-II (2x195 MW) ECS :De-Nox Combustion Modification</b>

**Amount in Rs. Lakhs**

S. No.	Particulars	Unit	Existing 2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5				6
1.1	Depreciation	Rs Lakh	39.19	40.43	41.66	41.66	41.66	41.66
1.2	Interest on Loan	Rs Lakh	37.79	35.81	33.85	30.54	27.23	23.92
1.3	Return on Equity	Rs Lakh	32.38	33.82	34.85	34.85	34.85	34.85
1.4	Interest on Working Capital	Rs Lakh	2.56	2.65	2.71	2.71	2.72	2.73
1.5	O&M Expenses	Rs Lakh	18.19	19.54	20.57	21.65	22.79	23.98
	<b>Total</b>	Rs Lakh	<b>130.11</b>	<b>132.25</b>	<b>133.65</b>	<b>131.42</b>	<b>129.25</b>	<b>127.15</b>

**(Petitioner)**



Name of the Petitioner: NTPC Ltd.  
Name of the Generating Station: MTPS-II (2x195 MW) ECS :De-Nox Combustion Modification

Amount in Rs. Lakhs

**Statement showing claimed capital cost**

S. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4			5
1	Opening Capital Cost	742.19	789.10	789.10	789.10	789.10
2	Add: Addition during the year/period	46.91	0.00	0.00	0.00	0.00
3	Less: De-capitalisation during the year/period	0.00	0.00	0.00	0.00	0.00
4	Less: Reversal during the year / period	0.00	0.00	0.00	0.00	0.00
5	Add: Discharges during the year/ period	0.00	0.00	0.00	0.00	0.00
6	Closing Capital Cost	789.10	789.10	789.10	789.10	789.10
7	<b>Average Capital Cost</b>	<b>765.65</b>	<b>789.10</b>	<b>789.10</b>	<b>789.10</b>	<b>789.10</b>

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

S. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4			5
1	Opening Capital Cost	-	0.00	0.00	0.00	0.00
2	Add: Addition during the year / period					
3	Less: De-capitalisation during the year / period					
4	Less: Reversal during the year / period					
5	Add: Discharges during the year / period					
6	Closing Capital Cost	0.00	0.00	0.00	0.00	0.00
7	<b>Average Capital Cost</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Statement showing claimed capital cost eligible for RoE at rate linked to SBI MCLR (B)**

S. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4			5
1	Opening Capital Cost	742.19	789.10	789.10	789.10	789.10
2	Add: Addition during the year / period	46.91	-			-
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	789.10	789.10	789.10	789.10	789.10
7	<b>Average Capital Cost</b>	<b>765.65</b>	<b>789.10</b>	<b>789.10</b>	<b>789.10</b>	<b>789.10</b>

(Petitioner)

<b>Name of the Petitioner:</b>	NTPC Ltd.
<b>Name of the Generating Station:</b>	MTPS-II (2x195 MW) ECS :De-Nox Combustion Modification

**Statement showing Return on Equity at at rate linked to SBI MCLR**

		Amount in Rs. Lakhs				
S. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4			5
	<b>Return on Equity eligible for RoE at rate linked to SBI MCLR</b>					
1	Gross Opening Equity (Normal)	222.66	236.73	236.73	236.73	236.73
2	Less: Adjustment in Opening Equity					
3	Adjustment during the year					
4	Net Opening Equity (Normal)	222.66	236.73	236.73	236.73	236.73
5	Add: Increase in equity due to addition during the year / period	14.07	-			-
7	Less: Decrease due to De-capitalisation during the year / period	-	-			-
8	Less: Decrease due to reversal during the year / period	-	-			-
9	Add: Increase due to discharges during the year / period	-	-			-
10	Net closing Equity (Normal)	236.73	236.73	236.73	236.73	236.73
11	Average Equity (Normal)	229.69	236.73	236.73	236.73	236.73
12	Rate of ROE (%)	14.722%	14.722%	14.722%	14.722%	14.722%
13	Total ROE	<b>33.82</b>	<b>34.85</b>	<b>34.85</b>	<b>34.85</b>	<b>34.85</b>

**(Petitioner)**

<b>Name of the Petitioner:</b>	<b>NTPC Ltd.</b>
<b>Name of the Generating Station:</b>	<b>MTPS-II (2x195 MW)</b>

**ECS Characteristics**

<b>Name of the Petitioner</b>	<b>NTPC LIMITED</b>
<b>Name of the Generating Station</b>	<b>MTPS-II (2x195 MW)</b>
<b>Unit(s)/Block(s)/Parameters</b>	<b>2x195 MW</b>
<b>Installed Capacity ( MW)-Coal Based</b>	<b>390 MW</b>
<b>Actual Commissioning (of CMS)</b>	<b>Unit-3 &amp; Unit-4: 01.08.2022</b>
<b>Type of System</b>	<b>Combustion Modification System (CM System)</b>
<b>Name of CM Manufacturer</b>	<b>M/s L&amp;T MHI POWER BOILERS PVT LTD</b>
<b>Special Technological Features</b>	
<b>Any other special features</b>	<b>Low NOX concentric firing system (LNCFS) with Seperated Over Fire Air (SOFA) dampers</b>
<b>Nox Control (Combustion Modification System)</b>	<b>Less than the 400 mg/Nm3 @6% O2 dry basis at ID Fan outlet.</b>

**(Petitioner)**

**Normative parameters considered for supplementary tariff computations**

<b>Name of the Petitioner:</b>		<b>NTPC Ltd.</b>					
<b>Name of the Generating Station:</b>		<b>MTPS-II (2x195 MW) ECS :De-Nox Combustion Modification</b>					
<b>(Year Ending March)</b>							
<b>Particulars</b>	<b>Unit</b>	<b>Existing 2023-24</b>	<b>2024-25</b>	<b>2025-26</b>	<b>2026-27</b>	<b>2027-28</b>	<b>2028-29</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>4</b>
Base Rate of Return on Equity	%	12.00%	12.15%	12.15%	12.15%	12.15%	12.15%
Effective Tax Rate	%	17.47%	17.47%	17.47%	17.47%	17.47%	17.47%
Target Availability							
Peak Hours		85.00%	85.00%	85.00%	85.00%	85.00%	85.00%
Off-Peak Hours		85.00%	85.00%	85.00%	85.00%	85.00%	85.00%
Auxiliary Energy Consumption	%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
Auxiliary Energy Consumption for emission control system (Design)	%	-	-	-	-	-	-
Rate of Interest on Working Capital	%	12.00%	11.90%	11.90%	11.90%	11.90%	11.90%
O&M Expenses	% of Capital Cost	2					
Maintenance Spares for WC	% of O&M	20.00%					
Receivables for WC	in Days	45					
<b>(Petitioner)</b>							

**Calculation of O&M Expenses**

<b>Name of the Company :</b>		NTPC Ltd.				
<b>Name of the Power Station :</b>		MTPS-II (2x195 MW) ECS :De-Nox Combustion Modification				
<b>Amount in Rs. Lakhs</b>						
S.No	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4			5
1	<b>O&amp;M expenses under Reg.36(1)(9)</b>					
1a	Normative O&M expenses- ECS	19.54	20.57	21.65	22.79	23.98
	<b>Total O&amp;M Expenses</b>	<b>19.54</b>	<b>20.57</b>	<b>21.65</b>	<b>22.79</b>	<b>23.98</b>

(Petitioner)

Year wise Statement of Additional Capitalisation after COD

<b>Name of the Petitioner</b>		NTPC Ltd.				
<b>Name of the Generating Station</b>		MTPS-II (2x195 MW) ECS :De-Nox Combustion Modification				
<b>For Financial Year</b>		2024-29 Summary				
						Amount in Rs Lakh
<b>Sl. No.</b>	<b>Head of Work /Equipment</b>	<b>ACE Claimed (Projected)</b>				
		<b>2024-25</b>	<b>2025-26</b>	<b>2026-27</b>	<b>2027-28</b>	<b>2028-29</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
1	Combustion Modification System St-II	46.91	-	-	-	-
<b>Total Add Cap</b>		<b>46.91</b>	-	-	-	-
5	Discharge of Liabilities	-	-	-	-	-
<b>Total Add. Cap. Claimed including discharge of liabilities</b>		<b>46.91</b>	-	-	-	-

(Petitioner)

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner			NTPC Ltd.					
Name of the Generating Station			MTPS-II (2x195 MW) ECS :De-Nox Combustion Modification					
For Financial Year			2024-25					
							Amount in Rs Lakh	
Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed (Projected)			Regulations under which claimed	Justification	Admitted Cost by the Commission, if any
			Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3			
1	2	3	4	5= (3-4)	6	7	8	9
1	Combustion Modification System Stage-II	46.91		46.91				
3	<b>Discharge of liabilities</b>			-				
	<b>Total</b>	<b>46.91</b>	<b>-</b>	<b>46.91</b>	<b>-</b>			
								(Petitioner)

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

<b>Name of the Petitioner</b>	NTPC Ltd.
<b>Name of the Generating Station</b>	MTPS-II (2x195 MW) ECS :De-Nox Combustion Modification
<b>For Financial Year</b>	2025-26

Amount in Rs Lakh

Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed (Projected)			Regulations under which claimed	Justification	Admitted Cost by the Commission, if any
			Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3			
1	2	3	4	5= (3-4)	6	7	8	9
1	Combustion Modification System St-II			-	0			
<b>3</b>	<b>Discharge of liabilities</b>							
	<b>Total</b>	-	-	-	-			

(Petitioner)



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

Name of the Petitioner	NTPC Ltd.
Name of the Generating Station	MTPS-II (2x195 MW) ECS :De-Nox Combustion Modification
For Financial Year	2026-27

Amount in Rs Lakh

Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed (Projected)			Regulations under which claimed	Justification	Admitted Cost by the Commission, if any
			Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3			
1	2	3	4	5= (3-4)	6	7	8	9
1	Combustion Modification System St-II							
3	<b>Discharge of liabilities</b>			-				
	<b>Total</b>	-	-	-	-			

(Petitioner)

## Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTPC Ltd.
Name of the Generating Station	MTPS-II (2x195 MW) ECS :De-Nox Combustion Modification
For Financial Year	2027-28

Amount in Rs Lakh

Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed (Projected)			Regulations under which claimed	Justification	Admitted Cost by the Commission, if any
			Un-discharged Liability included in col. 3	Cash basis	5= (3-4)			
1	2	3	4	5= (3-4)	6	7	8	9
1	Combustion Modification System St-II							
3	<b>Discharge of liabilities</b>			-				
	<b>Total</b>	-	-	-	-			

(Petitioner)

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

<b>Name of the Petitioner</b>			NTPC Ltd.					
<b>Name of the Generating Station</b>			MTPS-II (2x195 MW) ECS :De-Nox Combustion Modification					
<b>For Financial Year</b>			2028-29					
								<b>Amount in Rs Lakh</b>
SI. No.	Head of Work /Equipment	ACE Claimed (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
1	Combustion Modification System St-II							
3	<b>Discharge of liabilities</b>			-				
	<b>Total</b>	-	-	-	-			

(Petitioner)

**Calculation of Depreciation**

<b>Name of the Petitioner</b>	<b>NTPC Limited</b>
<b>Name of the Generating Station</b>	<b>MTPS-II (2x195 MW) ECS :De-Nox Combustion Modification</b>

**Amount in Rs Lakh**

SI.No.	Name of the Assets <sup>1</sup>	Depreciation Rates as per CERC's Depreciation Rate Schedule	Gross Block as on 01.04.2024	Depreciation
1	Plant & Machinery	5.28%	896.94	47.36
	<b>Total</b>		896.94	47.36
	<b>Weighted Average Rate of Depreciation (%)</b>			5.2800%

**(Petitioner)**

**Statement of Depreciation**

<b>Name of the Company :</b>	NTPC Ltd.					
<b>Name of the Power Station :</b>	MTPS-II (2x195 MW) ECS :De-Nox Combustion Modification					

(Amount in Rs Lakh)

S. No.	Particulars	Existing 2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	4	5	6	7	8	9
1	Opening Capital Cost	742.19	742.19	789.10	789.10	789.10	789.10
2	Closing Capital Cost	742.19	789.10	789.10	789.10	789.10	789.10
3	Average Capital Cost	742.19	765.65	789.10	789.10	789.10	789.10
4	Freehold land						
5	Rate of depreciation (%)	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%
6	Depreciable value	667.97	689.08	710.19	710.19	710.19	710.19
8	Remaining depreciable value	667.97	623.80	604.49	562.82	521.16	479.49
9	Depreciation (for the period)	39.19	40.43	41.66	41.66	41.66	41.66
10	Depreciation (annualised)	<b>39.19</b>	<b>40.43</b>	<b>41.66</b>	<b>41.66</b>	<b>41.66</b>	<b>41.66</b>
11	Cumulative depreciation at the end of the period	65.28	105.70	147.37	189.03	230.70	272.36
12	Less: Cumulative depreciation adjustment on account of un-discharged liabilities deducted as on 01.04.2009	-	-	-	-	-	-
13	Add: Cumulative depreciation adjustment on account of liability Discharge	-	-	-	-	-	-
14	Less: Cumulative depreciation adjustment on account of de-capitalisation	-	-	-	-	-	-
12	Net Cumulative depreciation at the end of the period after adjustments	65.28	105.70	147.37	189.03	230.70	272.36

\* Shall be provided at true-up.

(Petitioner)

Statement of Capital cost

Name of the Petitioner	NTPC Limited
Name of the Generating Station	MTPS-II (2x195 MW) ECS :De-Nox Combustion Modification
COD	01-04-2006
For Financial Year	2021-24

(Rs Lakh)

Sl. No.	Particulars	2024-25			2025-26			2026-27			2027-28			2028-29		
		Accrual Basis	Un-discharged Liabilities	Cash Basis	Accrual Basis	Un-discharged Liabilities	Cash Basis	Accrual Basis	Un-discharged Liabilities	Cash Basis	Accrual Basis	Un-discharged Liabilities	Cash Basis	Accrual Basis	Un-discharged Liabilities	Cash Basis
A	a) Opening Gross Block Amount as per books	742.19	-	742.19	SHALL BE PROVIDED AT TRUE-UP.											
	b) Amount of IDC in A(a) above	-	-	-												
	c) Amount of FC in A(a) above	-	-	-												
	d) Amount of FERV in A(a) above	-	-	-												
	e) Amount of Hedging Cost in A(a) above	-	-	-												
	f) Amount of IEDC in A(a) above	-	-	-												
B	a) Addition in Gross Block Amount during the period (Direct purchases)	SHALL BE PROVIDED AT TRUE-UP.														
	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)	SHALL BE PROVIDED AT TRUE-UP.														
	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	SHALL BE PROVIDED AT TRUE-UP.														
	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	SHALL BE PROVIDED AT TRUE-UP.														
	b) Amount of IDC in E(a) above															
	c) Amount of FC in E(a) above															
	d) Amount of FERV in E(a) above															
	e) Amount of Hedging Cost in E(a) above															
	f) Amount of IEDC in E(a) above															

(Petitioner)

**Calculation of Interest on Normative Loan**

<b>Name of the Company :</b>		NTPC Ltd.					
<b>Name of the Power Station :</b>		MTPS-II (2x195 MW) ECS :De-Nox Combustion Modification					
(Amount in Rs Lakh)							
S. No.	Particulars	Existing 2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
<b>1</b>	<b>2</b>	<b>4</b>	<b>5</b>				<b>6</b>
1	Gross Normative loan – Opening	519.53	519.53	552.37	552.37	552.37	552.37
2	Cumulative repayment of Normative loan up to previous year	26.09	65.28	105.70	147.37	189.03	230.70
<b>3</b>	<b>Net Normative loan – Opening</b>	<b>493.44</b>	<b>454.26</b>	<b>446.67</b>	<b>405.00</b>	<b>363.34</b>	<b>321.67</b>
4	Add: Increase due to addition during the year / period	-	32.84	-	-	-	-
5	Less: Decrease due to de-capitalisation during the year / period	-	-	-	-	-	-
6	Less: Decrease due to reversal during the year / period	-	-	-	-	-	-
7	Add: Increase due to discharges during the year / period	-	-	-	-	-	-
8	Less: Repayment of Loan	39.19	40.43	41.66	41.66	41.66	41.66
9	<b>Net Normative loan - Closing</b>	<b>454.26</b>	<b>446.67</b>	<b>405.00</b>	<b>363.34</b>	<b>321.67</b>	<b>280.01</b>
10	<b>Average Normative loan</b>	<b>473.85</b>	<b>450.46</b>	<b>425.83</b>	<b>384.17</b>	<b>342.51</b>	<b>300.84</b>
11	Weighted average rate of interest	7.9750%	7.9500%	7.9500%	7.9500%	7.9500%	7.9500%
<b>12</b>	<b>Interest on Loan</b>	<b>37.79</b>	<b>35.81</b>	<b>33.85</b>	<b>30.54</b>	<b>27.23</b>	<b>23.92</b>

(Petitioner)

**Calculation of Interest on Working Capital**

<b>Name of the Company :</b>			NTPC Ltd.					
<b>Name of the Power Station :</b>			MTPS-II (2x195 MW) ECS :De-Nox Combustion Modification					
<b>(Amount in Rs Lakh)</b>								
S. No.	Particulars		Existing 2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
1	2		4	5				
1	Cost of Limestone/Reagent toward stock	20 days	-	-	-	-	-	-
2	Cost of Limestone/Reagent toward generation	30 days	-	-	-	-	-	-
3	Receivables	45 days	16.09	16.31	16.48	16.20	15.89	15.68
4	O & M Expenses	1 month	1.55	1.63	1.71	1.80	1.90	2.00
5	Maintenance Spares	@20%	3.71	3.91	4.11	4.33	4.56	4.80
6	Total Working Capital	Rs. Lakh	21.35	21.84	22.31	22.34	22.35	22.47
7	Rate of Interest	%	12.00%	12.15%	12.15%	12.15%	12.15%	12.15%
8	<b>Interest on Working Capital</b>	Rs. Lakh	<b>2.56</b>	<b>2.65</b>	<b>2.71</b>	<b>2.71</b>	<b>2.72</b>	<b>2.73</b>
<b>(Petitioner)</b>								



**Summary of issue involved in the petition**

<b>Name of the Company :</b>		<b>NTPC.Ltd</b>
<b>Name of the Power Station:</b>		<b>MTPS-II (2X195 MW)</b>
<b>1</b>	<b>Petitioner:</b>	<b>NTPC Ltd.</b>
<b>2</b>	<b>Subject</b>	<b>DETERMINATION OF SUPPLEMENTARY TARIFF ( FOR DENOX- CM SYSTEM) FOR THE PERIOD 2024-29</b>
<b>3</b>	<b>Prayer:</b>	<p>i) Approve Supplementary Tariff of MTPS-II for the DeNOx System from 01.04.2024 to 31.03.2024.</p> <p>ii) Allow the Petitioner to bill provisional supplementary tariff in the instant station till the Supplementary tariff is finally determined &amp; approved by the Hon'ble Commission to mitigate the future interest burden.</p> <p>iii) Pass any other order as it may deem fit in the circumstances mentioned above.</p>
<b>4</b>	<b>Respondents: 8</b>	
<b>Name of Respondents :</b>		
a. Bihar State Power Holding Company Ltd (BSPHCL)		
b. North Bihar Power Distribution Company Ltd (NBPDCCL)		
c. South Bihar Power Distribution Company Ltd (SBPDCL)		
d. Jharkhand Bijlee Vitran Nigam Limited (JBVNL)		
e. GRIDCO Ltd.		
f. West Bengal State Electricity Distribution Company Limited (WBSEDCL)		
g. Deptt. of Power, Sikkim		
h. Damodar Valley Corporation (DVC)		
<b>5</b>	<b>Project Scope</b>	
	<b>Claim</b>	<b>Refer Form 9A</b>
	<b>AFC</b>	<b>Refer Form-1</b>
	<b>Capital cost as on 01.04.2019</b>	<b>Refer Form-1(1)</b>
	<b>NAPAF (Gen)</b>	<b>85%</b>
	<b>Any Specific</b>	

(Petitioner)

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited	
Name of the generating Station		Muzaffarpur Thermal Power Stat-STAGE 02	
Month		April-2023	
SL	Particulars	Unit	COAL-DOMESTIC
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	Opening Stock of coal	MT	17406.46
2	Value of Stock	Rs.	63171057.52
<b>B)</b>	<b>QUANTITY</b>		
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	206885.00
3.01	- Qty Received (Pit Head)	MT	0.00
3.02	- Qty Received (Non Pit Head)	MT	206885.00
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	3645.02-
5	Coal supplied by Coal/Lignite Company (3+4)	MT	203239.98
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	1625.92
6.01	- Normative Loss (Pit Head)	MT	0.00
6.02	- Normative Loss (Non Pit Head)	MT	1625.92
7	Net Coal / Lignite supplied (5 - 6)	MT	201614.06
<b>C)</b>	<b>PRICE</b>		
8	Amount charged by the Coal / Lignite Company	Rs.	514932783.00
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	8805105.37-
10	Handling, Sampling and such other Similar charges	Rs.	44316180.37
11	Total Amount charged (8 +9+10)	Rs.	550443858.00
<b>D)</b>	<b>TRANSPORTATION</b>		
12	Transportation charges by Rail / Ship / Road Transport	Rs.	208452048.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00
14	Demurrage charges, if any	Rs.	0.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00
16	Total transportation charges ( 12+/- 13 - 14 + 15 )	Rs.	208452048.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	758895906.00
<b>E)</b>	<b>TOTAL COST</b>		
18	Landed Cost of Coal/Lignite ( 2+17) / (1+7)	Rs./MT	3753.38
19	Blending Ratio (Domestic/Imported)	%	100.00
20	Weighted average cost of Coal /Lignite ( Including biomass)	Rs./MT	3753.38
20.10	Weighted average cost of Coal /Lignite ( Excluding biomass)	Rs./MT	3753.38
<b>F)</b>	<b>QUALITY</b>		
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4598
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4589
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	4590
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	4590
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3612
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3596
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0
29	GCV of Imported coal supplied as received at station	kCal/Kg	0
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3598
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3598

Submitted On :27.07.2023

**DETAILS OF SOURCE WISE FUEL FOR COMPUTATION OF ENERGY CHARGES**

PART 1  
FORM-15

NAME OF THE PETITIONER

NTPC Limited

NAME OF THE GENERATING STATION

MUZAFFARPUR THERMAL POWER STATION (Stage 02)

S. NO.	Particulars	Unit	April-2023
			LDO
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	OPENING QUANTITY OF OIL	(KL)	924.46
2	VALUE OF STOCK		8,01,41,951.40
<b>B)</b>	<b>QUANTITY</b>		
3	QUANTITY OF OIL SUPPLIED BY OIL/LIGNIE COMPANY	(KL)	-
4	ADJUSTMENT (+/-)IN QUANTITY SUPPLIED MADE BY OIL COMPANY	(KL)	
5	OIL SUPPLIED BY OIL COMPANY(3+4)	(KL)	-
6	NORMATIVE TRANSIT & HANDLING LOSSES (FOR OIL BASED PROJECTS)	(KL)	
7	NET OIL SUPPLIED (5-6)	(KL)	-
<b>C)</b>	<b>PRICE</b>		
8	AMOUNT CHARGED BY OIL COMPANY	( Rs. )	-
9	ADJUSTMENT(+/-)IN AMOUNT CHARGED BY OIL COMPANY	( Rs. )	-
10	HANDLING, SAMPLING AND SUCH OTHER SIMILAR CHARGES		
11	TOTAL AMOUNT CHARGED (8+9+10)	( Rs. )	-
<b>D)</b>	<b>TRANSPORTAION</b>		
12	TRANSPORTATION CHARGES BY RAIL/ROAD/SHIP TRANSPORT	( Rs. )	-
	BY RAIL		
	BY ROAD		
	BY SHIP		
	.....		
13	ADJUSTMENT(+/-) IN AMOUNT CHARGED MADE BY	( Rs. )	-
14	DEMURRAGE CHARGES, IF ANY	( Rs. )	-
15	COST OF DIESEL IN TRANSPOTING OIL THROUGH MGR SYSTEM, IF APPLICABLE	( Rs. )	-
16	TOTAL TRANSPORTATION CHARGES(12+13+14+15)	( Rs. )	-
17	TOTAL AMOUNT CHARGED FOR OIL SUPPLIED INCLUDING TRANSPORTATION (11+16)	( Rs. )	-
<b>E)</b>	<b>TOTAL COST</b>		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	<b>86690.31</b>
19	BLENDING RATIO(IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	<b>86690.31</b>
<b>F)</b>	<b>QUALITY</b>		
21	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
22	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
23	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
24	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
25	WEIGHTED AVERAGE GCV OF OIL AS BILLED	(KCAL/KL)	
26	GCV OF OIL OF THE OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
27	GCV OF OIL SUPPLIED AS RECEIVED AT STATION	(KCAL/KL)	
28	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
29	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
30	WEIGHTED AVERAGE GCV OF OIL AS RECEIVED	(KCAL/KL)	<b>9297</b>

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited	
Name of the generating Station		Muzaffarpur Thermal Power Stat-STAGE 02	
Month		May-2023	
SL	Particulars	Unit	COAL-DOMESTIC
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	Opening Stock of coal	MT	53859 36
2	Value of Stock	Rs.	202154571 06
<b>B)</b>	<b>QUANTITY</b>		
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	181662 40
3 01	- Qty Received (Pit Head)	MT	0 00
3 02	- Qty Received (Non Pit Head)	MT	181662 40
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	3209 39-
5	Coal supplied by Coal/Lignite Company (3+4)	MT	178453.01
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	1427 62
6 01	- Normative Loss (Pit Head)	MT	0 00
6 02	- Normative Loss (Non Pit Head)	MT	1427 62
7	Net Coal / Lignite supplied (5 - 6)	MT	177025 39
<b>C)</b>	<b>PRICE</b>		
8	Amount charged by the Coal / Lignite Company	Rs.	450491500 00
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	7749439 25-
10	Handling, Sampling and such other Similar charges	Rs.	15197101.61
11	Total Amount charged (8 +9-10)	Rs.	457939162 36
<b>D)</b>	<b>TRANSPORTATION</b>		
12	Transportation charges by Rail / Ship / Road Transport	Rs.	188113587 00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0 00
14	Demurrage charges if any	Rs.	1760705 00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0 00
16	Total transportation charges ( 12+/- 13 - 14 + 15 )	Rs.	186352882 00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	644292044 36
<b>E)</b>	<b>TOTAL COST</b>		
18	Landed Cost of Coal/Lignite ( 2+17) / (1+7)	Rs./MT	3666 10
19	Bending Ratio (Domestic/Imported)	%	100 00
20	Weighted average cost of Coal/Lignite ( Including biomass)	Rs./MT	3666 10
20 10	Weighted average cost of Coal/Lignite ( Excluding biomass)	Rs./MT	3666 10
<b>F)</b>	<b>QUALITY</b>		
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4590
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4601
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	4598
25 10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	4598
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3598
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3551
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0
29	GCV of Imported coal supplied as received at station	kCal/Kg	0
30	Weighted average GCV of coal / Lignite as Received ( Including biomass)	kCal/Kg	3562
30 10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3562

Submitted On :28.08.2023

**DETAILS OF SOURCE WISE FUEL FOR COMPUTATION OF ENERGY CHARGES**

PART 1  
FORM-15

NAME OF THE PETITIONER

NTPC Limited

NAME OF THE GENERATING STATION

MUZAFFARPUR THERMAL POWER STATION (Stage 02)

S. NO.	Particulars	Unit	May-2023
			LDO
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	OPENING QUANTITY OF OIL	(KL)	786.61
2	VALUE OF STOCK		6,81,91,523.89
<b>B)</b>	<b>QUANTITY</b>		
3	QUANTITY OF OIL SUPPLIED BY OIL/LIGNIE COMPANY	(KL)	100.00
4	ADJUSTMENT (+/-)IN QUANTITY SUPPLIED MADE BY OIL COMPANY	(KL)	-
5	OIL SUPPLIED BY OIL COMPANY(3+4)	(KL)	100.00
6	NORMATIVE TRANSIT & HANDLING LOSSES (FOR OIL BASED PROJECTS)	(KL)	-
7	NET OIL SUPPLIED (5-6)	(KL)	100.00
<b>C)</b>	<b>PRICE</b>		
8	AMOUNT CHARGED BY OIL COMPANY	( Rs. )	77,09,744.76
9	ADJUSTMENT(+/-)IN AMOUNT CHARGED BY OIL COMPANY	( Rs. )	-
10	HANDLING, SAMPLING AND SUCH OTHER SIMILAR CHARGES		
11	TOTAL AMOUNT CHARGED (8+9+10)	( Rs. )	77,09,744.76
<b>D)</b>	<b>TRANSPORTAION</b>		
12	TRANSPORTATION CHARGES BY RAIL/ROAD/SHIP TRANSPORT	( Rs. )	-
	BY RAIL		
	BY ROAD		
	BY SHIP		
	.....		
13	ADJUSTMENT(+/-) IN AMOUNT CHARGED MADE BY	( Rs. )	-
14	DEMURRAGE CHARGES, IF ANY	( Rs. )	-
15	COST OF DIESEL IN TRANSPOTING OIL THROUGH MGR SYSTEM, IF APPLICABLE	( Rs. )	-
16	TOTAL TRANSPORTATION CHARGES(12+13+14+15)	( Rs. )	-
17	TOTAL AMOUNT CHARGED FOR OIL SUPPLIED INCLUDING TRANSPORTATION (11+16)	( Rs. )	77,09,744.76
<b>E)</b>	<b>TOTAL COST</b>		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	<b>85608.35</b>
19	BLENDING RATIO(IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	<b>85608.35</b>
<b>F)</b>	<b>QUALITY</b>		
21	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
22	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
23	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
24	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
25	WEIGHTED AVERAGE GCV OF OIL AS BILLED	(KCAL/KL)	
26	GCV OF OIL OF THE OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
27	GCV OF OIL SUPPLIED AS RECEIVED AT STATION	(KCAL/KL)	
28	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
29	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
30	WEIGHTED AVERAGE GCV OF OIL AS RECEIVED	(KCAL/KL)	<b>9300</b>

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited	
Name of the generating Station		Muzaffarpur Thermal Power Stat-STAGE 02	
Month		June-2023	
SL	Particulars	Unit	COAL-DOMESTIC
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	Opening Stock of coal	MT	46125.73
2	Value of Stock	Rs.	169101539.56
<b>B)</b>	<b>QUANTITY</b>		
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	150782.23
3.01	- Qty Received (Pit Head)	MT	0.00
3.02	- Qty Received (Non Pit Head)	MT	150782.23
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	1768.12-
5	Coal supplied by Coal/Lignite Company (3+4)	MT	149014.11
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	1192.11
6.01	- Normative Loss (Pit Head)	MT	0.00
6.02	- Normative Loss (Non Pit Head)	MT	1192.11
7	Net Coal / Lignite supplied (5 - 6)	MT	147822.00
<b>C)</b>	<b>PRICE</b>		
8	Amount charged by the Coal / Lignite Company	Rs.	386054113.00
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	4449933.93-
10	Handling, Sampling and such other similar charges	Rs.	35118854.29
11	Total Amount charged (8 +9+10)	Rs.	416723033.36
<b>D)</b>	<b>TRANSPORTATION</b>		
12	Transportation charges by Rail / Ship / Road Transport	Rs.	156339734.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00
14	Demurrage charges, if any	Rs.	704563.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00
16	Total transportation charges ( 12+/- 13 - 14 + 15 )	Rs.	155635771.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	572358204.36
<b>E)</b>	<b>TOTAL COST</b>		
18	Landed Cost of Coal/Lignite ( 2+17) / (1+7)	Rs./MT	3822.99
19	Bending Ratio (Domestic/imported)	%	100.00
20	Weighted average cost of Coal /Lignite ( Including biomass)	Rs./MT	3822.99
20.10	Weighted average cost of Coal /Lignite ( Excluding biomass)	Rs./MT	3822.99
<b>F)</b>	<b>QUALITY</b>		
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4596
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4561
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	4570
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	4570
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3562
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3537
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0
29	GCV of Imported coal supplied as received at station	kCal/Kg	0
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3543
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3543

Submitted On :26.10.2023

**DETAILS OF SOURCE WISE FUEL FOR COMPUTATION OF ENERGY CHARGES**

PART 1  
FORM-15

NAME OF THE PETITIONER

NTPC Limited

NAME OF THE GENERATING STATION

MUZAFFARPUR THERMAL POWER STATION (Stage 02)

S. NO.	Particulars	Unit	June-2023
			LDO
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	OPENING QUANTITY OF OIL	(KL)	801.79
2	VALUE OF STOCK		6,86,40,227.28
<b>B)</b>	<b>QUANTITY</b>		
3	QUANTITY OF OIL SUPPLIED BY OIL/LIGNIE COMPANY	(KL)	228.00
4	ADJUSTMENT (+/-)IN QUANTITY SUPPLIED MADE BY OIL COMPANY	(KL)	-
5	OIL SUPPLIED BY OIL COMPANY(3+4)	(KL)	228.00
6	NORMATIVE TRANSIT & HANDLING LOSSES (FOR OIL BASED PROJECTS)	(KL)	-
7	NET OIL SUPPLIED (5-6)	(KL)	228.00
<b>C)</b>	<b>PRICE</b>		
8	AMOUNT CHARGED BY OIL COMPANY	( Rs. )	1,66,30,489.25
9	ADJUSTMENT(+/-)IN AMOUNT CHARGED BY OIL COMPANY	( Rs. )	-
10	HANDLING, SAMPLING AND SUCH OTHER SIMILAR CHARGES		
11	TOTAL AMOUNT CHARGED (8+9+10)	( Rs. )	1,66,30,489.25
<b>D)</b>	<b>TRANSPORTAION</b>		
12	TRANSPORTATION CHARGES BY RAIL/ROAD/SHIP TRANSPORT	( Rs. )	-
	BY RAIL		
	BY ROAD		
	BY SHIP		
	.....		
13	ADJUSTMENT(+/-) IN AMOUNT CHARGED MADE BY	( Rs. )	-
14	DEMURRAGE CHARGES, IF ANY	( Rs. )	-
15	COST OF DIESEL IN TRANSPOTING OIL THROUGH MGR SYSTEM, IF APPLICABLE	( Rs. )	-
16	TOTAL TRANSPORTATION CHARGES(12+13+14+15)	( Rs. )	-
17	TOTAL AMOUNT CHARGED FOR OIL SUPPLIED INCLUDING TRANSPORTATION (11+16)	( Rs. )	1,66,30,489.25
<b>E)</b>	<b>TOTAL COST</b>		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	<b>82803.69</b>
19	BLENDING RATIO(IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	<b>82803.69</b>
<b>F)</b>	<b>QUALITY</b>		
21	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
22	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
23	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
24	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
25	WEIGHTED AVERAGE GCV OF OIL AS BILLED	(KCAL/KL)	
26	GCV OF OIL OF THE OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
27	GCV OF OIL SUPPLIED AS RECEIVED AT STATION	(KCAL/KL)	
28	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
29	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
30	WEIGHTED AVERAGE GCV OF OIL AS RECEIVED	(KCAL/KL)	<b>9300</b>

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited	
Name of the generating Station		Muzaffarpur Thermal Power Stat-STAGE 02	
Month		July-2023	
SL	Particulars	Unit	COAL-DOMESTIC
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	Opening Stock of coal	MT	19843.55
2	Value of Stock	Rs.	75861651.26
<b>B)</b>	<b>QUANTITY</b>		
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	211507.15
3.01	- Qty Received (Pit Head)	MT	0.00
3.02	- Qty Received (Non Pit Head)	MT	211507.15
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	0.00
5	Coal supplied by Coal/Lignite Company (3+4)	MT	211507.15
6	Normative trans t & Handling losses (for Coal /Lignite based projects)	MT	1692.06
6.01	- Normative Loss (Pit Head)	MT	0.00
6.02	- Normative Loss (Non Pit Head)	MT	1692.06
7	Net Coal / Lignite supplied (5 - 6)	MT	209815.09
<b>C)</b>	<b>PRICE</b>		
8	Amount charged by the Coal / Lignite Company	Rs.	551284270.00
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	0.00
10	Handling, Sampling and such other Similar charges	Rs.	2489346.31
11	Total Amount charged (8 +9+10)	Rs.	553773616.31
<b>D)</b>	<b>TRANSPORTATION</b>		
12	Transportation charges by Rail / Ship / Road Transport	Rs.	207617811.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00
14	Demurrage charges, if any	Rs.	1235453.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00
16	Total transportation charges ( 12+/- 13 - 14 + 15 )	Rs.	206382358.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	760155974.31
<b>E)</b>	<b>TOTAL COST</b>		
18	Landed Cost of Coal/Lignite ( 2+17) / (1+7)	Rs./MT	3640.26
19	Bending Ratio (Domestic/imported)	%	100.00
20	Weighted average cost of Coal /Lignite ( Including biomass)	Rs./MT	3640.26
20.10	Weighted average cost of Coal /Lignite ( Excluding biomass)	Rs./MT	3640.26
<b>F)</b>	<b>QUALITY</b>		
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4570
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4575
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	4575
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	4575
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3543
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3332
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0
29	GCV of Imported coal supplied as received at station	kCal/Kg	0
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3332
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3332

Submitted On :23.12.2023



**DETAILS OF SOURCE WISE FUEL FOR COMPUTATION OF ENERGY CHARGES**

PART 1  
FORM-15

NAME OF THE PETITIONER

NTPC Limited

NAME OF THE GENERATING STATION

MUZAFFARPUR THERMAL POWER STATION (Stage 02)

S. NO.	Particulars	Unit	July-2023
			LDO
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	OPENING QUANTITY OF OIL	(KL)	859.39
2	VALUE OF STOCK		7,11,60,889.34
<b>B)</b>	<b>QUANTITY</b>		
3	QUANTITY OF OIL SUPPLIED BY OIL/LIGNIE COMPANY	(KL)	-
4	ADJUSTMENT (+/-)IN QUANTITY SUPPLIED MADE BY OIL COMPANY	(KL)	-
5	OIL SUPPLIED BY OIL COMPANY(3+4)	(KL)	-
6	NORMATIVE TRANSIT & HANDLING LOSSES (FOR OIL BASED PROJECTS)	(KL)	-
7	NET OIL SUPPLIED (5-6)	(KL)	-
<b>C)</b>	<b>PRICE</b>		
8	AMOUNT CHARGED BY OIL COMPANY	( Rs. )	-
9	ADJUSTMENT(+/-)IN AMOUNT CHARGED BY OIL COMPANY	( Rs. )	-
10	HANDLING, SAMPLING AND SUCH OTHER SIMILAR CHARGES		
11	TOTAL AMOUNT CHARGED (8+9+10)	( Rs. )	-
<b>D)</b>	<b>TRANSPORTAION</b>		
12	TRANSPORTATION CHARGES BY RAIL/ROAD/SHIP TRANSPORT	( Rs. )	-
	BY RAIL		
	BY ROAD		
	BY SHIP		
	.....		
13	ADJUSTMENT(+/-) IN AMOUNT CHARGED MADE BY	( Rs. )	-
14	DEMURRAGE CHARGES, IF ANY	( Rs. )	-
15	COST OF DIESEL IN TRANSPOTING OIL THROUGH MGR SYSTEM, IF APPLICABLE	( Rs. )	-
16	TOTAL TRANSPORTATION CHARGES(12+13+14+15)	( Rs. )	-
17	TOTAL AMOUNT CHARGED FOR OIL SUPPLIED INCLUDING TRANSPORTATION (11+16)	( Rs. )	-
<b>E)</b>	<b>TOTAL COST</b>		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	<b>82803.70</b>
19	BLENDING RATIO(IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	<b>82803.70</b>
<b>F)</b>	<b>QUALITY</b>		
21	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
22	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
23	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
24	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
25	WEIGHTED AVERAGE GCV OF OIL AS BILLED	(KCAL/KL)	
26	GCV OF OIL OF THE OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
27	GCV OF OIL SUPPLIED AS RECEIVED AT STATION	(KCAL/KL)	
28	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
29	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
30	WEIGHTED AVERAGE GCV OF OIL AS RECEIVED	(KCAL/KL)	<b>9300</b>

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited	
Name of the generating Station		Muzaffarpur Thermal Power Stat-STAGE 02	
Month		August-2023	
SL	Particulars	Unit	COAL-DOMESTIC
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	Opening Stock of coal	MT	48088.92
2	Value of Stock	Rs.	175056250.82
<b>B)</b>	<b>QUANTITY</b>		
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	187606.93
3.01	- Qty Received (Pit Head)	MT	0.00
3.02	- Qty Received (Non Pit Head)	MT	187606.93
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	6900.72-
5	Coal supplied by Coal/Lignite Company (3+4)	MT	180706.21
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	1445.65
6.01	- Normative Loss (Pit Head)	MT	0.00
6.02	- Normative Loss (Non Pit Head)	MT	1445.65
7	Net Coal / Lignite supplied (5 - 6)	MT	179260.56
<b>C)</b>	<b>PRICE</b>		
8	Amount charged by the Coal / Lignite Company	Rs.	501180205.00
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	17279710.50-
10	Handling, Sampling and such other Similar charges	Rs.	24646058.78
11	Total Amount charged (8 +9+10)	Rs.	508546553.28
<b>D)</b>	<b>TRANSPORTATION</b>		
12	Transportation charges by Rail / Ship / Road Transport	Rs.	189495222.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00
14	Demurrage charges, if any	Rs.	2003885.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00
16	Total transportation charges ( 12+/- 13 - 14 + 15 )	Rs.	187491337.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	696037890.28
<b>E)</b>	<b>TOTAL COST</b>		
18	Landed Cost of Coal/Lignite ( 2+17) / (1+7)	Rs./MT	3831.52
19	Blending Ratio (Domestic/Imported)	%	100.00
20	Weighted average cost of Coal /Lignite ( Including biomass)	Rs./MT	3831.52
20.10	Weighted average cost of Coal /Lignite ( Excluding biomass)	Rs./MT	3831.52
<b>F)</b>	<b>QUALITY</b>		
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4575
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4605
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	4599
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	4599
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3332
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3354
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0
29	GCV of Imported coal supplied as received at station	kCal/Kg	0
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3350
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3350

Submitted On :27.03.2024

**DETAILS OF SOURCE WISE FUEL FOR COMPUTATION OF ENERGY CHARGES**

PART 1  
FORM-15

NAME OF THE PETITIONER

NTPC Limited

NAME OF THE GENERATING STATION

MUZAFFARPUR THERMAL POWER STATION (Stage 02)

S. NO.	Particulars	Unit	August-2023
			LDO
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	OPENING QUANTITY OF OIL	(KL)	787.82
2	VALUE OF STOCK		6,52,34,051.48
<b>B)</b>	<b>QUANTITY</b>		
3	QUANTITY OF OIL SUPPLIED BY OIL/LIGNIE COMPANY	(KL)	51.00
4	ADJUSTMENT (+/-)IN QUANTITY SUPPLIED MADE BY OIL COMPANY	(KL)	-
5	OIL SUPPLIED BY OIL COMPANY(3+4)	(KL)	51.00
6	NORMATIVE TRANSIT & HANDLING LOSSES (FOR OIL BASED PROJECTS)	(KL)	-
7	NET OIL SUPPLIED (5-6)	(KL)	51.00
<b>C)</b>	<b>PRICE</b>		
8	AMOUNT CHARGED BY OIL COMPANY	( Rs. )	41,44,696.50
9	ADJUSTMENT(+/-)IN AMOUNT CHARGED BY OIL COMPANY	( Rs. )	-
10	HANDLING, SAMPLING AND SUCH OTHER SIMILAR CHARGES		
11	TOTAL AMOUNT CHARGED (8+9+10)	( Rs. )	41,44,696.50
<b>D)</b>	<b>TRANSPORTAION</b>		
12	TRANSPORTATION CHARGES BY RAIL/ROAD/SHIP TRANSPORT	( Rs. )	-
	BY RAIL		
	BY ROAD		
	BY SHIP		
	.....		
13	ADJUSTMENT(+/-) IN AMOUNT CHARGED MADE BY	( Rs. )	-
14	DEMURRAGE CHARGES, IF ANY	( Rs. )	-
15	COST OF DIESEL IN TRANSPOTING OIL THROUGH MGR SYSTEM, IF APPLICABLE	( Rs. )	-
16	TOTAL TRANSPORTATION CHARGES(12+13+14+15)	( Rs. )	-
17	TOTAL AMOUNT CHARGED FOR OIL SUPPLIED INCLUDING TRANSPORTATION (11+16)	( Rs. )	41,44,696.50
<b>E)</b>	<b>TOTAL COST</b>		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	<b>82710.37</b>
19	BLENDING RATIO(IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	<b>82710.37</b>
<b>F)</b>	<b>QUALITY</b>		
21	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
22	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
23	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
24	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
25	WEIGHTED AVERAGE GCV OF OIL AS BILLED	(KCAL/KL)	
26	GCV OF OIL OF THE OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
27	GCV OF OIL SUPPLIED AS RECEIVED AT STATION	(KCAL/KL)	
28	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
29	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
30	WEIGHTED AVERAGE GCV OF OIL AS RECEIVED	(KCAL/KL)	<b>9302</b>

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited	
Name of the generating Station		Muzaffarpur Thermal Power Stat-STAGE 02	
Month		September-2023	
SL	Particulars	Unit	COAL-DOMESTIC
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	Opening Stock of coal	MT	19037.75
2	Value of Stock	Rs.	72943512.59
<b>B)</b>	<b>QUANTITY</b>		
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	178952.14
3.01	- Qty Received (Pit Head)	MT	0.00
3.02	- Qty Received (Non Pit Head)	MT	178952.14
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	5398.29-
5	Coal supplied by Coal/Lignite Company (3+4)	MT	173553.85
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	1388.43
6.01	- Normative Loss (Pit Head)	MT	0.00
6.02	- Normative Loss (Non Pit Head)	MT	1388.43
7	Net Coal / Lignite supplied (5 - 6)	MT	172165.42
<b>C)</b>	<b>PRICE</b>		
8	Amount charged by the Coal / Lignite Company	Rs.	504433356.00
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	37815467.95-
10	Handling, Sampling and such other Similar charges	Rs.	27388890.46
11	Total Amount charged (8 +9+10)	Rs.	494006776.51
<b>D)</b>	<b>TRANSPORTATION</b>		
12	Transportation charges by Rail / Ship / Road Transport	Rs.	176241421.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00
14	Demurrage charges, if any	Rs.	980428.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00
16	Total transportation charges ( 12+/- 13 - 14 + 15 )	Rs.	175260993.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	669267771.51
<b>E)</b>	<b>TOTAL COST</b>		
18	Landed Cost of Coal/Lignite ( 2+17) / (1+7)	Rs./MT	3881.79
19	Bending Ratio (Domestic/imported)	%	100.00
20	Weighted average cost of Coal /Lignite ( Including biomass)	Rs./MT	3881.79
20.10	Weighted average cost of Coal /Lignite ( Excluding biomass)	Rs./MT	3881.79
<b>F)</b>	<b>QUALITY</b>		
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4594
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4676
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	4668
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	4668
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3309
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3829
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0
29	GCV of Imported coal supplied as received at station	kCal/Kg	0
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3778
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3778

Submitted On :12.10.2023

**DETAILS OF SOURCE WISE FUEL FOR COMPUTATION OF ENERGY CHARGES**

PART 1  
FORM-15

NAME OF THE PETITIONER

NTPC Limited

NAME OF THE GENERATING STATION

MUZAFFARPUR THERMAL POWER STATION (Stage 02)

S. NO.	Particulars	Unit	September-2023
			LDO
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	OPENING QUANTITY OF OIL	(KL)	829.27
2	VALUE OF STOCK		6,86,02,143.81
<b>B)</b>	<b>QUANTITY</b>		
3	QUANTITY OF OIL SUPPLIED BY OIL/LIGNIE COMPANY	(KL)	-
4	ADJUSTMENT (+/-)IN QUANTITY SUPPLIED MADE BY OIL COMPANY	(KL)	-
5	OIL SUPPLIED BY OIL COMPANY(3+4)	(KL)	-
6	NORMATIVE TRANSIT & HANDLING LOSSES (FOR OIL BASED PROJECTS)	(KL)	-
7	NET OIL SUPPLIED (5-6)	(KL)	-
<b>C)</b>	<b>PRICE</b>		
8	AMOUNT CHARGED BY OIL COMPANY	( Rs. )	-
9	ADJUSTMENT(+/-)IN AMOUNT CHARGED BY OIL COMPANY	( Rs. )	-
10	HANDLING, SAMPLING AND SUCH OTHER SIMILAR CHARGES		
11	TOTAL AMOUNT CHARGED (8+9+10)	( Rs. )	-
<b>D)</b>	<b>TRANSPORTAION</b>		
12	TRANSPORTATION CHARGES BY RAIL/ROAD/SHIP TRANSPORT	( Rs. )	-
	BY RAIL		
	BY ROAD		
	BY SHIP		
	.....		
13	ADJUSTMENT(+/-) IN AMOUNT CHARGED MADE BY	( Rs. )	-
14	DEMURRAGE CHARGES, IF ANY	( Rs. )	-
15	COST OF DIESEL IN TRANSPOTING OIL THROUGH MGR SYSTEM, IF APPLICABLE	( Rs. )	-
16	TOTAL TRANSPORTATION CHARGES(12+13+14+15)	( Rs. )	-
17	TOTAL AMOUNT CHARGED FOR OIL SUPPLIED INCLUDING TRANSPORTATION (11+16)	( Rs. )	-
<b>E)</b>	<b>TOTAL COST</b>		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	<b>82726.18</b>
19	BLENDING RATIO(IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	<b>82726.18</b>
<b>F)</b>	<b>QUALITY</b>		
21	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
22	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
23	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
24	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
25	WEIGHTED AVERAGE GCV OF OIL AS BILLED	(KCAL/KL)	
26	GCV OF OIL OF THE OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
27	GCV OF OIL SUPPLIED AS RECEIVED AT STATION	(KCAL/KL)	
28	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
29	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
30	WEIGHTED AVERAGE GCV OF OIL AS RECEIVED	(KCAL/KL)	<b>9302</b>

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited	
Name of the generating Station		Muzaffarpur Thermal Power Stat-STAGE 02	
Month		October-2023	
SL	Particulars	Unit	COAL-DOMESTIC
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	Opening Stock of coal	MT	15115.34
2	Value of Stock	Rs.	58674626.21
<b>B)</b>	<b>QUANTITY</b>		
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	185766.59
3.01	- Qty Received (Pit Head)	MT	0.00
3.02	- Qty Received (Non Pit Head)	MT	185766.59
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	3731.49-
5	Coal supplied by Coal/Lignite Company (3+4)	MT	181435.10
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	1451.48
6.01	- Normative Loss (Pit Head)	MT	0.00
6.02	- Normative Loss (Non Pit Head)	MT	1451.48
7	Net Coal / Lignite supplied (5 - 6)	MT	179983.62
<b>C)</b>	<b>PRICE</b>		
8	Amount charged by the Coal / Lignite Company	Rs.	526808319.00
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	10199301.29-
10	Handling, Sampling and such other Similar charges	Rs.	39831537.41
11	Total Amount charged (8 +9+10)	Rs.	556440555.12
<b>D)</b>	<b>TRANSPORTATION</b>		
12	Transportation charges by Rail / Ship / Road Transport	Rs.	192186042.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00
14	Demurrage charges, if any	Rs.	1567054.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00
16	Total transportation charges ( 12+/- 13 - 14 + 15 )	Rs.	190618988.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	747059543.12
<b>E)</b>	<b>TOTAL COST</b>		
18	Landed Cost of Coal/Lignite ( 2+17) / (1+7)	Rs./MT	4129.87
19	Bending Ratio (Domestic/Imported)	%	100.00
20	Weighted average cost of Coal /Lignite ( Including biomass)	Rs./MT	4129.87
20.10	Weighted average cost of Coal /Lignite ( Excluding biomass)	Rs./MT	4129.87
<b>F)</b>	<b>QUALITY</b>		
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4668
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4673
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	4673
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	4673
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3779
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3875
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0
29	GCV of Imported coal supplied as received at station	kCal/Kg	0
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3867
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3867

Submitted On : 10.01.2024

**DETAILS OF SOURCE WISE FUEL FOR COMPUTATION OF ENERGY CHARGES**

PART 1  
FORM-15

NAME OF THE PETITIONER

NTPC Limited

NAME OF THE GENERATING STATION

MUZAFFARPUR THERMAL POWER STATION (Stage 02)

S. NO.	Particulars	Unit	October-2023
			LDO
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	OPENING QUANTITY OF OIL	(KL)	826.13
2	VALUE OF STOCK		6,83,42,962.80
<b>B)</b>	<b>QUANTITY</b>		
3	QUANTITY OF OIL SUPPLIED BY OIL/LIGNIE COMPANY	(KL)	73.00
4	ADJUSTMENT (+/-)IN QUANTITY SUPPLIED MADE BY OIL COMPANY	(KL)	-
5	OIL SUPPLIED BY OIL COMPANY(3+4)	(KL)	73.00
6	NORMATIVE TRANSIT & HANDLING LOSSES (FOR OIL BASED PROJECTS)	(KL)	-
7	NET OIL SUPPLIED (5-6)	(KL)	73.00
<b>C)</b>	<b>PRICE</b>		
8	AMOUNT CHARGED BY OIL COMPANY	( Rs. )	66,65,828.47
9	ADJUSTMENT(+/-)IN AMOUNT CHARGED BY OIL COMPANY	( Rs. )	-
10	HANDLING, SAMPLING AND SUCH OTHER SIMILAR CHARGES		
11	TOTAL AMOUNT CHARGED (8+9+10)	( Rs. )	66,65,828.47
<b>D)</b>	<b>TRANSPORTAION</b>		
12	TRANSPORTATION CHARGES BY RAIL/ROAD/SHIP TRANSPORT	( Rs. )	-
	BY RAIL		
	BY ROAD		
	BY SHIP		
	.....		
13	ADJUSTMENT(+/-) IN AMOUNT CHARGED MADE BY	( Rs. )	-
14	DEMURRAGE CHARGES, IF ANY	( Rs. )	-
15	COST OF DIESEL IN TRANSPOTING OIL THROUGH MGR SYSTEM, IF APPLICABLE	( Rs. )	-
16	TOTAL TRANSPORTATION CHARGES(12+13+14+15)	( Rs. )	-
17	TOTAL AMOUNT CHARGED FOR OIL SUPPLIED INCLUDING TRANSPORTATION (11+16)	( Rs. )	66,65,828.47
<b>E)</b>	<b>TOTAL COST</b>		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	<b>83423.32</b>
19	BLENDING RATIO(IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	<b>83423.32</b>
<b>F)</b>	<b>QUALITY</b>		
21	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
22	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
23	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
24	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
25	WEIGHTED AVERAGE GCV OF OIL AS BILLED	(KCAL/KL)	
26	GCV OF OIL OF THE OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
27	GCV OF OIL SUPPLIED AS RECEIVED AT STATION	(KCAL/KL)	
28	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
29	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
30	WEIGHTED AVERAGE GCV OF OIL AS RECEIVED	(KCAL/KL)	<b>9292</b>

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited	
Name of the generating Station		Muzaffarpur Thermal Power Stat-STAGE 02	
Month		November-2023	
SL	Particulars	Unit	COAL-DOMESTIC
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	Opening Stock of coal	MT	23659.9
2	Value of Stock	Rs.	97709483.09
<b>B)</b>	<b>QUANTITY</b>		
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	182056.48
3.01	- Qty Received (Pit Head)	MT	0.00
3.02	- Qty Received (Non Pit Head)	MT	182056.48
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	5030.14
5	Coal supplied by Coal/Lignite Company (3+4)	MT	177026.34
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	1416.21
6.01	- Normative Loss (Pit Head)	MT	0.00
6.02	- Normative Loss (Non Pit Head)	MT	1416.21
7	Net Coal / Lignite supplied (5 - 6)	MT	175610.13
<b>C)</b>	<b>PRICE</b>		
8	Amount charged by the Coal / Lignite Company	Rs.	503552728.00
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	12611839.50
10	Handling, Sampling and such other similar charges	Rs.	1822877.62
11	Total Amount charged (8 +9+10)	Rs.	492763766.12
<b>D)</b>	<b>TRANSPORTATION</b>		
12	Transportation charges by Rail / Ship / Road Transport	Rs.	168107523.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00
14	Demurrage charges, if any	Rs.	1250523.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00
16	Total transportation charges ( 12+/- 13 - 14 + 15 )	Rs.	168857000.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	679620766.12
<b>E)</b>	<b>TOTAL COST</b>		
18	Landed Cost of Coal/Lignite ( 12+17 ) / (1+7)	Rs./MT	3900.90
19	Bending Ratio (Domestic/imported)	%	100.00
20	Weighted average cost of Coal /Lignite ( Including biomass)	Rs./MT	3900.90
20.10	Weighted average cost of Coal /Lignite ( Excluding biomass)	Rs./MT	3900.90
<b>F)</b>	<b>QUALITY</b>		
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4673
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4690
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	4688
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	4688
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3867
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3871
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0
29	GCV of Imported coal supplied as received at station	kCal/Kg	0
30	Weighted average GCV of coal / Lignite as Received (Including biomass)	kCal/Kg	3870
30.10	Weighted average GCV of coal / Lignite as Received (Excluding biomass)	kCal/Kg	3870

Submitted On : 10.01.2024



**DETAILS OF SOURCE WISE FUEL FOR COMPUTATION OF ENERGY CHARGES**

PART 1  
FORM-15

NAME OF THE PETITIONER

NTPC Limited

NAME OF THE GENERATING STATION

MUZAFFARPUR THERMAL POWER STATION (Stage 02)

S. NO.	Particulars	Unit	November-2023
			LDO
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	OPENING QUANTITY OF OIL	(KL)	825.41
2	VALUE OF STOCK		6,88,60,280.72
<b>B)</b>	<b>QUANTITY</b>		
3	QUANTITY OF OIL SUPPLIED BY OIL/LIGNIE COMPANY	(KL)	73.00
4	ADJUSTMENT (+/-)IN QUANTITY SUPPLIED MADE BY OIL COMPANY	(KL)	-
5	OIL SUPPLIED BY OIL COMPANY(3+4)	(KL)	73.00
6	NORMATIVE TRANSIT & HANDLING LOSSES (FOR OIL BASED PROJECTS)	(KL)	-
7	NET OIL SUPPLIED (5-6)	(KL)	73.00
<b>C)</b>	<b>PRICE</b>		
8	AMOUNT CHARGED BY OIL COMPANY	( Rs. )	63,70,014.27
9	ADJUSTMENT(+/-)IN AMOUNT CHARGED BY OIL COMPANY	( Rs. )	-
10	HANDLING, SAMPLING AND SUCH OTHER SIMILAR CHARGES		
11	TOTAL AMOUNT CHARGED (8+9+10)	( Rs. )	63,70,014.27
<b>D)</b>	<b>TRANSPORTAION</b>		
12	TRANSPORTATION CHARGES BY RAIL/ROAD/SHIP TRANSPORT	( Rs. )	-
	BY RAIL		
	BY ROAD		
	BY SHIP		
	.....		
13	ADJUSTMENT(+/-) IN AMOUNT CHARGED MADE BY	( Rs. )	-
14	DEMURRAGE CHARGES, IF ANY	( Rs. )	-
15	COST OF DIESEL IN TRANSPOTING OIL THROUGH MGR SYSTEM, IF APPLICABLE	( Rs. )	-
16	TOTAL TRANSPORTATION CHARGES(12+13+14+15)	( Rs. )	-
17	TOTAL AMOUNT CHARGED FOR OIL SUPPLIED INCLUDING TRANSPORTATION (11+16)	( Rs. )	63,70,014.27
<b>E)</b>	<b>TOTAL COST</b>		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	<b>83737.00</b>
19	BLENDING RATIO(IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	<b>83737.00</b>
<b>F)</b>	<b>QUALITY</b>		
21	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
22	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
23	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
24	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
25	WEIGHTED AVERAGE GCV OF OIL AS BILLED	(KCAL/KL)	
26	GCV OF OIL OF THE OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
27	GCV OF OIL SUPPLIED AS RECEIVED AT STATION	(KCAL/KL)	
28	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
29	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
30	WEIGHTED AVERAGE GCV OF OIL AS RECEIVED	(KCAL/KL)	<b>9285</b>

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited	
Name of the generating Station		Muzaffarpur Thermal Power Stat-STAGE 02	
Month		December-2023	
SL	Particulars	Unit	COAL-DOMESTIC
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	Opening Stock of coal	MT	41475 29
2	Value of Stock	Rs.	161791093 96
<b>B)</b>	<b>QUANTITY</b>		
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	142481 47
3 01	- Qty Received (Pit Head)	MT	0 00
3 02	- Qty Received (Non Pit Head)	MT	142481 47
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	4699 87-
5	Coal supplied by Coal/Lignite Company (3+4)	MT	137781 60
6	Normative trans t & Handling losses (for Coal /Lignite based projects)	MT	1102 25
6 01	- Normative Loss (Pit Head)	MT	0 00
6 02	- Normative Loss (Non Pit Head)	MT	1102 25
7	Net Coal / Lignite supplied (5 - 6)	MT	136679 35
<b>C)</b>	<b>PRICE</b>		
8	Amount charged by the Coal / Lignite Company	Rs.	358321823 00
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	31636711 59
10	Handling, Sampling and such other Similar charges	Rs.	9863738 03
11	Total Amount charged (8 +9+10)	Rs.	399822272 62
<b>D)</b>	<b>TRANSPORTATION</b>		
12	Transportation charges by Rail / Ship / Road Transport	Rs.	147318119 00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0 00
14	Demurrage charges if any	Rs.	1018965 00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0 00
16	Total transportation charges ( 12+/- 13 - 14 + 15 )	Rs.	146299154 00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	546121426 62
<b>E)</b>	<b>TOTAL COST</b>		
18	Landed Cost of Coal/Lignite ( 2+17) / (1+7)	Rs./MT	3973 58
19	Bending Ratio (Domestic/imported)	%	100.00
20	Weighted average cost of Coal /Lignite ( Including biomass)	Rs./MT	3973 58
20 10	Weighted average cost of Coal /Lignite ( Excluding biomass)	Rs./MT	3973 58
<b>F)</b>	<b>QUALITY</b>		
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4686
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4536
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	4571
25 10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	4571
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3870
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3548
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0
29	GCV of Imported coal supplied as received at station	kCal/Kg	0
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3622
30 10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3622

Submitted On : 10.01.2024

**DETAILS OF SOURCE WISE FUEL FOR COMPUTATION OF ENERGY CHARGES**

PART 1  
FORM-15

NAME OF THE PETITIONER

NTPC Limited

NAME OF THE GENERATING STATION

MUZAFFARPUR THERMAL POWER STATION (Stage 02)

S. NO.	Particulars	Unit	December-2023
			LDO
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	OPENING QUANTITY OF OIL	(KL)	833.36
2	VALUE OF STOCK		6,99,34,523.71
<b>B)</b>	<b>QUANTITY</b>		
3	QUANTITY OF OIL SUPPLIED BY OIL/LIGNIE COMPANY	(KL)	-
4	ADJUSTMENT (+/-)IN QUANTITY SUPPLIED MADE BY OIL COMPANY	(KL)	-
5	OIL SUPPLIED BY OIL COMPANY(3+4)	(KL)	-
6	NORMATIVE TRANSIT & HANDLING LOSSES (FOR OIL BASED PROJECTS)	(KL)	-
7	NET OIL SUPPLIED (5-6)	(KL)	-
<b>C)</b>	<b>PRICE</b>		
8	AMOUNT CHARGED BY OIL COMPANY	( Rs. )	-
9	ADJUSTMENT(+/-)IN AMOUNT CHARGED BY OIL COMPANY	( Rs. )	-
10	HANDLING, SAMPLING AND SUCH OTHER SIMILAR CHARGES		
11	TOTAL AMOUNT CHARGED (8+9+10)	( Rs. )	-
<b>D)</b>	<b>TRANSPORTAION</b>		
12	TRANSPORTATION CHARGES BY RAIL/ROAD/SHIP TRANSPORT	( Rs. )	-
	BY RAIL		
	BY ROAD		
	BY SHIP		
	.....		
13	ADJUSTMENT(+/-) IN AMOUNT CHARGED MADE BY	( Rs. )	-
14	DEMURRAGE CHARGES, IF ANY	( Rs. )	-
15	COST OF DIESEL IN TRANSPOTING OIL THROUGH MGR SYSTEM, IF APPLICABLE	( Rs. )	-
16	TOTAL TRANSPORTATION CHARGES(12+13+14+15)	( Rs. )	-
17	TOTAL AMOUNT CHARGED FOR OIL SUPPLIED INCLUDING TRANSPORTATION (11+16)	( Rs. )	-
<b>E)</b>	<b>TOTAL COST</b>		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	<b>83918.28</b>
19	BLENDING RATIO(IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	<b>83918.28</b>
<b>F)</b>	<b>QUALITY</b>		
21	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
22	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
23	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
24	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
25	WEIGHTED AVERAGE GCV OF OIL AS BILLED	(KCAL/KL)	
26	GCV OF OIL OF THE OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
27	GCV OF OIL SUPPLIED AS RECEIVED AT STATION	(KCAL/KL)	
28	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
29	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
30	WEIGHTED AVERAGE GCV OF OIL AS RECEIVED	(KCAL/KL)	<b>9285</b>

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited	
Name of the generating Station		Muzaffarpur Thermal Power Stat-STAGE 02	
Month		January-2024	
SL	Particulars	Unit	COAL-DOMESTIC
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	Opening Stock of coal	MT	89468.27
2	Value of Stock	Rs.	355509716.99
<b>B)</b>	<b>QUANTITY</b>		
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	165979.44
3.01	- Qty Received (Pit Head)	MT	0.00
3.02	- Qty Received (Non Pit Head)	MT	165979.44
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	3810.85-
5	Coal supplied by Coal/Lignite Company (3+4)	MT	162168.59
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	1297.35
6.01	- Normative Loss (Pit Head)	MT	0.00
6.02	- Normative Loss (Non Pit Head)	MT	1297.35
7	Net Coal / Lignite supplied (5 - 6)	MT	160871.24
<b>C)</b>	<b>PRICE</b>		
8	Amount charged by the Coal / Lignite Company	Rs.	417554400.72
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	9560783.71-
10	Handling, Sampling and such other Similar charges	Rs.	8139767.30
11	Total Amount charged (8 +9+10)	Rs.	416133384.31
<b>D)</b>	<b>TRANSPORTATION</b>		
12	Transportation charges by Rail / Ship / Road Transport	Rs.	174397047.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00
14	Demurrage charges, if any	Rs.	1040795.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00
16	Total transportation charges ( 12+/- 13 - 14 + 15 )	Rs.	173356252.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	589489636.31
<b>E)</b>	<b>TOTAL COST</b>		
18	Landed Cost of Coal/Lignite ( 2+17) / (1+7)	Rs./MT	3774.87
19	Blending Ratio (Domestic/Imported)	%	100.00
20	Weighted average cost of Coal /Lignite ( Including biomass)	Rs./MT	3774.87
20.10	Weighted average cost of Coal /Lignite ( Excluding biomass)	Rs./MT	3774.87
<b>F)</b>	<b>QUALITY</b>		
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4571
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4556
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	4561
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	4561
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3622
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3664
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0
29	GCV of Imported coal supplied as received at station	kCal/Kg	0
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3649
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3649

Submitted On :16.04.2024

For M.C. Bhandari & Co.  
Chartered Accountants

**DETAILS OF SOURCE WISE FUEL FOR COMPUTATION OF ENERGY CHARGES**

PART 1  
FORM-15

NAME OF THE PETITIONER

NTPC Limited

NAME OF THE GENERATING STATION

MUZAFFARPUR THERMAL POWER STATION (Stage 02)

S. NO.	Particulars	Unit	January-2024
			LDO
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	OPENING QUANTITY OF OIL	(KL)	829.75
2	VALUE OF STOCK		6,96,31,159.27
<b>B)</b>	<b>QUANTITY</b>		
3	QUANTITY OF OIL SUPPLIED BY OIL/LIGNIE COMPANY	(KL)	210.86
4	ADJUSTMENT (+/-)IN QUANTITY SUPPLIED MADE BY OIL COMPANY	(KL)	-
5	OIL SUPPLIED BY OIL COMPANY(3+4)	(KL)	210.86
6	NORMATIVE TRANSIT & HANDLING LOSSES (FOR OIL BASED PROJECTS)	(KL)	-
7	NET OIL SUPPLIED (5-6)	(KL)	210.86
<b>C)</b>	<b>PRICE</b>		
8	AMOUNT CHARGED BY OIL COMPANY	( Rs. )	1,71,96,808.56
9	ADJUSTMENT(+/-)IN AMOUNT CHARGED BY OIL COMPANY	( Rs. )	-
10	HANDLING, SAMPLING AND SUCH OTHER SIMILAR CHARGES		
11	TOTAL AMOUNT CHARGED (8+9+10)	( Rs. )	1,71,96,808.56
<b>D)</b>	<b>TRANSPORTAION</b>		
12	TRANSPORTATION CHARGES BY RAIL/ROAD/SHIP TRANSPORT	( Rs. )	-
	BY RAIL		
	BY ROAD		
	BY SHIP		
	.....		
13	ADJUSTMENT(+/-) IN AMOUNT CHARGED MADE BY	( Rs. )	-
14	DEMURRAGE CHARGES, IF ANY	( Rs. )	-
15	COST OF DIESEL IN TRANSPOTING OIL THROUGH MGR SYSTEM, IF APPLICABLE	( Rs. )	-
16	TOTAL TRANSPORTATION CHARGES(12+13+14+15)	( Rs. )	-
17	TOTAL AMOUNT CHARGED FOR OIL SUPPLIED INCLUDING TRANSPORTATION (11+16)	( Rs. )	1,71,96,808.56
<b>E)</b>	<b>TOTAL COST</b>		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	<b>83439.52</b>
19	BLENDING RATIO(IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	<b>83439.52</b>
<b>F)</b>	<b>QUALITY</b>		
21	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
22	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
23	GCV OF OIL OF THE OPENING STOCK AS PER BILL OF OIL COMPANY	(KCAL/KL)	
24	GCV OF OIL SUPPLIED AS PER BILL OF OIL COMPANY	(KCAL/KL)	
25	WEIGHTED AVERAGE GCV OF OIL AS BILLED	(KCAL/KL)	
26	GCV OF OIL OF THE OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
27	GCV OF OIL SUPPLIED AS RECEIVED AT STATION	(KCAL/KL)	
28	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
29	GCV OF OIL OF OPENING STOCK AS RECEIVED AT STATION	(KCAL/KL)	
30	WEIGHTED AVERAGE GCV OF OIL AS RECEIVED	(KCAL/KL)	<b>9306</b>

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited	
Name of the generating Station		Muzaffarpur Thermal Power Stat-STAGE 02	
Month		February-2024	
SL	Particulars	Unit	COAL-DOMESTIC
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	Opening Stock of coal	MT	106516.87
2	Value of Stock	Rs.	402087444.20
<b>B)</b>	<b>QUANTITY</b>		
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	175032.49
3.01	- Qty Received (Pit Head)	MT	0.00
3.02	- Qty Received (Non Pit Head)	MT	175032.49
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	4426.74-
5	Coal supplied by Coal/Lignite Company (3+4)	MT	170605.75
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	1364.85
6.01	- Normative Loss (Pit Head)	MT	0.00
6.02	- Normative Loss (Non Pit Head)	MT	1364.85
7	Net Coal / Lignite supplied (5 - 6)	MT	169240.90
<b>C)</b>	<b>PRICE</b>		
8	Amount charged by the Coal / Lignite Company	Rs.	446495169.00
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	10843852.24-
10	Handling, Sampling and such other Similar charges	Rs.	7431814.08
11	Total Amount charged (8 +9+10)	Rs.	443083130.84
<b>D)</b>	<b>TRANSPORTATION</b>		
12	Transportation charges by Rail / Ship / Road Transport	Rs.	187762058.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00
14	Demurrage charges, if any	Rs.	1042720.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00
16	Total transportation charges ( 12+/- 13 - 14 + 15 )	Rs.	186719338.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	629802468.84
<b>E)</b>	<b>TOTAL COST</b>		
18	Landed Cost of Coal/Lignite ( 2+17) / (1+7)	Rs./MT	3742.02
19	Blending Ratio (Domestic/Imported)	%	100.00
20	Weighted average cost of Coal /Lignite ( Including biomass)	Rs./MT	3742.02
20.10	Weighted average cost of Coal /Lignite ( Excluding biomass)	Rs./MT	3742.02
<b>F)</b>	<b>QUALITY</b>		
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4561
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4504
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	4526
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	4526
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3649
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3712
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0
29	GCV of Imported coal supplied as received at station	kCal/Kg	0
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3688
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3688

Submitted On :16.04.2024

## Details of Sourcewise fuel for computation of Energy Charges

<b>Company</b>	<b>NTPC Limited</b>
<b>Name of the generating Station</b>	<b>Muzaffarpur Thermal Power Stat(STAGE 02)</b>
<b>Month</b>	<b>February-2024</b>

SL	Particulars	Unit	LDO	HFO	HSD
<b>A)</b>	<b>OPENING QUANTITY</b>				
1	Opening Stock Of Oil	KL	832.126	0.000	0.000
2	Value Of Stock	Rs.	69432169.17	0.00	0.00
<b>B)</b>	<b>QUANTITY</b>				
3	Quantity Of Oil Supplied By Oil Company	KL	120.864	0.000	0.000
4	Adjustment (+/-) In Quantity Supplied Made By Oil Company	KL	0.000	0.000	0.000
5	Oil Supplied By Oil Company (3+4)	KL	120.864	0.000	0.000
6	Normative Transit & Handling Losses	KL	0.000	0.000	0.000
7	Net Oil Supplied (5 - 6)	KL	120.864	0.000	0.000
<b>C)</b>	<b>PRICE</b>				
8	Amount Charged By The Oil Company	Rs.	9839914.08	0.00	0.00
9	Adjustment (+ / -) In Amount Charged By Oil Company	Rs.	0.00	0.00	0.00
10	Handling,Sampling And Such Other Similar Charges	Rs.	0.00	0.00	0.00
<b>11</b>	<b>Total Amount Charged (8 +9+10)</b>	<b>Rs.</b>	<b>9839914.08</b>	<b>0.00</b>	<b>0.00</b>
<b>D)</b>	<b>TRANSPORTATION</b>				
12	Transportation Charges By Rail / Ship / Road Transport	Rs.	0.00	0.00	0.00
13	Adjustment (+/-) In Amount Charged By Railways/Transport	Rs.	0.00	0.00	0.00
14	Demurrage Charges, If Any	Rs.	0.00	0.00	0.00
15	Cost Of Diesel InTransporting Coal Through MGR System	Rs.	0.00	0.00	0.00
16	Total Transportation Charges ( 12+/- 13 - 14 + 15 )	Rs.	0.00	0.00	0.00
17	Total Amount Charged For Oil Supplied Incl Transportation (11+16)	Rs.	9839914.08	0.00	0.00
<b>E)</b>	<b>TOTAL COST</b>				
18	Landed Cost Of Oil (LDO/HFO) ( 2+17) / (1+7)	Rs.	83182.49	0.00	0.00
19	Blending Ratio		1.000	0.000	0.000
<b>20</b>	<b>Weighted Average Cost Of Oil</b>	<b>Rs.</b>	<b>83182.49</b>		
<b>F)</b>	<b>QUALITY</b>				
21	GCV Of Oil Of The Opening Stock As Per Bill Of Oil Company	Kcal/Ltr	0	0	0
22	GCV Of Oil Supplied As Per Bill Of Oil Company	Kcal/Ltr	0	0	0
23	GCV Of Imported Oil Of The Op Stock As Per Bill Of Oil Company	Kcal/Ltr	0	0	0
24	GCV Of Imported Oil Supplied As Per Bill Of Oil Company	Kcal/Ltr	0	0	0
25	Weighted Average GCV Of Oil As Billed	Kcal/Ltr	0	0	0
26	GCV Of Oil Of The Opening Stock As Received At Station	Kcal/Ltr	0	0	0
27	GCV Of Oil Supplied	Kcal/Ltr	9267	0	0
28	GCV Of Imported Oil Of The Opening Stock As Received At Station	Kcal/Ltr	0	0	0
29	GCV Of Imported Oil Supplied As Received At Station	Kcal/Ltr	0	0	0
<b>30</b>	<b>Weighted Average GCV Of Oil</b>	<b>Kcal/Ltr</b>	<b>9267</b>		

Submitted on :01.03.2024

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited	
Name of the generating Station		Muzaffarpur Thermal Power Stat-STAGE 02	
Month		March-2024	
SL	Particulars	Unit	COAL-DOMESTIC
<b>A)</b>	<b>OPENING QUANTITY</b>		
1	Opening Stock of coal	MT	103569.95
2	Value of Stock	Rs.	387560324.37
<b>B)</b>	<b>QUANTITY</b>		
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	171191.63
3.01	- Qty Received (Pit Head)	MT	0.00
3.02	- Qty Received (Non Pit Head)	MT	171191.63
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	5840.62-
5	Coal supplied by Coal/Lignite Company (3+4)	MT	165351.01
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	1322.81
6.01	- Normative Loss (Pit Head)	MT	0.00
6.02	- Normative Loss (Non Pit Head)	MT	1322.81
7	Net Coal / Lignite supplied (5 - 6)	MT	164028.20
<b>C)</b>	<b>PRICE</b>		
8	Amount charged by the Coal / Lignite Company	Rs.	455282093.00
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	14704834.66-
10	Handling, Sampling and such other Similar charges	Rs.	30439056.00
11	Total Amount charged (8 +9+10)	Rs.	471016314.34
<b>D)</b>	<b>TRANSPORTATION</b>		
12	Transportation charges by Rail / Ship / Road Transport	Rs.	177686305.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00
14	Demurrage charges, if any	Rs.	1334770.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00
16	Total transportation charges ( 12+/- 13 - 14 + 15 )	Rs.	176351535.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	647367849.34
<b>E)</b>	<b>TOTAL COST</b>		
18	Landed Cost of Coal/Lignite ( 2+17) / (1+7)	Rs./MT	3867.47
19	Blending Ratio (Domestic/Imported)	%	100.00
20	Weighted average cost of Coal /Lignite ( Including biomass)	Rs./MT	3867.47
20.10	Weighted average cost of Coal /Lignite ( Excluding biomass)	Rs./MT	3867.47
<b>F)</b>	<b>QUALITY</b>		
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4526
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4690
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	4627
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	4627
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3688
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3923
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0
29	GCV of Imported coal supplied as received at station	kCal/Kg	0
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3833
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3833

Submitted On :16.04.2024



## Details of Sourcewise fuel for computation of Energy Charges

<b>Company</b>	<b>NTPC Limited</b>
<b>Name of the generating Station</b>	<b>Muzaffarpur Thermal Power Stat(STAGE 02)</b>
<b>Month</b>	<b>March-2024</b>

SL	Particulars	Unit	LDO	HFO	HSD
<b>A)</b>	<b>OPENING QUANTITY</b>				
1	Opening Stock Of Oil	KL	882.529	0.000	0.000
2	Value Of Stock	Rs.	73410961.70	0.00	0.00
<b>B)</b>	<b>QUANTITY</b>				
3	Quantity Of Oil Supplied By Oil Company	KL	0.000	0.000	0.000
4	Adjustment (+/-) In Quantity Supplied Made By Oil Company	KL	0.000	0.000	0.000
5	Oil Supplied By Oil Company (3+4)	KL	0.000	0.000	0.000
6	Normative Transit & Handling Losses	KL	0.000	0.000	0.000
7	Net Oil Supplied (5 - 6)	KL	0.000	0.000	0.000
<b>C)</b>	<b>PRICE</b>				
8	Amount Charged By The Oil Company	Rs.	0.00	0.00	0.00
9	Adjustment (+ / -) In Amount Charged By Oil Company	Rs.	0.00	0.00	0.00
10	Handling, Sampling And Such Other Similar Charges	Rs.	0.00	0.00	0.00
<b>11</b>	<b>Total Amount Charged (8 +9+10)</b>	<b>Rs.</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>D)</b>	<b>TRANSPORTATION</b>				
12	Transportation Charges By Rail / Ship / Road Transport	Rs.	0.00	0.00	0.00
13	Adjustment (+/-) In Amount Charged By Railways/Transport	Rs.	0.00	0.00	0.00
14	Demurrage Charges, If Any	Rs.	0.00	0.00	0.00
15	Cost Of Diesel InTransporting Oil Through MGR System	Rs.	0.00	0.00	0.00
16	Total Transportation Charges ( 12+/- 13 - 14 + 15 )	Rs.	0.00	0.00	0.00
17	Total Amount Charged For Oil Supplied Incl Transportation (11+16)	Rs.	0.00	0.00	0.00
<b>E)</b>	<b>TOTAL COST</b>				
18	Landed Cost Of Oil (LDO/HFO) ( 2+17) / (1+7)	Rs.	83182.49	0.00	0.00
19	Blending Ratio		1.000	0.000	0.000
<b>20</b>	<b>Weighted Average Cost Of Oil</b>	<b>Rs.</b>	<b>83182.49</b>		
<b>F)</b>	<b>QUALITY</b>				
21	GCV Of Oil Of The Opening Stock As Per Bill Of Oil Company	Kcal/Ltr	0	0	0
22	GCV Of Oil Supplied As Per Bill Of Oil Company	Kcal/Ltr	0	0	0
23	GCV Of Imported Oil Of The Op Stock As Per Bill Of Oil Company	Kcal/Ltr	0	0	0
24	GCV Of Imported Oil Supplied As Per Bill Of Oil Company	Kcal/Ltr	0	0	0
25	Weighted Average GCV Of Oil As Billed	Kcal/Ltr	0	0	0
26	GCV Of Oil Of The Opening Stock As Received At Station	Kcal/Ltr	0	0	0
27	GCV Of Oil Supplied	Kcal/Ltr	9267	0	0
28	GCV Of Imported Oil Of The Opening Stock As Received At Station	Kcal/Ltr	0	0	0
29	GCV Of Imported Oil Supplied As Received At Station	Kcal/Ltr	0	0	0
<b>30</b>	<b>Weighted Average GCV Of Oil</b>	<b>Kcal/Ltr</b>	<b>9267</b>		

Submitted on :01.04.2024

# ANNEXURE-1

No. 40-3/2020-DM-I(A)  
Government of India  
Ministry of Home Affairs

North Block, New Delhi-110001

Dated 24<sup>th</sup> March, 2020

## ORDER

Whereas, the National Disaster Management Authority (NDMA), is satisfied that the country is threatened with the spread of COVID-19 epidemic, which has already been declared as a pandemic by the World Health Organisation, and has considered it necessary to take effective measures to prevent its spread across the country and that there is a need for consistency in the application and implementation of various measures across the country while ensuring maintenance of essential services and supplies, including health infrastructure;

Whereas in exercise of the powers under section 6(2)(i) of the Disaster Management Act, 2005, the National Disaster Management Authority (NDMA), has issued an Order no. 1-29/2020-PP (Pt.II) dated 24.03.2020 (Copy enclosed) directing the Ministries/ Departments of Government of India, State/Union Territory Governments and State/ Union Territory Authorities to take effective measures so as to prevent the spread of COVID-19 in the country;

Whereas under directions of the aforesaid Order of NDMA, and in exercise of the powers, conferred under Section 10(2)(i) of the Disaster Management Act, the undersigned, in his capacity as Chairperson, National Executive Committee, hereby issues guidelines, as per the Annexure, to Ministries/ Departments of Government of India, State/Union Territory Governments and State/ Union Territory Authorities with the directions for their strict implementation. This Order shall remain in force, in all parts of the country for a period of 21 days with effect from 25.03.2020.

  
Home Secretary 24/3/2020

To

1. The Secretaries of Ministries/ Departments of Government of India
2. The Chief Secretaries/Administrators of States/Union Territories  
(As per list attached)

Copy to:

- i. All members of the National Executive Committee.
- ii. Member Secretary, National Disaster Management Authority.

**Annexure to Ministry of Home Affairs Order No .40-3/2020-D dated ( )24.03.2020**

**Guidelines on the measures to be taken by Ministries/ Departments of Government of India, State/Union Territory Governments and State/ Union Territory Authorities for containment of COVID-19 Epidemic in the Country.**

1. Offices of the Government of India, its Autonomous/ Subordinate Offices and Public Corporations shall remain closed.

*Exceptions:*

Defence, central armed police forces, treasury, public utilities (including petroleum, CNG, LPG, PNG), disaster management, power generation and transmission units, post offices, National Informatics Centre, Early Warning Agencies

2. Offices of the State/ Union Territory Governments, their Autonomous Bodies, Corporations, etc. shall remain closed.

*Exceptions:*

- a. Police, home guards, civil defence, fire and emergency services, disaster management, and prisons.
- b. District administration and Treasury
- c. Electricity, water, sanitation
- d. Municipal bodies—Only staff required for essential services like sanitation, personnel related to water supply etc

*The above offices (Sl. No 1 & 2) should work with minimum number of employees. All other offices may continue to work-from-home only.*

3. Hospitals and all related medical establishments, including their manufacturing and distribution units, both in public and private sector, such as dispensaries, chemist and medical equipment shops, laboratories, clinics, nursing homes, ambulance etc. will continue to remain functional. The transportation for all medical personnel, nurses, para-medical staff, other hospital support services be permitted.

4. Commercial and private establishments shall be closed down.

*Exceptions:*

- a. Shops, including ration shops (under PDS), dealing with food, groceries, fruits and vegetables, dairy and milk booths, meat and fish, animal fodder. However, district authorities may encourage and facilitate home delivery to minimize the movement of individuals outside their homes.
- b. Banks, insurance offices, and ATMs.
- c. Print and electronic media
- d. Telecommunications, internet services, broadcasting and cable services. IT and IT enabled Services only (for essential services) and as far as possible to work from home.
- e. Delivery of all essential goods including food, pharmaceuticals, medical equipment through E-commerce

- f. Petrol pumps, LPG, Petroleum and gas retail and storage outlets.
- g. Power generation, transmission and distribution units and services.
- h. Capital and debt market services as notified by the Securities and Exchange Board of India
- i. Cold storage and warehousing services.
- j. Private security services

All other establishments may work-from-home only.

5. Industrial Establishments will remain closed.

Exceptions:

- a. Manufacturing units of essential commodities.
- b. Production units, which require continuous process, after obtaining required permission from the State Government

6. All transport services – air, rail, roadways – will remain suspended.

Exceptions:

- a. Transportation for essential goods only.
- b. Fire, law and order and emergency services.

7. Hospitality Services to remain suspended

Exceptions:

- a. Hotels, homestays, lodges and motels, which are accommodating tourists and persons stranded due to lockdown, medical and emergency staff, air and sea crew.
- b. Establishments used/ earmarked for quarantine facilities.

8. All educational, training, research, coaching institutions etc. shall remain closed.

9. All places of worship shall be closed for public. No religious congregations will be permitted, without any exception.

10. All social/ political/ sports/ entertainment/ academic/ cultural/ religious functions / gatherings shall be barred.

11. In case of funerals, congregation of not more than twenty persons will be permitted.

12. All persons who have arrived into India after 15.02.2020, and all such persons who have been directed by health care personnel to remain under strict home/ institutional quarantine for a period as decided by local Health Authorities, failing which they will be liable to legal action under Sec. 188 of the IPC.

13. Wherever exceptions to above containment measures have been allowed, the organisations/employers must ensure necessary precautions against COVID-19



virus, as well as social distance measures, as advised by the Health Department from time to time.

14. In order to implement these containment measures, the District Magistrate will deploy Executive Magistrates as Incident Commanders in the respective local jurisdictions. The Incident Commander will be responsible for the overall implementation of these measures in their respective jurisdictions. All other line department officials in the specified area will work under the directions of such incident commander. The Incident Commander will issue passes for enabling essential movements as explained.
15. All enforcing authorities to note that these strict restrictions fundamentally relate to movement of people, but not to that of essential goods.
16. The Incident Commanders will in particular ensure that all efforts for mobilisation of resources, workers and material for augmentation and expansion of hospital infrastructure shall continue without any hindrance.
17. Any person violating these containment measures will be liable to be proceeded against as per the provisions of Section 51 to 60 of the Disaster Management Act, 2005, besides legal action under Sec. 188 of the IPC (as per Appendix).
18. The above containment measures will remain in force, in all parts of the country, for a period of 21 days with effect from 25.03.2020.

  
24/3/2020  
Union Home Secretary

**1. Section 51 to 60 of the Disaster Management Act, 2005**

OFFENCES AND PENALTIES

**51. Punishment for obstruction, etc.**—Whoever, without reasonable cause —

(a) obstructs any officer or employee of the Central Government or the State Government, or a person authorised by the National Authority or State Authority or District Authority in the discharge of his functions under this Act; or

(b) refuses to comply with any direction given by or on behalf of the Central Government or the State Government or the National Executive Committee or the State Executive Committee or the District Authority under this Act,

shall on conviction be punishable with imprisonment for a term which may extend to one year or with fine, or with both, and if such obstruction or refusal to comply with directions results in loss of lives or imminent danger thereof, shall on conviction be punishable with imprisonment for a term which may extend to two years.

**52. Punishment for false claim.**—Whoever knowingly makes a claim which he knows or has reason to believe to be false for obtaining any relief, assistance, repair, reconstruction or other benefits consequent to disaster from any officer of the Central Government, the State Government, the National Authority, the State Authority or the District Authority, shall, on conviction be punishable with imprisonment for a term which may extend to two years, and also with fine.

**53. Punishment for misappropriation of money or materials, etc.**—Whoever, being entrusted with any money or materials, or otherwise being, in custody of, or dominion over, any money or goods, meant for providing relief in any threatening disaster situation or disaster, misappropriates or appropriates for his own use or disposes of such money or materials or any part thereof or wilfully compels any other person so to do, shall on conviction be punishable with imprisonment for a term which may extend to two years, and also with fine.

**54. Punishment for false warning.**—Whoever makes or circulates a false alarm or warning as to disaster or its severity or magnitude, leading to panic, shall on conviction, be punishable with imprisonment which may extend to one year or with fine.

**55. Offences by Departments of the Government.**—(1) Where an offence under this Act has been committed by any Department of the Government, the head of the Department shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly unless he proves that the offence was committed without his knowledge or that he exercised all due diligence to prevent the commission of such offence.

(2) Notwithstanding anything contained in sub-section (1), where an offence under this Act has been committed by a Department of the Government and it is proved that the

offence has been committed with the consent or connivance of, or is attributable to any neglect on the part of, any officer, other than the head of the Department, such officer shall be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

**56. Failure of officer in duty or his connivance at the contravention of the provisions of this Act.**—Any officer, on whom any duty has been imposed by or under this Act and who ceases or refuses to perform or withdraws himself from the duties of his office shall, unless he has obtained the express written permission of his official superior or has other lawful excuse for so doing, be punishable with imprisonment for a term which may extend to one year or with fine.

**57. Penalty for contravention of any order regarding requisitioning.**—If any person contravenes any order made under section 65, he shall be punishable with imprisonment for a term which may extend to one year or with fine or with both.

**58. Offence by companies.**—(1) Where an offence under this Act has been committed by a company or body corporate, every person who at the time the offence was committed, was in charge of, and was responsible to, the company, for the conduct of the business of the company, as well as the company, shall be deemed to be guilty of the contravention and shall be liable to be proceeded against and punished accordingly: Provided that nothing in this sub-section shall render any such person liable to any punishment provided in this Act, if he proves that the offence was committed without his knowledge or that he exercised due diligence to prevent the commission of such offence. (2) Notwithstanding anything contained in sub-section (1), where an offence under this Act has been committed by a company, and it is proved that the offence was committed with the consent or connivance of or is attributable to any neglect on the part of any director, manager, secretary or other officer of the company, such director, manager, secretary or other officer shall also, be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

*Explanation.*—For the purpose of this section— (a) "company" means any body corporate and includes a firm or other association of individuals; and (b) "director", in relation to a firm, means a partner in the firm.

**59. Previous sanction for prosecution.**—No prosecution for offences punishable under sections 55 and 56 shall be instituted except with the previous sanction of the Central Government or the State Government, as the case may be, or of any officer authorised in this behalf, by general or special order, by such Government.

**60. Cognizance of offences.**—No court shall take cognizance of an offence under this Act except on a complaint made by— (a) the National Authority, the State Authority, the Central Government, the State Government, the District Authority or any other authority or officer authorised in this behalf by that Authority or Government, as the case may be; or (b) any person who has given notice of not less than thirty days in the manner prescribed, of the alleged offence and his intention to make a complaint to

the National Authority, the State Authority, the Central Government, the State Government, the District Authority or any other authority or officer authorised as aforesaid.

## **2. Section 188 in The Indian Penal Code**

188. Disobedience to order duly promulgated by public servant.—Whoever, knowing that, by an order promulgated by a public servant lawfully empowered to promulgate such order, he is directed to abstain from a certain act, or to take certain order with certain property in his possession or under his management, disobeys such direction, shall, if such disobedience causes or tends to cause obstruction, annoyance or injury, or risk of obstruction, annoyance or injury, to any person lawfully employed, be punished with simple imprisonment for a term which may extend to one month or with fine which may extend to two hundred rupees, or with both; and if such disobedience causes or tends to cause danger to human life, health or safety, or causes or tends to cause a riot or affray, shall be punished with imprisonment of either description for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both.

*Explanation.*—It is not necessary that the offender should intend to produce harm, or contemplate his disobedience as likely to produce harm. It is sufficient that he knows of the order which he disobeys, and that his disobedience produces, or is likely to produce, harm.

### *Illustration*

An order is promulgated by a public servant lawfully empowered to promulgate such order, directing that a religious procession shall not pass down a certain street. A knowingly disobeys the order, and thereby causes danger of riot. A has committed the offence defined in this section.



AJAY BHALLA, IAS



गृह सचिव  
Home Secretary  
भारत सरकार  
Government of India  
North Block,  
New Delhi

D.O.No. 40-3/2020-DM-I(A)

14<sup>th</sup> April, 2020

Dear *Chief Secretary,*

Hon'ble Prime Minister, in his address to the Nation today, has announced that the lockdown in India, which has been imposed to contain the spread of COVID-19 pandemic, will have to be extended till May 3, 2020. In pursuance of this announcement, and on the directions of the National Disaster Management Authority (NDMA), issued on April 14, 2020, I, as Chairperson, National Executive Committee(NEC), have issued directions to all the Ministries/Departments of Government of India, State/Union Territory Governments and Authorities, that the lockdown measures stipulated in the Consolidated Guidelines of MHA, for containment of COVID-19 pandemic in the country, will continue to remain in force upto May 3, 2020. A copy of the Order dated April 14, 2020, issued under the Disaster Management Act, 2005, is herewith enclosed.

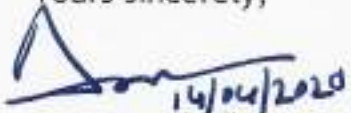
2. With the extension of the lockdown, all restrictions that have been imposed in various sectors, and on various activities, will continue to remain in force. These restrictions, which have been spelt out in the Consolidated Guidelines of MHA, must be enforced strictly, by all Ministries/Departments of the Government of India, and by State/Union Territory Governments and Authorities.

3. It is emphasized that as per the orders issued by MHA under the Disaster Management Act, 2005, the States/Union Territories cannot dilute restrictions imposed vide the aforesaid guidelines.

4. I would again urge you to strictly implement the directions issued by MHA, under the Disaster Management Act, 2005, as contained in the Consolidated Guidelines, without any dilution of the same.

With regards,

Encl : as above.

Yours sincerely,  
  
(Ajay Bhalla) 14/04/2020

Chief Secretaries of All States  
(As per standard list)

AJAY BHALLA, IAS



गृह सचिव  
Home Secretary  
भारत सरकार  
Government of India  
North Block,  
New Delhi

D.O.No. 40-3/2020-DM-I(A)

14<sup>th</sup> April, 2020

Dear *Administrators,*

Hon'ble Prime Minister, in his address to the Nation today, has announced that the lockdown in India, which has been imposed to contain the spread of COVID-19 pandemic, will have to be extended till May 3, 2020. In pursuance of this announcement, and on the directions of the National Disaster Management Authority (NDMA), issued on April 14, 2020, I, as Chairperson, National Executive Committee(NEC), have issued directions to all the Ministries/Departments of Government of India, State/Union Territory Governments and Authorities, that the lockdown measures stipulated in the Consolidated Guidelines of MHA, for containment of COVID-19 pandemic in the country, will continue to remain in force upto May 3, 2020. A copy of the Order dated April 14, 2020, issued under the Disaster Management Act, 2005, is herewith enclosed.


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3. It is emphasized that as per the orders issued by MHA under the Disaster Management Act, 2005, the States/Union Territories cannot dilute restrictions imposed vide the aforesaid guidelines.

4. I would again urge you to strictly implement the directions issued by MHA, under the Disaster Management Act, 2005, as contained in the Consolidated Guidelines, without any dilution of the same.

With regards,

Encl : as above.

Yours sincerely,  
  
(Ajay Bhalla) 14/04/20

**Administrators of All UTs**  
(As per standard list)

**No. 40-3/2020-DM-I(A)**  
**Government of India**  
**Ministry of Home Affairs**

North Block, New Delhi-110001

Dated 14th April, 2020

**ORDER**

Whereas under directions of the National Disaster Management Authority (NDMA)'s Order dated 24.03.2020, and in exercise of the powers, conferred under Section 10(2)(l) of the Disaster Management Act 2005, the undersigned, in his capacity as Chairperson, National Executive Committee, issued directions vide Order of even number dated 24.03.2020 to all Ministries/ Departments of Government of India, State/ Union Territory Governments and State/ Union Territory Authorities, with the guidelines to implement lockdown measures, to contain the spread of COVID-19, in all parts of the country for a period of 21 days with effect from 25.03.2020;

Whereas, the guidelines to implement lockdown measures were further modified on 25.03.2020, 27.03.2020, 02.04.2020, 03.04.2020 and 10.04.2020 and consolidated guidelines are placed on the website of Ministry of Home Affairs (MHA);

Whereas, NDMA after assessing the situation on COVID-19 epidemic is satisfied that strict social distancing measures need to be implemented for a further period so as to effectively contain the spread of COVID-19 in the country;

Whereas in exercise of the powers under section 6(2)(i) of the Disaster Management Act, 2005, NDMA has issued an Order number 1-137/2018-Mit-II (FTS-10548) dated 14.04.2020 (copy enclosed) directing the Chairperson, National Executive Committee that existing lockdown measures be continued to be implemented in all parts of the Country, upto 03.05.2020.

Whereas under directions of the aforesaid Order of NDMA, and in exercise of the powers, conferred under Section 10(2)(l) of the Disaster Management Act, 2005, the undersigned, in his capacity as Chairperson, National Executive Committee, hereby issues directions to all the all Ministries/ Departments of Government of India, State/Union Territory Governments and State/Union Territory Authorities that the Lockdown measures stipulated in aforesaid Consolidated Guidelines of MHA for containment of COVID-19 epidemic in the country, will continue to remain in force upto 03.05.2020 to contain the spread of COVID-19 in the country.

  
14/04/2020  
Union Home Secretary

**To:**

1. The Secretaries of Ministries/ Departments of Government of India
2. The Chief Secretaries/Administrators of States/Union Territories  
(As per list attached)

**Copy to:**

- i. All members of the National Executive Committee.
- ii. Member Secretary, National Disaster Management Authority.



**Government of India**  
**National Disaster Management Authority**  
"NDMA Bhawan",  
A-1, Safdarjung Enclave, New Delhi-110029.



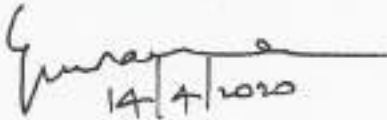
No.1-137/2018-Mit-II(FTS-10548)

Dated, the 13<sup>th</sup> April, 2020.  
14<sup>th</sup>

**ORDER**

On 24<sup>th</sup> March, 2020, the National Disaster Management Authority directed the Ministries/Departments of Government of India, State Governments and State Authorities to take measures for ensuring social distancing so as to prevent the spread of COVID 19 in the country. These measures are in force for a period of 21 days w.e.f. from 25<sup>th</sup> March 2020. Detailed guidelines and addenda were issued by National Executive Committee from time to time under section 10(2)(I) of the Disaster Management Act 2005.

2. Considering the fact that strict social distancing measures need to be implemented for a further period to contain the spread of COVID 19, the National Authority, in exercise of powers under Section 6 (2) (i) of the Disaster Management Act, 2005, directs the Ministries/Departments of Government of India, State Governments and State Authorities to continue the same measures for social distancing upto 3<sup>rd</sup> May, 2020. In this regard the guidelines/orders issued by NEC shall continue to be applicable throughout the country. The Authority further directs NEC to issue modifications in the guidelines as necessary, keeping in view the need to contain the spread of COVID 19.

  
14/4/2020

Member Secretary, NDMA

To

Union Home Secretary,  
North Block, New Delhi 110011

**No. 40-3/2020-DM-I(A)  
Government of India  
Ministry of Home Affairs**

North Block, New Delhi-110001  
Dated 1<sup>st</sup> May, 2020

**ORDER**

Whereas under directions of the National Disaster Management Authority (NDMA), guidelines on lockdown measures to contain the spread of COVID-19 in all parts of the country were issued vide Order of even number dated 24.03.2020 under the Disaster Management Act 2005 for a period of 21 days with effect from 25.03.2020. Under further directions of NDMA, the lockdown period was extended upto 03.05.2020 vide Order of even number dated 14.04.2020 and consolidated revised guidelines were issued vide Order of even number dated 15.04.2020;

Whereas in exercise of the powers under section 6(2)(i) of the Disaster Management Act, 2005, NDMA has issued an Order number 1-29/2020-PP dated 01.05.2020 directing the Chairperson, NEC that lockdown measures be continued to be implemented in all parts of the Country, for a further period of two weeks with effect from 04.05.2020;

Whereas under directions of the aforesaid Order of NDMA dated 01.05.2020, and in exercise of the powers, conferred under Section 10(2)(l) of the Disaster Management Act, 2005, the undersigned, in his capacity as Chairperson, NEC, hereby issues directions to all the Ministries/ Departments of Government of India, State/Union Territory Governments and State/Union Territory Authorities that the lockdown period is extended for a further period of two weeks with effect from 04.05.2020;

Whereas, in exercise of the powers, conferred under Section 10(2)(l) of the Disaster Management Act, 2005, the undersigned, in his capacity as Chairperson, NEC, hereby issues new guidelines on lockdown measures, as annexed, which will come into effect from 04.05.2020 for a period of two weeks, for strict implementation.

  
Union Home Secretary

**To:**

1. The Secretaries of Ministries/ Departments of Government of India
2. The Chief Secretaries/Administrators of States/Union Territories  
(As per list attached)

**Copy to:**

- i. All members of the National Executive Committee.
- ii. Member Secretary, National Disaster Management Authority.

**New Guidelines on the measures to be taken by Ministries/ Departments of Government of India, State/ UT Governments and State/ UT authorities for containment of COVID-19 in the country for the extended period of National Lockdown for a further period of two weeks with effect from 4<sup>th</sup> May, 2020.**

**[As per Ministry of Home Affairs (MHA) Order No. 40-3/2020-DM-I (A) dated 1<sup>st</sup> May, 2020]**

1. With the extension of the Lockdown period for a further period of two weeks with effect from 4<sup>th</sup> May 2020, new guidelines, as under, will be applicable based on the risk profiling of the districts into Red (Hotspot), Green and Orange zones.
2. **Identification of Red (Hotspots), Green and Orange Zones**
  - i. Based on their risk profile, the criteria for dividing the districts of the country into three zones, viz., **green, red and orange**, will be as follows:
    - a. **Green Zones:** Green Zones shall be defined as per the following criteria: districts with zero confirmed case till date; or, districts with no confirmed case in the last 21 days.
    - b. **Red Zones or Hotspot Districts:** Districts shall be defined as Red Zones or Hotspot districts, by Ministry of Health and Family Welfare (MoHFW), Government of India (GoI), taking into account total number of active cases, doubling rate of confirmed cases, extent of testing and surveillance feedback.
    - c. **Orange Zones:** Districts, which are neither defined as Red nor as Green Zones, shall be Orange Zones.
  - ii. MoHFW will share the list of Red Zone (Hotspot), Orange Zone and Green Zone districts and related information with State/ UTs on a weekly basis or earlier as required. States/ UTs, on review, may consider inclusion of **additional districts** as Red Zone (Hotspots) and Orange Zone districts depending on the extent of spread of COVID-19 infection. **However, States and UTs may not lower the classification of any district, that is included in the list of Red Zone (Hotspots) and Orange Zone districts by MoHFW.**
  - iii. Districts classified either as Red or Orange Zones, may have one or more Municipal Corporation (MC) areas. In such cases, States/ UTs and District administrations may make an assessment of the distribution of cases - within the jurisdiction of the MC(s); and the area falling outside the MC(s) boundaries. In such cases, the classification of zones shall be as follows:
    - a. In case the district is classified as a Red Zone, and, there is no confirmed case in the last 21 days in the area of the district outside the limits of the MC(s), this area may be labeled as an Orange Zone. However, due caution may be exercised in such areas so that they remain free from COVID-19 cases.
    - b. In case the district is classified as an Orange Zone, and, there is no confirmed case in the last 21 days in the area of the district outside the limits of the MC(s), this area may be labeled as a Green Zone. However, due caution may be exercised in such areas so that they remain free from COVID-19 cases.
    - c. In case in the area of the district outside the limits of the MC (s) does have one or more confirmed case(s) in the last 21 days, this part of the



district shall continue to be labeled as a Red or Orange Zone, as per the classification of the district.

- d. While assessing the classification of a zone, cases should be registered in the zone where the case originates, rather than where it is treated.

### 3. Identification of Containment Zones

- i. Containment Zones shall be demarcated within **Red (Hotspots) and Orange Zones** by States/ UTs and District Administrations based on the guidelines of MoHFW. The boundary of the Containment Zone shall be defined by District Administrations taking into account the following factors: mapping of cases and contacts; geographical dispersion of cases and contacts; area with well demarcated perimeter; and enforceability.
- ii. The boundary of the Containment Zone will be a residential colony, *mohalla*, municipal ward, municipal zone, Police Station area, towns etc., in case of urban areas; and, a village, cluster of villages, Gram Panchayats, group of Police Stations, blocks etc., in case of rural areas.

#### Protocol within Containment Zones:

- iii. Intensive surveillance mechanism as outlined in the Standard Operating Protocol (SOP) issued by MoHFW is to be established within the Containment Zone. **The local authority shall ensure 100% coverage of Aarogya Setu app among the residents of Containment Zones.**
- iv. In the Containment Zone, following activities shall be undertaken by the local authorities:
  - a. Contact Tracing.
  - b. Home or Institutional quarantining of individuals based on risk assessment by medical officers. This risk assessment will be based on symptoms, contact with confirmed cases, and travel history.
  - c. Testing of all cases with Severe Acute Respiratory Infection (SARI), Influenza Like Illness (ILI) and other symptoms specified by MOHFW.
  - d. House to house surveillance by special teams constituted for this purpose.
  - e. Clinical management of all cases as per protocol.
  - f. Counselling and educating people; and establishing effective communication strategies.
- v. In these **Containment Zones**, within Red (Hotspots) and Orange Zones, **where maximum precaution is required**, there shall be strict perimeter control to ensure that there is no movement of population in or out of these zones except for medical emergencies and for maintaining supply of essential goods and services. The guidelines issued in this regard by MoHFW will be strictly implemented by State/ UT Governments and the local district authorities.

### 4. The following activities will continue to remain prohibited across the country, irrespective of the Zone, for a period of two weeks with effect from 4<sup>th</sup> May, 2020:

- i. All domestic and international air travel of passengers, except for medical services, air ambulance and for security purposes or for purposes as permitted by MHA.
- ii. All passenger movement by trains, except for security purposes or for purposes as permitted by MHA.



- iii. Inter-State Buses for public transport, except as permitted by MHA.
  - iv. Metro rail services.
  - v. Inter-State movement of individuals except for medical reasons or for activities as permitted by MHA.
  - vi. All schools, colleges, educational/ training/ coaching institutions etc. However, online/ distance learning shall be permitted.
  - vii. Hospitality services other than those used for housing health/ police/ Government officials/ healthcare workers, stranded persons including tourists, and those used for quarantine facilities.
  - viii. All cinema halls, shopping malls, gymnasiums, sports complexes, swimming pools, entertainment parks, theatres, bars and auditoriums, assembly halls and similar places.
  - ix. All social/ political/ sports/ entertainment/ academic/ cultural/ religious functions/ other gatherings.
  - x. All religious places/ places of worship shall be closed for public. Religious congregations are strictly prohibited.
- 5. Measures for well being and safety of persons**
- i. The movement of individuals, for all non-essential activities, shall remain strictly prohibited between 7 pm to 7 am. Local authorities shall issue orders under appropriate provisions of law, such as prohibitory orders [curfew] under Section 144 of CrPC, for this purpose, and ensure strict compliance.
  - ii. In all zones, persons above 65 years of age, persons with co-morbidities, pregnant women, and children below the age of 10 years, shall stay at home, except for meeting essential requirements and for health purposes, as per the National Directives.
  - iii. In Containment Zones, Out-Patient Departments (OPDs) and Medical clinics shall not be permitted to operate. However, these may be permitted to operate in Red, Orange and Green Zones, with social distancing norms and other safety precautions.
- 6. Activities in Containment Zones**
- i. Strict perimeter control.
  - ii. Establishment of clear entry and exit points.
  - iii. Movement of persons only for maintaining supply of goods and services; and for medical emergencies.
  - iv. No unchecked influx of people and transport.
  - v. Recording of details of people moving in and out of perimeter.
- 7. Activities in Red Zones (Hotspots) [Outside Containment Zones]**
- i. Apart from the prohibited activities mentioned at Para 4, the following activities shall **not** be permitted:
    - a. Cycle rickshaws and auto rickshaws.
    - b. Taxis and cab aggregators.
    - c. Intra-district and inter-district plying of buses.
    - d. Barber shops, spas and salons.
  - ii. The following activities shall be permitted with **restrictions** as specified:
    - a. Movement of individuals and vehicles, only for permitted activities. Four wheeler vehicles will have maximum two passengers besides the vehicle driver; for two wheelers, pillion rider is not allowed.



- b. Industrial establishments in urban areas: Only Special Economic Zones (SEZs), Export Oriented Units (EOUs), industrial estates and industrial townships with access control; Manufacturing units of essential goods, including drugs, pharmaceuticals, medical devices, their raw material and intermediates; Production units, which require continuous process, and their supply chain; Manufacturing of IT hardware; Jute industry with staggered shifts and social distancing; and, Manufacturing units of packaging material are permitted.

All industrial activities are permitted in rural areas.

- c. Construction activities in urban areas: Only in situ construction (where workers are available on site and no workers are required to be brought in from outside) and construction of renewable energy projects are permitted.

All construction activities are permitted in rural areas.

- d. All malls, market complexes and markets shall remain closed in urban areas, i.e., areas within the limits of municipal corporations and municipalities. However, shops selling essential goods in markets and market complexes are permitted.

All standalone (single) shops, neighborhood (colony) shops and shops in residential complexes are permitted to remain open in urban areas, without any distinction of essential and non-essential.

All shops in rural areas, except in malls, are permitted to remain open, without any distinction of essential and non-essential.

Social distancing (2 Gaz ki doori) will be maintained in all cases.

- e. E-commerce activities will be permitted only in respect of essential goods.
- f. Private offices can operate with upto 33% strength as per requirement, with the remaining persons working from home.
- g. All Government offices shall function with officers of the level of Deputy Secretary and above to the extent of 100% strength. The remaining staff will attend upto 33% as per requirement. However, Defense and Security services, Health and Family Welfare, Police, Prisons, Home Guards, Civil Defence, Fire and Emergency Services, Disaster management and related services, NIC, Customs, FCI, NCC, NYK and Municipal services shall function without any restrictions; delivery of public services shall be ensured and necessary staff will be deployed for such purpose.

#### 8. **Activities in Orange Zones [Outside Containment Zones]**

- i. Apart from the prohibited activities mentioned at Para 4, the following activities shall **not** be permitted:
  - a. Inter-district and Intra-district plying of buses.
- ii. The following activities shall be permitted with **restrictions** as are specified:
  - a. Taxis and cab aggregators, with 1 driver and 2 passengers only.
  - b. Inter-district movement of individuals and vehicles, only for permitted activities. Four wheeler vehicles will have maximum two passengers besides the driver.

- 9. Activities in Green Zones**
- i. All activities are permitted in Green Zones, except those activities that are prohibited under Para 4.
  - ii. Buses can operate with upto 50% seating capacity.
  - iii. Bus depots can operate with upto 50% capacity.
- 10. All other activities will be permitted activities, which are not specifically prohibited/ permitted with restrictions in the various Zones, under these guidelines. However, States/ UTs, based on their assessment of the situation, and with the primary objective of keeping the spread of COVID-19 in check, may allow only select activities from out of the permitted activities, with such restrictions as felt necessary.**
- 11. All States/ UTs shall allow inter-state movement of goods/ cargo, including empty trucks.**
- 12. No State/ UT shall stop the movement of cargo for cross land-border trade under Treaties with neighbouring countries.**
- 13. No separate/ fresh permissions are required from authorities for activities already permitted to operate under the guidelines on Lockdown measures up to May 3, 2020. The following Standard Operating Protocols (SOPs) issued by MHA will continue to operate:**
- i. SOP on transit arrangement for foreign national(s) in India and release of quarantine persons, issued vide Order dated April 02, 2020.
  - ii. SOP on movement of stranded labour within States/ UTs, issued vide Order dated April 19, 2020.
  - iii. SOP on sign-on and sign-off of Indian seafarers, issued vide Order dated April 21, 2020.
  - iv. SOP on movement of stranded migrant workers, pilgrims, tourists, students and other persons, issued vide Order dated April 29, 2020.
  - v. SOP on movement of stranded migrant workers, pilgrims, tourists, students and other persons by train, issued vide Order dated May 01, 2020.
- 14. Strict enforcement of the lockdown guidelines**  
State/ UT Governments shall not dilute these guidelines issued under the Disaster Management Act, 2005, in any manner, and shall strictly enforce the same.
- 15. Instructions for enforcement of above lockdown measures:**
- i. All the district magistrates shall strictly enforce the above lockdown measures and the National Directives for COVID 19 Management, for public and work places, as specified in **Annexure I**.
  - ii. In order to implement these containment measures, the District Magistrate will deploy Executive Magistrates as Incident Commanders in the respective local jurisdictions. The Incident Commander will be responsible for the overall implementation of these measures in their respective jurisdictions. All other line department officials in the specified area will work under the directions of such Incident Commander. The Incident Commander will issue passes for enabling essential movements as explained.
  - iii. The Incident Commanders will in particular ensure that all efforts for mobilization of resources, workers and material for augmentation and expansion of hospital infrastructure shall continue without any hindrance.



**16. Penal provisions**

Any person violating these lockdown measures and the National Directives for COVID-19 Management will be liable to be proceeded against as per the provisions of Section 51 to 60 of the Disaster Management Act, 2005, besides legal action under Sec. 188 of the IPC, and other legal provisions as applicable. Extracts of these penal provisions are at **Annexure II**.

  
Union Home Secretary

**National Directives for COVID-19 Management**

**PUBLIC PLACES**

1. Wearing of face cover is compulsory in all public places.
2. All persons in charge of public places and transport shall ensure social distancing as per the guidelines issued by Ministry of Health and Family Welfare.
3. No organization/ manager of public place shall allow gathering of 5 or more persons.
4. Marriages related gatherings shall ensure social distancing, and the maximum number of guests allowed shall not be more than 50.
5. Funeral/ last rites related gatherings shall ensure social distancing, and the maximum numbers allowed shall not be more than 20.
6. Spitting in public places shall be punishable with fine, as may be prescribed by the State/ UT local authority.
7. Consumption of liquor, *paan*, *gutka*, tobacco etc. in public places is not allowed.
8. Shops selling liquor, *paan*, *gutka*, tobacco etc. will ensure minimum six feet distance (*2 gaz ki doon*) from each other, and also ensure that not more than 5 persons are present at one time at the shop.

**WORK PLACES**

9. Wearing of face cover is compulsory in all work places and adequate stock of such face covers shall be made available.
10. All persons in charge of work places shall ensure social distancing as per the guidelines issued by Ministry of Health and Family Welfare, both within the work places and in company transport.
11. Social distancing at work places shall be ensured through adequate gaps between shifts, staggering the lunch breaks of staff, etc.
12. Provision for thermal scanning, hand wash and sanitizer preferably with touch free mechanism will be made at all entry and exit points and common areas. In addition, sufficient quantities of handwash and sanitizer shall be made available in the work places.
13. Frequent sanitization of entire workplace, common facilities and all points which come into human contact e.g. door handles etc., shall be ensured, including between shifts.
14. Persons above 65 years of age, persons with co-morbidities, pregnant women and children below the age of 10 years shall stay at home, except for meeting essential requirements and for health purposes.
15. Use of *Arogya Setu* app shall be made mandatory for all employees, both private and public. It shall be the responsibility of the Head of the respective Organizations to ensure 100% coverage of this app among the employees.
16. Large physical meetings to be avoided.
17. Hospitals/ clinics in the nearby areas, which are authorized to treat COVID-19 patients, should be identified and list should be available at work place all the times. Employees showing any symptom of COVID-19 should be immediately sent for check up to such facilities. Quarantine areas should be earmarked for isolating employees showing symptoms till they are safely moved to the medical facilities.



18. Arrangements for transport facilities shall be ensured with social distancing, wherever personal/ public transport is not feasible.
  19. Intensive communication and training on good hygiene practices shall be taken up.
- 



**Offences and Penalties for Violation of Lockdown Measures**

**A. Section 51 to 60 of the Disaster Management Act, 2005**

**51. Punishment for obstruction, etc.—**Whoever, without reasonable cause

- (a) obstructs any officer or employee of the Central Government or the State Government, or a person authorised by the National Authority or State Authority or District Authority in the discharge of his functions under this Act; or
- (b) refuses to comply with any direction given by or on behalf of the Central Government or the State Government or the National Executive Committee or the State Executive Committee or the District Authority under this Act,

shall on conviction be punishable with imprisonment for a term which may extend to one year or with fine, or with both, and if such obstruction or refusal to comply with directions results in loss of lives or imminent danger thereof, shall on conviction be punishable with imprisonment for a term which may extend to two years.

**52. Punishment for false claim.—**Whoever knowingly makes a claim which he knows or has reason to believe to be false for obtaining any relief, assistance, repair, reconstruction or other benefits consequent to disaster from any officer of the Central Government, the State Government, the National Authority, the State Authority or the District Authority, shall, on conviction be punishable with imprisonment for a term which may extend to two years, and also with fine.

**53. Punishment for misappropriation of money or materials, etc.—**Whoever, being entrusted with any money or materials, or otherwise being, in custody of, or dominion over, any money or goods, meant for providing relief in any threatening disaster situation or disaster, misappropriates or appropriates for his own use or disposes of such money or materials or any part thereof or wilfully compels any other person so to do, shall on conviction be punishable with imprisonment for a term which may extend to two years, and also with fine.

**54. Punishment for false warning.—**Whoever makes or circulates a false alarm or warning as to disaster or its severity or magnitude, leading to panic, shall on conviction, be punishable with imprisonment which may extend to one year or with fine.

**55. Offences by Departments of the Government.—**(1) Where an offence under this Act has been committed by any Department of the Government, the head of the Department shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly unless he proves that the offence was committed without his knowledge or that he exercised all due diligence to prevent the commission of such offence.

(2) Notwithstanding anything contained in sub-section (1), where an offence under this Act has been committed by a Department of the Government and it is proved that the offence has been committed with the consent or connivance of, or is attributable to any neglect on the part of, any officer, other than the head of the Department, such officer shall be deemed to

be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

**56. Failure of officer in duty or his connivance at the contravention of the provisions of this Act.**—Any officer, on whom any duty has been imposed by or under this Act and who ceases or refuses to perform or withdraws himself from the duties of his office shall, unless he has obtained the express written permission of his official superior or has other lawful excuse for so doing, be punishable with imprisonment for a term which may extend to one year or with fine.

**57. Penalty for contravention of any order regarding requisitioning.**—If any person contravenes any order made under section 65, he shall be punishable with imprisonment for a term which may extend to one year or with fine or with both.

**58. Offence by companies.**—(1) Where an offence under this Act has been committed by a company or body corporate, every person who at the time the offence was committed, was in charge of, and was responsible to, the company, for the conduct of the business of the company, as well as the company, shall be deemed to be guilty of the contravention and shall be liable to be proceeded against and punished accordingly:

Provided that nothing in this sub-section shall render any such person liable to any punishment provided in this Act, if he proves that the offence was committed without his knowledge or that he exercised due diligence to prevent the commission of such offence.

(2) Notwithstanding anything contained in sub-section (1), where an offence under this Act has been committed by a company, and it is proved that the offence was committed with the consent or connivance of or is attributable to any neglect on the part of any director, manager, secretary or other officer of the company, such director, manager, secretary or other officer shall also, be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

*Explanation.*—For the purpose of this section—

- i. "company" means any body corporate and includes a firm or other association of individuals; and
- ii. "director", in relation to a firm, means a partner in the firm.

**59. Previous sanction for prosecution.**—No prosecution for offences punishable under sections 55 and 56 shall be instituted except with the previous sanction of the Central Government or the State Government, as the case may be, or of any officer authorised in this behalf, by general or special order, by such Government.

**60. Cognizance of offences.**—No court shall take cognizance of an offence under this Act except on a complaint made by—

- (a) the National Authority, the State Authority, the Central Government, the State Government, the District Authority or any other authority or officer authorised in this behalf by that Authority or Government, as the case may be; or
- (b) any person who has given notice of not less than thirty days in the manner prescribed, of the alleged offence and his intention to make a complaint to the National Authority, the State Authority, the Central Government, the State Government, the District Authority or any other authority or officer authorised as aforesaid.

**B. Section 188 in the Indian Penal Code, 1860**

**188.** Disobedience to order duly promulgated by public servant.—Whoever, knowing that, by an order promulgated by a public servant lawfully empowered to promulgate such order, he is directed to abstain from a certain act, or to take certain order with certain property in his possession or under his management, disobeys such direction, shall, if such disobedience causes or tends to cause obstruction, annoyance or injury, or risk of obstruction, annoyance or injury, to any person lawfully employed, be punished with simple imprisonment for a term which may extend to one month or with fine which may extend to two hundred rupees, or with both; and if such disobedience causes or trends to cause danger to human life, health or safety, or causes or tends to cause a riot or affray, shall be punished with imprisonment of either description for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both.

*Explanation.*—It is not necessary that the offender should intend to produce harm, or contemplate his disobedience as likely to produce harm. It is sufficient that he knows of the order which he disobeys, and that his disobedience produces, or is likely to produce, harm.

*Illustration*

An order is promulgated by a public servant lawfully empowered to promulgate such order, directing that a religious procession shall not pass down a certain street. A knowingly disobeys the order, and thereby causes danger of riot. A has committed the offence defined in this section.

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बिहार सरकार  
गृह विभाग  
आदेश

संख्या-जी/आपदा-06-02/2020-298/अ.मु.स.को. पटना, दिनांक 3 मई 2020

गृह मंत्रालय, भारत सरकार के आदेश संख्या-40-3/2020-DM-I(A) दिनांक 1 मई 2020 के द्वारा कोविड-19 वायरस का प्रसार रोकने हेतु राष्ट्रव्यापी लॉकडाउन के संबंध में नये आदेश निर्गत किये गये हैं। बिहार राज्य के नये-नये क्षेत्रों में कोरोना वायरस के हो रहे लगातार प्रसार तथा आगामी कुछ दिनों में अन्य राज्यों से प्रवासी मजदूरों तथा छात्रों के बड़ी संख्या में आगमन की स्थिति को देखते हुए आवश्यक हो गया है कि बिहार में लॉकडाउन को अपेक्षाकृत अधिक कड़ाई से लागू किया जाय।

2. भारत सरकार के उपर्युक्त आदेश के साथ संलग्न गाइडलाइन की कंडिका-10 में निम्नलिखित प्रावधान किया गया है :-

"All other activities will be permitted activities, which are not specifically prohibited/permitted with restrictions in the various Zones, under these guidelines. However, States/UTs, based on their assessment of the situation, and with the primary objective of keeping the spread of COVID-19 in check, may allow only select activities from out of the permitted activities, with such restrictions as felt necessary."

3. उक्त परिपेक्ष्य में बिहार राज्य में कोविड-19 वायरस के प्रसार को रोकने हेतु निम्नलिखित आदेश दिए जाते हैं :-

(क) सम्पूर्ण बिहार राज्य में दो ही प्रकार के जोन होंगे। प्रथम, रेड जोन के जिले जो भारत सरकार के मापदण्डों के अंतर्गत समय-समय पर रेड जोन के रूप में अधिसूचित किए जाएंगे; तथा द्वितीय राज्य के सभी शेष जिले जो ऑरेंज जोन माने जाएंगे।

(ख) रेड जोन में भारत सरकार के द्वारा निर्गत सभी आदेश यथावत् लागू रहेंगे, परन्तु भारत सरकार की गाइडलाइन की कंडिका-7(ii) d के अंतर्गत दुकानें खोलने का जो आदेश है वह केवल आवश्यक वस्तुओं की बिक्री के लिए दुकानें खोलने हेतु अनुमान्य होगा। आवश्यक वस्तुओं से भिन्न वस्तुओं के संबंध में जिला पदाधिकारी अपने जिले की स्थिति एवं आवश्यकता को देखते हुए अपने स्तर से निर्णय लेकर आदेश निर्गत करेंगे।

(ग) राज्य के ऑरेंज जोन अर्थात् रेड जोन से भिन्न सभी शेष क्षेत्रों में भारत सरकार के द्वारा अनुमान्य निम्नलिखित गतिविधियाँ जारी रहेंगी :-


- (i) सभी प्रकार के वस्तुओं के लिए ई-कॉमर्स।
- (ii) सभी प्रकार के निर्माण कार्य।
- (iii) सभी प्रकार के उद्योगों का संचालन।
- (iv) बाल काटने की दुकानें, स्पा और सैलून।

उपरोक्त के अतिरिक्त ऑरेंज जोन के लिए भी वही आदेश होगा जो रेड जोन के लिए है।

(घ) उपरोक्त कंडिका-(क), (ख) एवं (ग) के साथ गृह मंत्रालय के आदेश संख्या-40-3/2020-DM-I(A) दिनांक 1 मई 2020 की सभी कंडिकाएँ सम्पूर्ण राज्य में यथावत् लागू रहेंगी।

4. निदेश दिया जाता है कि उपरोक्त शर्तों के साथ गृह मंत्रालय के आदेश संख्या-40-3/2020-DM-I(A) दिनांक 1 मई 2020 (छायाप्रति संलग्न) का कड़ाई से पालन किया जाय।

अनु० - यथापरि ।

  
3.5.2020  
(आमिर सुबहानी)  
अपर मुख्य सचिव

ज्ञापांक-जी/आपदा-06-02/2020-298/अ.मु.स.को. पटना, दिनांक 3 मई 2020  
प्रतिलिपि : सभी विभाग/सभी विभागाध्यक्ष/सभी प्रमंडलीय आयुक्त/सभी जिला पदाधिकारी  
को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित ।

(AM)

(आमिर सुबहानी)

अपर मुख्य सचिव

ज्ञापांक-जी/आपदा-06-02/2020-298/अ.मु.स.को. पटना, दिनांक 3 मई 2020  
प्रतिलिपि : मुख्य सचिव/विकास आयुक्त/पुलिस महानिदेशक/माननीय मुख्यमंत्री के प्रधान  
सचिव/माननीय मुख्यमंत्री के सचिव (श्री अनुपम कुमार)/माननीय मुख्यमंत्री के सचिव  
(श्री मनीष कुमार वर्मा), बिहार, पटना को सूचनार्थ प्रेषित ।

(AM)

(आमिर सुबहानी)

अपर मुख्य सचिव

ज्ञापांक-जी/आपदा-06-02/2020-298/अ.मु.स.को. पटना, दिनांक 3 मई 2020  
प्रतिलिपि : सचिव, गृह मंत्रालय, भारत सरकार, नई दिल्ली को सूचनार्थ प्रेषित ।

(AM)

(आमिर सुबहानी)

अपर मुख्य सचिव 3.5.2020

बिहार सरकार  
गृह विभाग  
आदेश

संख्या-जी/आपदा-06-02/2020- 321/अ.मु.स.को. पटना, दिनांक 31 मई 2020

गृह मंत्रालय, भारत सरकार के द्वारा Covid-19 का प्रसार रोकने हेतु आदेश संख्या 40-3/2020-DM-I (A) दिनांक 30 मई 2020 के माध्यम से दिशा-निर्देश निर्गत करते हुए Containment Zone में लॉकडाउन की अवधि को दिनांक 30.06.2020 तक विस्तारित किया गया है तथा कतिपय अन्य निदेश भी दिये गए हैं।

2. सम्यक विचारोपरांत राज्य सरकार ने निर्णय लिया है कि गृह मंत्रालय का उपर्युक्त आदेश एवं उसके साथ संलग्न दिशा-निर्देशों को बिहार राज्य में यथावत लागू एवं अनुपालित किया जाएगा।

3. अतः राज्य सरकार के सभी विभागों एवं क्षेत्रीय प्रशासन के सभी अधिकारियों को निदेश दिया जाता है कि गृह मंत्रालय के उपर्युक्त आदेश तथा उसके साथ संलग्न दिशा-निर्देशों का कड़ाई से अनुपालन कराना सुनिश्चित करेंगे।



(आमिर सुबहानी)

अपर मुख्य सचिव

ज्ञापांक-जी/आपदा-06-02/2020- 321/अ.मु.स.को. पटना, दिनांक 31 मई 2020

प्रतिलिपि : सभी विभाग/सभी विभागाध्यक्ष/सभी प्रमंडलीय आयुक्त/सभी जिला पदाधिकारी को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।



(आमिर सुबहानी)

अपर मुख्य सचिव

ज्ञापांक-जी/आपदा-06-02/2020- 321/अ.मु.स.को. पटना, दिनांक 31 मई 2020

प्रतिलिपि : मुख्य सचिव/विकास आयुक्त/पुलिस महानिदेशक/माननीय मुख्यमंत्री के प्रधान सचिव/माननीय मुख्यमंत्री के सचिव (श्री अनुपम कुमार)/माननीय मुख्यमंत्री के सचिव (श्री मनीष कुमार वर्मा), बिहार, पटना को सूचनार्थ प्रेषित।



(आमिर सुबहानी)

अपर मुख्य सचिव

ज्ञापांक-जी/आपदा-06-02/2020- 321/अ.मु.स.को. पटना, दिनांक 31 मई 2020

प्रतिलिपि : गृह सचिव, भारत सरकार, नई दिल्ली को सूचनार्थ प्रेषित।



(आमिर सुबहानी)

अपर मुख्य सचिव

**Home Department  
Government of Bihar**

**Date- 14.7.2020**

**ORDER**

Whereas, an order of MHA dated-29.06.2020 issued for containment of COVID-19, in the country, for a period upto 31.07.2020

And whereas, there is an alarming surge in COVID-19 positive cases in State of Bihar in last three weeks wherein positivity rate has also been considerably high.

And whereas, the Government has examined the matter in detail and is convinced that the requirement for a lockdown in following manner is inevitable and urgent to contain the further spread of the COVID-19 within the State.

And Whereas, vide letter no-DO No-40-3/2020-DM-I (A) dated-29.06.2020 of the Home Secretary Govt. of India, States, based on their assessment of the situation, may prohibit certain activities in areas outside containment zones, or impose such restrictions as deemed necessary.

Now, therefore, in exercise of the powers, conferred vide the instructions issued by the Ministry of Home Affairs, Govt. of India, the undersigned hereby directs that the guidelines, as follows, will remain in force in State HQ, District HQ, Sub Divisional HQ, Block HQ and all Municipal areas in the state of Bihar, for a period of 16 days with effect from 16.07.2020.

- 1- Offices of the Government of India, its Autonomous/Subordinate Offices and Public Corporation shall remain closed.

***Exceptions:***

Defence, central armed police forces, treasury, public utilities (including petroleum, CNG, LPG, PNG), disaster management, power generation and transmission units, post offices, National informatics Centre, Early Warning Agencies

- 2- Offices of the State Government, its Autonomous Bodies, Corporation, etc. shall remain closed.

***Exceptions:***

- a. Police, home guards, civil defense, fire and emergency services, disaster management, Elections and Prisons.
- b. District administration and Treasury along with IT services/Video Conferencing support from BELTRON.

- c. Electricity, water supply, sanitation, Health, Food and Civil Supplies, Water Resources, Agriculture, Animal Husbandry.
- d. Municipal bodies
- e. Forest offices- Staff and workers required to operate and maintain zoo, nurseries, parks, plantation, firefighting in forests, wildlife rescue including handling human- wildlife conflicts, watering plantations, patrolling and protection of sanctuaries including tiger reserves, operation of pollution monitoring stations and the corresponding field and headquarter offices.
- f. Offices of Social Welfare - Staff and workers required (i) to operate and maintain child care institutions under Juvenile Justice Act, old age homes, homes for women, destitute and persons with disability, (ii) to pay food security allowances under National Security Act (iii) to pay social security pensions and the corresponding field and headquarter offices.

The above offices (Sl. No 1 & 2) should work with minimum number of employees. All other government offices may work with not more than 33% of working strength in case the Head of the Office, considering the essential nature of government work decides so under intimation to the concerned District Magistrate. All other offices may continue to work-from-home only.

*Note :-* Offices related to judicial work will be run as per the guidelines issued by the Administration of Patna High Court.

3- Hospitals and all related medical establishments, including their manufacturing and distribution units, both in public and private sector, such as dispensaries, chemist and medical equipment shops, laboratories, clinics, nursing homes, ambulance etc. will continue to remain functional. The transportation for all medical personnel nurses, Para-medical staff, other hospital support services be permitted. This provision shall apply to veterinary services and establishments also.


4- Commercial and private establishments shall be closed down.

**Exceptions:**

- a. Shops, including ration shops (under PDS), dealing with food, groceries, fruits and vegetables, dairy and milk booths, meat and fish, animal fodder, agricultural inputs. However, authorities will encourage and facilitate home delivery to minimize the movement of individuals outside their homes.
- b. Banks, insurance offices, and ATM which will include all bank related subsidiaries offices like Cash Management, IT services etc.
- c. Print and electronic media


- d. Telecommunications, internet services, broadcasting and cable services. IT and IT enabled Services only (for essential services) and as far as possible to work from home.
  - e. E-commerce (All kind of goods).
  - f. Petrol pumps. LPG petroleum and gas retail and storage outlets.
  - g. Power generation, transmission and distribution units and services.
  - h. Capital and debt market services and notified by the Securities and Exchange Board of India
  - i. Cold storage and warehousing services.
  - j. Private security services
  - k. Hospitality services including Hotels/Motels/Lodges. Restaurants/ Dhaba/ Eateries will be allowed to open with home delivery/take away services only.
  - l. Repair and maintenance activities- garage, mobile repair, shops related to repair and maintenance parts etc. to be allowed by the district administration.  
All other establishments may work-from-home only.
- 5- Industrial Establishments will be allowed to open with strict implementation of necessary precautions against COVID-19 virus, as well as social distancing measures, as advised by Health Department from time to time. However, such establishment will work in-situ in Urban areas.
- 6- All Transport services will be suspended-
- Exceptions:**
- a. As per the guidelines issued by Ministry of Civil Aviation and Ministry of Railways, Air and Rail transport will remain functional.
  - b. Taxies, auto rickshaws etc will be permitted across Bihar.
  - c. Private Vehicles will be allowed across Bihar for permitted activities mentioned in this order.
  - d. Transportation of goods will be allowed without any hinderance including loading and unloading at the warehouses.
  - e. All Government vehicles, and private vehicles carrying Government Office staffs will be allowed to commute on their office I-cards.
  - f. All essential service providers will be allowed to commute only from home to workplace.
- 7- All construction related activities will be allowed along with the functioning of construction related shops.
- 8- All agriculture related activities will be allowed along with the functioning of agriculture related shops.

- 9- All educational, training, research, coaching institution etc. shall remain closed. Online/distance learning shall continue to be permitted and shall be encouraged.
- 10- All places of worship shall be closed for public. No religious congregation will be permitted, without any exception.
- 11- All social/political/sports/entertainment/academic/cultural/religious functions/gathering and opening of parks shall be barred. Sports complexes and stadium will be permitted to open, however spectators will not be allowed.
- 12- The National Directives for COVID-19 Management-Annexure 1 of Order no-40-3/2020-DM-I(A), Dated-29.06.2020 of Ministry of Home Affairs, Govt. of India shall be applicable
- 13- The above containment measures will remain in force for a period of 16 days with effect from 16.07.2020 (Thursday) till 31.7.2020 (Friday).
- 14- The orders of MHA regarding containment zones will continue to be effective.
- 15- This order shall supersede all orders issued by concerned District Magistrates in their respective area of jurisdiction regarding the lockdown with respect to containment of COVID-19.
- 16- The District Magistrates can not dilute restriction imposed vide the aforesaid guidelines but, based on their assessment of the situation, may prohibit certain activities in areas outside containment zones, or impose such restriction as deemed necessary.

  
 14/7/2020  
 Special Secretary to the Govt.

बिहार सरकार  
 गृह विभाग (विशेष शाखा)  
 सरदार पटेल भवन, नेहरू पथ, पटना-800023

ज्ञापांक:-जी/आपदा-06-06/2020-58(विशेषको) पटना,दिनांक-14 जुलाई, 2020  
 प्रतिलिपि:- 1. सभी अपर मुख्य सचिव/प्रधान सचिव/सचिव/सभी विभागाध्यक्ष/ पुलिस महानिदेशक, बिहार/सभी प्रमंडलीय आयुक्त, बिहार/मुख्य सचिव, बिहार के आप्त सचिव को सूचनार्थ प्रेषित।  
 2. सभी जिला पदाधिकारी/वरीय पुलिस अधीक्षक/ पुलिस अधीक्षक, बिहार को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

  
 14/7/2020  
 सरकार के विशेष सचिव।

69

13<sup>th</sup> February, 2021

**Government of India  
Ministry of Health & Family Welfare**

**SOP on preventive measures to contain spread of COVID-19 in offices**

**1. Background**

Offices and other workplaces are relatively close settings, with shared spaces like workstations, corridors, elevators & stairs, parking places, cafeteria/canteens, meeting rooms and conference halls etc. and COVID-19 infection can spread relatively fast among officials, staffs and visitors.

There is a need to prevent spread of infection and to respond in a timely and effective manner in case suspect case of COVID-19 is detected in these settings, so as to limit the spread of infection.

**2. Scope**

This document outlines the preventive and response measures to be observed to contain the spread of COVID-19 in office settings. The document is divided into the following sub-sections

- i. Generic preventive measures to be followed at all times
- ii. Measures specific to offices
- iii. Measures to be taken on occurrence of case(s)
- iv. Disinfection procedures to be implemented in case of occurrence of suspect/confirmed case.

**Offices in containment zones shall remain closed except for medical & essential services. Only those outside containment zones will be allowed to open up.**

**3. Generic preventive measures**

The generic preventive measures include simple public health measures that are to be followed to reduce the risk of infection with COVID-19. These measures need to be observed by all (employees and visitors) at all times. These include:

- i. Individuals must maintain a minimum distance of 6 feet (*2 gaj ki doori*) in common places as far as feasible.
- ii. Use of face covers/masks at all times. They must be worn properly to cover nose and mouth. Touching the front portion of mask/face covers to be avoided.
- iii. Practice frequent hand washing with soap (for at least 40-60 seconds) even when hands are not visibly dirty. Use of alcohol-based hand sanitizers (for at least 20 seconds) can be made wherever feasible.



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- iv. Respiratory etiquettes to be strictly followed. This involves strict practice of covering one's mouth and nose while coughing/sneezing with a tissue/handkerchief/flexed elbow and disposing off used tissues properly.
  - v. Self-monitoring of health by all and reporting any illness at the earliest to the immediate supervisory officer.
  - vi. Spitting shall be strictly prohibited.
  - vii. Installation & use of Aarogya Setu App by all employees.

#### 4. Specific preventive measures for offices:

- i. Entrance to have mandatory hand hygiene (sanitizer dispenser) and thermal screening provisions.
- ii. Only asymptomatic staff/visitors shall be allowed entry.
- iii. Any officer and staff residing in containment zone should inform the same to supervisory officer and not attend the office till containment zone is denotified. Such staff should be permitted to work from home.
- iv. Drivers shall maintain physical distancing at all times particularly within rooms/ spaces designated for drivers. They shall follow required do's and don'ts related to COVID-19. It shall be ensured by the service providers/ officers/ staff that drivers residing in containment zones shall not be allowed to drive vehicles.
- v. There shall be provision for disinfection at-least twice a day of the interior of the vehicle using 1% sodium hypochlorite solution/spray. A proper disinfection of frequently touched surfaces i.e. steering, door handles, keys, etc. should be taken up.
- vi. Advise all employees who are at higher risk i.e. older employees, pregnant employees and employees who have underlying medical conditions, to take extra precautions. They should preferably not be exposed to any front-line work requiring direct contact with the public.
- vii. All officers and staff / visitors to be allowed entry only if using face cover/masks. The face cover/mask has to be worn at all times inside the office premises.
- viii. Visitors with proper permission of the officer who they want to meet, should be allowed after being properly screened.
- ix. Meetings, as far as feasible, should be done through video conferencing.
- x. Posters/standees/AV media on preventive measures about COVID-19 to be displayed prominently.
- xi. Proper crowd management in the parking lots and outside the premises – duly following physical distancing norms be ensured.
- xii. Valet parking, if available, shall be operational with operating staff wearing face covers/ masks and gloves as appropriate. A proper disinfection of steering, door handles, keys, etc. of vehicles should be taken up.
- xiii. Any shops, stalls, cafeteria/canteen etc., outside and within the office premises shall follow physical distancing norms at all times.

- xiv. Specific markings may be made with sufficient distance to manage the queue and ensure physical distancing in the premises.
- xv. Proper cleaning and frequent sanitization (at-least twice a day) of the workplace, particularly of the frequently touched surfaces must be ensured.
- xvi. Ensure regular supply of hand sanitizers, soap and running water in the washrooms.
- xvii. Number of people in the elevators shall be restricted, duly maintaining physical distancing norms for which purpose proper marking be made on the floor of the elevators.
- xviii. For air-conditioning/ventilation, the guidelines of CPWD shall be followed which mentions that the temperature setting of all air conditioning devices should be in the range of 24-30° C, relative humidity should be in the range of 40- 70%, intake of fresh air should be as much as possible and cross ventilation should be adequate.
- xix. Large physical gatherings continue to remain prohibited.
- xx. Effective and frequent sanitation within the premises shall be maintained with particular focus on lavatories, drinking and hand washing stations/areas.
- xxi. Cleaning and regular disinfection (using 1% sodium hypochlorite) of frequently touched surfaces (doorknobs, elevator buttons, handrails, benches, washroom fixtures, etc.) shall be done in office premises and in common areas at-least twice a day.
- xxii. Proper disposal of face covers / masks / gloves left over by visitors and/or employees in covered bins, shall be ensured.
- xxiii. In the cafeteria/canteen/dining halls:
  - a. Mandatory placement of hand sanitizers at the entrance to ensure personal hygiene.
  - b. Staff to take their temperature regularly and check for respiratory symptoms. They must see a doctor if feeling unwell or having flu-like symptoms.
  - c. Adequate crowd and queue management to be done to ensure physical distancing norms for which purpose markings be made on the floor of cafeteria/canteen/dining halls.
  - d. Staff / waiters to wear mask and hand gloves and take other required precautionary measures.
  - e. The seating arrangement to ensure a distance of at least 6 feet between patrons as far as feasible.
  - f. In the kitchen, the staff to follow physical distancing norms.

**5. Measures to be taken on occurrence of case(s):**

Despite taking the above measures, the occurrence of cases among the employees working in the office cannot be ruled out. The following measures will be taken in such circumstances, when one or few people(s) who share a room/close office space is/are found to be suffering from symptoms suggestive of COVID-19:

- a. Place the ill person in a room or area where they are isolated from others at the workplace. Provide a mask/face cover till such time he/she is examined by a doctor.

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- b. Immediately inform the nearest medical facility (hospital/clinic) or call the state or district helpline.
  - c. A risk assessment will be undertaken by the designated public health authority (district RRT/treating physician) and accordingly further advice shall be made regarding management of case, his/her contacts and need for disinfection.
  - d. The management of cases and contacts will be done as per the existing protocol (<https://www.mohfw.gov.in/pdf/FinalGuidanceonMangaementofCovidcasesversion2.pdf> and <https://ncdc.gov.in/showfile.php?lid=570>).

## 6. Management of premises

- i. If there are one or two cases reported, the disinfection procedure will be limited to places/areas occupied and visited by the patient in past 48 hours and work can be resumed after disinfection as per laid down protocol.
- ii. In case of larger number of cases are being reported at the workplace, the whole block or building, as the case may be, should be disinfected.

## ANNEXURE-2

### बिहार सरकार गृह विभाग (विशेष शाखा) आदेश

ज्ञापांक – जी/आपदा-06-02/2020- 40(वि0स0को0) पटना, दिनांक- 18 अप्रैल, 2021

दिनांक-18.04.2021 को आपदा प्रबंधन समूह (CMG) की बैठक में राज्य में कोविड-19 के संक्रमण के प्रसार की जिलावार समीक्षा के उपरान्त कोविड संक्रमण के मामलों को नियंत्रित करने एवं बेहतर स्वास्थ्य सुविधा उपलब्ध कराने के लिए दिनांक 15.05.2021 तक निम्नांकित अतिरिक्त प्रतिबंध/कार्रवाई तत्काल प्रभाव से लागू करने का निर्णय लिया गया:-

1. स्कूल, कॉलेज, कोचिंग संस्थान एवं अन्य शैक्षणिक संस्थान बंद रहेंगे। इस अवधि में राज्य सरकार के विद्यालय एवं विश्वविद्यालय द्वारा किसी भी तरह की परीक्षाएँ भी नहीं ली जाएंगी (बिहार लोक सेवा आयोग, बिहार कर्मचारी चयन आयोग, बिहार तकनीकी चयन आयोग, केन्द्रीय चयन पर्वद (सिपाही भर्ती), बिहार पुलिस अवर सेवा आयोग एवं बिहार विद्यालय परीक्षा समिति पर यह लागू नहीं होगा)। ऑनलाईन शैक्षणिक कार्यक्रम पूर्ववत् चलते रहेंगे।
2. पिछले आदेश के द्वारा दुकानों को 7.00 बजे संध्या तक बंद करने का आदेश दिया गया था, अब संशोधित करते हुए अपराह्न 6.00 बजे बंद करने का आदेश दिया जाता है। सभी सरकारी / निजी कार्यालय 5.00 बजे बंद हो जाएंगे।
3. गत वर्ष की तरह Containment Zones बनाए जाएंगे और Containment Zones में प्रावधानित प्रतिबंध लगाए जाएंगे और उनका सख्ती से अनुपालन किया जाएगा। इस संबंध में विस्तृत दिशा-निर्देश स्वास्थ्य विभाग के द्वारा निर्गत किया जाएगा।
4. सभी सिनेमा हॉल, शॉपिंग मॉल, क्लब, स्विमिंग पूल, स्टेडियम, जिम, पार्क एवं उद्यान पूरी तरह बंद रहेंगे।
5. राज्य में रात्रि 9 बजे से प्रातः 5 बजे तक Night curfew लागू रहेगा। बस/हवाई/रेल यात्रियों पर यह प्रतिबंध लागू नहीं रहेगा।
6. रेस्टोरेंट/ढाबा/भोजनालय में बैठकर खाना प्रतिबंधित रहेगा। होम डिलीवरी एवं Take away service का संचालन रात्रि 9 बजे तक किया जा सकेगा।
7. सार्वजनिक स्थलों पर किसी भी प्रकार के आयोजनों – सरकारी एवं निजी – पर रोक रहेगी। यह रोक दफन/दाह संस्कार कार्यक्रम तथा विवाह एवं श्राद्ध कार्यक्रमों पर लागू नहीं रहेगी। दफन/दाह संस्कार कार्यक्रम के लिए अधिकतम 25 तथा शादी एवं श्राद्ध कार्यक्रम के लिए अधिकतम सीमा 100 व्यक्तियों की निर्धारित रहेगी।
8. सभी प्रकार के धार्मिक स्थल दिनांक-15.05.2021 तक बन्द रहेंगे।
9. जिला प्रशासन बाजारों में Staggering करेगा ताकि भीड़ नहीं हो। इसके लिए आवश्यकतानुसार क्षेत्रवार/मुहल्लावार दुकानों को alternate days पर खोलने का आदेश दिया जा सकेगा। आवश्यकता पड़ने पर जिला प्रशासन भीड़-भाड़ की जगह वाली मंडियों पर भी प्रतिबंध लगाते हुए उन्हें खुले जगह में स्थानांतरित करने हेतु आवश्यक कार्रवाई कर सकता है।

10. जिला प्रशासन द्वारा आवश्यकतानुसार नगर क्षेत्रों एवं प्रखंड मुख्यालयों में दंड प्रक्रिया की धारा-144 का प्रयोग कर अनावश्यक भीड़ को नियंत्रित करने हेतु नियमानुसार कार्रवाई की जा सकती है।

उपर्युक्त आदेश का उल्लंघन करते हुए पाए जाने पर आपदा प्रबंधन अधिनियम, 2005 की धारा 51-60 एवं भा.द.वि. की धारा 188 के प्रावधानों के अंतर्गत दण्डात्मक कार्रवाई की जाएगी।

उपरोक्त प्रतिबंधों से आवश्यक सेवाओं (Essential Services) जैसे परिवहन, बैंकिंग, डाक, स्वास्थ्य एवं इससे संबंधित सेवाओं, फायर, पुलिस, एम्बुलेंस आदि पर छूट रहेगी। e-Commerce की गतिविधियाँ एवं उससे संबंधित प्रतिष्ठान भी इस प्रतिबंध से मुक्त होंगे। अंतर जिला एवं अंतरराज्यीय सार्वजनिक परिवहनों पर कोई रोक नहीं होगी। निर्माण कार्यों एवं औद्योगिक प्रतिष्ठानों पर भी किसी प्रकार का प्रतिबंध नहीं रहेगा।

इसके अतिरिक्त निम्नानुसार अग्रेत्तर कार्रवाई संबंधित विभाग एवं जिला प्रशासन के स्तर से अपेक्षित होगी :-

- (i) महत्वपूर्ण दवाएँ यथा Remdesivir, High antibiotics एवं अन्य दवाओं की उपलब्धता जिला प्रशासन के द्वारा सुनिश्चित की जाएगी।
- (ii) मरीजों की बढ़ती संख्या को देखते हुए प्राथमिक स्वास्थ्य केन्द्रों एवं अनुमंडल अस्पतालों तक गंभीर मरीजों के उपचार की व्यवस्था एवं treatment protocol निर्धारित किया जाएगा।
- (iii) AIIMS / PMCH / NMCH / IGIMS के चिकित्सकों द्वारा जिलों के डॉक्टरों का online orientation किया जाएगा।
- (iv) आवश्यकतानुसार एम्बुलेंस की संख्या किराये पर लेकर भी बढ़ाई जाएगी।
- (v) भविष्य में कोविड केयर सेंटर एवं हेल्थ सेंटर पर बेड की संख्या को बढ़ाना पड़ सकता है। इसलिए अतिरिक्त भवनों को भी इस हेतु चिह्नित कर लिया जाएगा।
- (vi) सभी आवश्यक दवाओं / मानव बल की उपलब्धता की कार्रवाई स्वास्थ्य विभाग सुनिश्चित करेगा।
- (vii) Home isolation में रह रहे लोगों की daily monitoring होगी। जरूरत पड़ने पर प्रतिदिन ऑक्सीजन / बुखार जाँचने एवं स्थिति गंभीर होने पर उन्हें कोविड केयर सेंटर / उच्चतर कोविड सेंटर लाने की व्यवस्था की जाएगी।
- (viii) सभी सरकारी चिकित्सा महाविद्यालय एवं अस्पताल में Liquid ऑक्सीजन प्लांट का अधिष्ठापन किया जाएगा।
- (ix) कोरोना के बढ़ते संक्रमण से लोगों के बचाव एवं सजग रहने तथा आवश्यक सावधानी बरतने हेतु miking के द्वारा व्यापक प्रचार-प्रसार किया जाएगा।

- (x) जो बाहर से मजदूर आ रहे हैं उनकी स्थिति की भी समीक्षा लगातार की जाए। आवश्यकतानुसार रोजगार उपलब्ध कराने हेतु औद्योगिक कलस्टर योजना एवं अन्य कल्याणकारी योजनाओं के अंतर्गत लाभ पहुँचाया जाएगा।

mw

(आमिर सुबहानी) 18.4.21

विकास आयुक्त, बिहार

ज्ञापांक - जी/आपदा-06-02/2020- 40(वि0स0को0) पटना, दिनांक- 18 अप्रैल, 2021  
प्रतिलिपि:- सभी विभागों के अपर मुख्य सचिव/प्रधान सचिव/सचिव/सभी विभागाध्यक्ष/सभी प्रमंडलीय आयुक्त/सभी क्षेत्रीय पुलिस महानिरीक्षक/उप-महानिरीक्षक/सभी जिला पदाधिकारी/सभी वरीय पुलिस अधीक्षक/पुलिस अधीक्षक को सूचनार्थ एवं आवश्यक कार्यवाई हेतु प्रेषित।

निर्वाचन

सरकार के विशेष सचिव

ज्ञापांक - जी/आपदा-06-02/2020- 40(वि0स0को0) पटना, दिनांक- 18 अप्रैल, 2021  
प्रतिलिपि:- मुख्य सचिव/विकास आयुक्त/पुलिस महानिदेशक/माननीय मुख्यमंत्री के प्रधान सचिव/मुख्य निर्वाचन पदाधिकारी, निर्वाचन विभाग, बिहार/माननीय मुख्यमंत्री के सचिव, बिहार, पटना को सूचनार्थ प्रेषित।

निर्वाचन

सरकार के विशेष सचिव

ज्ञापांक - जी/आपदा-06-02/2020- 40(वि0स0को0) पटना, दिनांक- 18 अप्रैल, 2021  
प्रतिलिपि:- गृह सचिव, भारत सरकार, नई दिल्ली को सूचनार्थ प्रेषित।

निर्वाचन

सरकार के विशेष सचिव

**बिहार सरकार**  
**गृह विभाग (विशेष शाखा)**  
**आदेश**

ज्ञापक - जी/आपदा-08-02/2020-2835

पटना, दिनांक- 04 मई, 2021

कोरोना वायरस जनित महामारी की दूसरी लहर से देश के अनेक राज्यों सहित बिहार में भी कोरोना पोजिटिव मामलों की संख्या में वृद्धि हुई है। उपर्युक्त स्थिति को ध्यान में रखते हुए राज्य सरकार द्वारा विभागीय आदेश संख्या-2633 दिनांक 09.04.2021 के माध्यम से संक्रमण के फैलाव को रोकने के लिए कुछ प्रतिबंध लगाने की घोषणा की गई। इसी क्रम में कोरोना के संक्रमण के प्रसार की जिलावार समीक्षा के उपरान्त संक्रमण के मामलों को नियंत्रित करने एवं बेहतर स्वास्थ्य सुविधा उपलब्ध कराने के लिए विभागीय आदेश संख्या-40 (वि0स0को0) दिनांक 18.04.2021 तथा विभागीय आदेश संख्या-44/वि0स0को0 दिनांक 28.04.2021 के माध्यम से अतिरिक्त प्रतिबंध लागू किए गए हैं, जो 15.05.2021 तक लागू हैं।

- गृह सचिव, भारत सरकार के पत्र सं0- 40-3/2020-DM-I(A), दिनांक- 29.04.2021 के माध्यम से स्वास्थ्य एवं परिवार कल्याण मंत्रालय, भारत सरकार द्वारा निर्गत Implementation Framework for Community containment/ large containment Areas के सम्बन्ध में आवश्यक दिशा निर्देश प्राप्त हुए हैं। पत्र में यह निदेश दिया गया है कि राज्य सरकार स्थिति के आकलन के आधार पर कोरोना की रोकथाम हेतु आपदा प्रबंधन अधिनियम के प्रासंगिक प्रावधानों के अंतर्गत निर्दिष्ट उपाय कर सकती है।
- राज्य में पोजिटिविटी की दर पिछले एक सप्ताह से निरंतर 10 प्रतिशत से अधिक बनी हुई है। उपरोक्त प्रतिबंधों के बावजूद भी संक्रमण की स्थिति गंभीर है।
- वर्तमान में वायुयान एवं ट्रेनों का परिचालन हो रहा है। उनसे संबद्ध यात्रियों के लिए सार्वजनिक परिवहनों को भी कुछ प्रतिबंधों के साथ चलाना बाध्यकारी होगा।
- इस तरह के प्रतिबंधों के लगने से आम जन, विशेषकर श्रमिक, गरीब तबके के परिवार प्रतिकूल रूप से प्रभावित होते हैं। इसलिए उन्हें भी राहत पहुँचाना उचित होगा।

उपर्युक्त सभी बिन्दुओं को ध्यान में रखते हुए दिनांक 04.05.2021 की आपदा प्रबंधन समूह की बैठक में दिनांक 05.05.2021 से 15.05.2021 तक निम्न प्रतिबंध लगाने एवं उससे संबंधित अग्रतर कार्रवाइयों को करने का निर्णय लिया गया:-

1. राज्य सरकार के सभी कार्यालय बंद रहेंगे।

**अपवाद :-** आवश्यक सेवाओं यथा - जिला प्रशासन, पुलिस, सिविल डिफेंस, विद्युत आपूर्ति, जलापूर्ति, स्वच्छता, फायरब्रिगेड, स्वास्थ्य, पशु स्वास्थ्य, आपदा प्रबंधन, कोषागार एवं उनसे सम्बन्धित वित्त विभाग के कार्यालय, दूरसंचार, डाक विभाग से

संबंधित कार्यालय यथावत कार्य करेंगे। न्यायिक प्रशासन के संबंध में माननीय उच्च न्यायालय के द्वारा लिया गया निर्णय लागू होगा।

2. दुकानें, वाणिज्यिक एवं अन्य निजी प्रतिष्ठान बंद रहेंगे।

**अपवाद :-**

- (क) बैंकिंग, बीमा, एवं ए.टी.एम. संचालन से संबंधित प्रतिष्ठान।
- (ख) औद्योगिक एवं विनिर्माण कार्य से संबंधित प्रतिष्ठान।
- (ग) सभी प्रकार के निर्माण कार्य ( Construction Works)।
- (घ) E-commerce एवं Courier Services से जुड़ी सारी गतिविधियाँ।
- (ङ) कृषि एवं इससे जुड़े कार्य।
- (च) प्रिंट और इलेक्ट्रॉनिक मीडिया।
- (छ) टेलीकम्यूनिकेशन, इंटरनेट सेवाएं, ब्रॉडकास्टिंग एवं केबल सेवाओं से संबंधित गतिविधियाँ।
- (ज) पेट्रोल पम्प, एल.पी.जी., पेट्रोलियम आदि से संबंधित खुदरा एवं भण्डारण प्रतिष्ठान।
- (झ) आवश्यक खाद्य सामग्री तथा फल एवं सब्जी/मांस-मछली/दूध/पी.डी.एस. की दुकानें -प्रातः 7.00 बजे से 11.00 बजे पूर्वाह्न तक।
- (ञ) कोल्ड स्टोरेज एवं वेयर हाउसिंग सेवाएँ।
- (ट) निजी सुरक्षा सेवाएँ।
- (ठ) ठेला पर फल एवं सब्जी की घूम-घूम कर बिक्री सहित।

अन्य सभी प्रतिष्ठान Work from Home के आधार पर कार्य कर सकते हैं।

3. अस्पताल एवं अन्य संबंधित स्वास्थ्य प्रतिष्ठान (पशु स्वास्थ्य सहित), उनके निर्माण एवं वितरण इकाईयां - सरकारी एवं निजी, दवा दुकानें, मेडिकल लैब, नर्सिंग होम, एम्बुलेंस सेवाओं से संबंधित प्रतिष्ठान यथावत कार्य करेंगे।
4. सार्वजनिक स्थानों एवं मार्गों पर अनावश्यक आवागमन (पैदल सहित) पूर्णतः प्रतिबंधित रहेगा।
5. सभी प्रकार के वाहनों का परिचालन बंद रहेगा।

**अपवाद :-**

- (क) पब्लिक ट्रांसपोर्ट में निर्धारित बैठने की क्षमता के 50 प्रतिशत के उपयोग की अनुमति रहेगी। केवल रेल, वायुयान अथवा अन्य लंबी दूरी यात्रा करने वालों तथा अनुमान्य सेवाओं से संबंधित व्यक्तियों को ही सार्वजनिक परिवहन के उपयोग की अनुमति होगी।
- (ख) स्वास्थ्य से जुड़ी गतिविधियों में संलग्न वाहन एवं स्वास्थ्य प्रयोजनार्थ प्रयुक्त निजी वाहन
- (ग) अनुमान्य कार्यों से संबंधित कार्यालयों के सरकारी वाहन।



- (घ) वैसे निजी वाहन जिन्हें जिला प्रशासन द्वारा किसी विशेष कार्य हेतु ई-पास निर्गत है।
- (ङ०) सभी प्रकार के माल वाहक वाहन।
- (च) वैसे निजी वाहन जिनमें हवाई-जहाज/ट्रेन के यात्री यात्रा कर रहे हो और उनके पास टिकट हो।
- (छ) कर्तव्य पर जाने हेतु सरकारी सेवकों एवं अन्य आवश्यक अनुमान्य सेवाओं के निजी वाहन।
- (ज) अंतर्राज्यीय मार्गों पर अन्य राज्यों को जाने वाले निजी वाहन
6. सभी स्कूल/कॉलेज/कोचिंग संस्थान/ट्रेनिंग एवं अन्य शैक्षणिक संस्थान बंद रहेंगे। इस अवधि में राज्य सरकार के विद्यालय एवं विश्वविद्यालय द्वारा किसी भी तरह की परीक्षाएँ भी नहीं ली जाएँगी।
7. रेस्टोरेंट एवं खाने की दुकानें बंद रहेंगी। इनका संचालन केवल होमडिलीवरी के लिए प्रातः 9 बजे से रात्रि 9 बजे तक अनुमान्य होगा। राष्ट्रीय राजमार्गों पर स्थित ढाबे take home के आधार पर कार्यरत रह सकते हैं।
8. सभी धार्मिक स्थल आमजनों के लिए बंद रहेंगे।
9. सभी प्रकार के सामाजिक/राजनीतिक/मनोरंजन/खेल-कूद/शैक्षणिक/सांस्कृतिक एवं धार्मिक आयोजन/समारोह प्रतिबंधित होंगे।
10. सभी सिनेमा हॉल, शॉपिंग मॉल, क्लब, स्विमिंग पूल, स्टेडियम, जिम, पार्क एवं उद्यान पूरी तरह बंद रहेंगे।
11. सार्वजनिक स्थलों पर किसी भी प्रकार के आयोजन - सरकारी एवं निजी - पर रोक रहेगी।
12. विवाह समारोह अधिकतम 50 व्यक्तियों की उपस्थिति के साथ आयोजित किए जा सकते हैं, किन्तु इनमें डी0जे0 एवं बारात जुलूस की इजाजत नहीं होगी। विवाह की पूर्व सूचना स्थानीय थाने को कम-से-कम 03 दिन पूर्व देनी होगी। अंतिम संस्कार/श्राद्ध कार्यक्रम के लिए 20 व्यक्तियों की अधिसीमा रहेगी।

इसके अतिरिक्त निम्नानुसार अग्रतर कार्रवाई संबंधित विभाग एवं जिला प्रशासन द्वारा की जाएगी :-

- (क) सभी जिलाधिकारी अपने-अपने जिलान्तर्गत चिन्हित स्थानों पर सामुदायिक किचन स्थापित करेंगे।

(ख) रोजगार के लिए ग्रामीण क्षेत्रों में मनरेगा के अन्तर्गत तथा शहरी क्षेत्रों में शहरी रोजगार योजना के अन्तर्गत किये जाने वाले कार्य अनुमान्य होंगे।

(ग) सभी राशन कार्ड धारकों को मई माह में राशन की प्राप्ति हेतु किसी राशि का भुगतान नहीं करना होगा। उक्त राशि का वहन राज्य सरकार द्वारा किया जाएगा।

सभी जिला पदाधिकारी इस आदेश के अनुपालन हेतु द० प्र० सं० की धारा 144 के अन्तर्गत निषेधाज्ञा निर्गत करेंगे।

उपरोक्त आदेशों का उल्लंघन करते हुए पाए जाने पर संबंधित के विरुद्ध आपदा प्रबंधन अधिनियम, 2005 की धारा 51-60 एवं भा.द.वि. की धारा 188 के प्रावधानों के अंतर्गत दण्डात्मक कार्रवाई की जाएगी।

Jh 4/5/21

मुख्य सचिव, बिहार

ज्ञापांक - जी/आपदा-06-02/2020-2835 पटना, दिनांक- 04 मई, 2021  
प्रतिलिपि:- सभी विभागों के अपर मुख्य सचिव/प्रधान सचिव/सचिव/सभी विभागाध्यक्ष/सभी प्रमंडलीय आयुक्त/सभी क्षेत्रीय पुलिस महानिरीक्षक/उप-महानिरीक्षक/सभी जिला पदाधिकारी/सभी वरीय पुलिस अधीक्षक/पुलिस अधीक्षक को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

बि.स.स.स.

सरकार के विशेष सचिव

ज्ञापांक - जी/आपदा-06-02/2020-2835 पटना, दिनांक- 04 मई, 2021  
प्रतिलिपि:- मुख्य सचिव/विकास आयुक्त/पुलिस महानिदेशक/माननीय मुख्यमंत्री के प्रधान सचिव/मुख्य निर्वाचन पदाधिकारी, निर्वाचन विभाग, बिहार/माननीय मुख्यमंत्री के सचिव, बिहार, पटना को सूचनार्थ प्रेषित।

बि.स.स.स.

सरकार के विशेष सचिव

ज्ञापांक - जी/आपदा-06-02/2020-2835 पटना, दिनांक- 04 मई, 2021  
प्रतिलिपि:- गृह सचिव, भारत सरकार, नई दिल्ली को सूचनार्थ प्रेषित।

बि.स.स.स.

सरकार के विशेष सचिव

**बिहार सरकार**  
**गृह विभाग (विशेष शाखा)**  
**आदेश**

ज्ञापक – जी/आपदा-08-02/2020- 44/वि0स0को0 पटना, दिनांक- 28 अप्रैल, 2021

कोरोना वायरस जनित महामारी की दूसरी लहर से देश के अनेक राज्य बुरी तरह से प्रभावित हुए हैं। बिहार में भी पिछले कुछ दिनों से कोरोना धीजिटिव मामलों की संख्या में अफत्याशित वृद्धि हुई है। उपर्युक्त स्थिति को ध्यान में रखते हुए राज्य सरकार द्वारा विभागीय आदेश संख्या-2633 दिनांक 09.04.2021 के माध्यम से संक्रमण के फैलाव को रोकने के लिए कुछ प्रतिबंध लगाने की घोषणा की गई है, जो 30.04.2021 तक लागू हैं।

2. पुनः राज्य में कोविड-19 के संक्रमण के प्रसार की जिलावार समीक्षा के उपरान्त कोविड राकनण के मामलों को नियंत्रित करने एवं बेहतर स्वास्थ्य सुविधा उपलब्ध कराने के लिए विभागीय आदेश संख्या 40 (वि0स0को0) दिनांक 18.04.2021 के माध्यम से अतिरिक्त प्रतिबंध लागू किए गए हैं, जो 15.05.2021 तक लागू हैं।

3. गृह सचिव, भारत सरकार के पत्र सं0- 40-3/2020-DM I(A), दिनांक- 26.04.2021 के माध्यम से स्वास्थ्य एवं परिवार कल्याण मंत्रालय, भारत सरकार द्वारा निम्न Implementation Framework for Community containment/ large containment Areas के सम्बन्ध में आवश्यक दिशा निर्देश प्राप्त हुए हैं। उक्त दिशा-निर्देश के अंतर्गत कंटेनमेंट क्षेत्र के डिहिकरण एवं प्रतिबंधों की सामान्य रूप रखा निरूपित की गई है।

4. उपर्युक्त वर्णित तथ्यों की पृष्ठभूमि में आज दिनांक 28.04.2021 को आपदा प्रबंधन समूह की बैठक में दिनांक 18.04.2021 के आदेश द्वारा लगाए गए प्रतिबंधों के अतिरिक्त निम्न प्रतिबंध तत्काल दिनांक 15.05.2021 तक लगाने का निर्णय लिया गया -

- दिनांक 29.04.2021 से सारी दुकानें शाम 6 बजे की बजाय 4 बजे अपठ बन्द होंगी।
- जिला प्रशासन बाजारों में staggering करेगा ताकि भीड़ नहीं हो। इसके लिए आवश्यकतानुसार क्षेत्रवार/ नंइल्लावार दुकानों को alternate days पर खोलने का आदेश दिया जा सकेगा। आवश्यकता पडने पर जिला प्रशासन भीड़ न्नाड की जगह वाली मंडियों पर भी प्रतिबन्ध लगाते हुए उन्हें खुले जगह में स्थानान्तरित करने हेतु आवश्यक कार्रवाई कर सकता है।
- रात्रि कर्फ्यू शाम 8 बजे से सुबह 6 बजे तक रहेगा।
- विवाह समारोह के लिए 50 व्यक्तियों की एवं अंतिम संस्कार के लिए 20 व्यक्तियों की अधिकता रहेगी। विवाह समारोह के लिए रात्रि कर्फ्यू रात्रि 10 बजे से प्रभावी होगी। विवाह समारोह में डीजे का उपयोग प्रतिबंधित रहेगा।

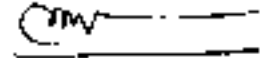
- इस अवधि के दौरान सभी सरकारी एवं गैर सरकारी कार्यालय 25 प्रतिशत उपस्थिति के साथ कार्य करेंगे ( आवश्यक सेवाओं से संबंधित कार्यालयों को छोड़कर )। सभी कर्मियों (सरकारी एवं गैर-सरकारी सेवकों) को घर से काम (Work from home) करने के लिए प्रेरित किया जाएगा। सभी सरकारी एवं गैर सरकारी कार्यालय 4 बजे अपठ बन्द हो जायेगी।
- दण्ड प्रकिया संहिता की धारा 144 के तारे में पूर्व में दिए गए निदेश का सख्ती से अनुपालन जिला पदाधिकारी करेंगे और उराका व्यापक प्रचार-प्रसार भी करायेंगे ;
- यह प्रतिबंध निम्न सेवाओं/गतिविधियों पर लागू नहीं होगा, परन्तु Corona से संबंधित Guidelines का अनुपालन सुनिश्चित किया जायेगा
  - सार्वजनिक परिवहन (50 प्रतिशत seating क्षमता के अधीन)
  - औद्योगिक प्रतिष्ठाग
  - निर्माण कार्य
  - E-commerce से जुड़ी सारी गतिविधियों
  - स्वास्थ्य प्रक्षेत्र से जुड़े प्रतिष्ठान एवं गतिविधियाँ
  - ठेला पर फल/सब्जी ली घूम-घूम कर बिक्री
  - कृषि एव इससे जुड़े कार्य
  - रेस्टोरेंट एवं खाने की दुकान पर रात्रि 9 बजे तक 'Take home अनुमान्य होगा।
- कंटेनमेंट जोन गठित करने के पूर्व में दिए गए राज्य सरकार के निदेश के क्रम में एच भारत सरकार द्वारा 25 अप्रैल, 2021 को दिए गए Advisory के अलाोक में जिला प्रशासन जिले के अंदर जरूरत के अनुरूप कंटेनमेंट जोन गठित करेंगे और उपयुक्त प्रतिबंधों के अतिरिक्त प्रेरिबंधा यथा सब्जी, फल, मांस, मछली, किराना एवं दवा ली दुकानों तथा अन्य आवश्यक सेवाओं को छोड़कर सभी दुकानों को बन्द करने आदि के लिए सक्षम होंगे।
- इसके अतिरिक्त निम्नानुसार अग्रतर कार्रवाई संबंधित विभाग एव जिला प्रशासन को करना होगा -
  - राज्य सरकार कोविड से मरे हुए सभी व्यक्तियों (इसमें कोविड टेस्ट में निगेटिव परन्तु कोविड के लक्षण वाले मरीज भी सम्मिलित होंगे), का अतिग संस्कार अपने खर्च पर करायेंगी। नगर विकास विभाग एवं ग्रामीण विकास विभाग इसके लिए क्रमशः नगर निकाय एवं प्रखण्ड विकास पदाधिकारी को अधिकृत कर आवश्यकतानुसार राशि आवंटित करेंगे।
  - Miking के माध्यम से प्रचार करते समय अन्य बातों के अलावा कोरोना संक्रमण की स्थानीय स्थिति को भी बताया जाए ताकि प्रचार का अच्छा प्रभाव पड़े।
  - तीन लाख सक्रिय कोविड मरीज मानते हुए सभी प्रकार की आध्यात्मिक संरचना यथा बेड, पाईपऑक्सीजन, वेंटीलेटर (Ventilator), ऑक्सीजन कंसंट्रेटर (Oxygen Concentrator) आदि की तैयारी की जाए।
  - इस क्रम में 3 लाख सक्रिय कोविड मरीज के लिए आवश्यक मानव बल तथा चिकित्सक (एलोपैथिक, आयुष, यूनानी, अंटेस्ट चिकित्सक सहित), लैब

टेक्नीशियन, नर्स, पारा मेडिकल स्टाफ एंड एनेस्थेसिस्ट के अस्थायी पदों का सृजन कर वाक-इन-इन्टरव्यू (Walk-in-Interview) के माध्यम से न्यूनतम एक वर्ष के लिए संविदा पर नियुक्ति की जाए। इन नियुक्ति निजी व्यक्तियों को संविदा कर्मियों की भौति एक साल के सरकारी अनुभव की अटिगानता भी दी जाए।

- सभी सौचानिक चिकित्साका एलांमैथिक, आयुष, डेंटिस्ट को भी काम पर उपर्युक्त आवश्यकता के अनुसार लगाया जाएगा।
- कोविड के लक्षण वाले रोगी (नले ही कांविड टेस्ट में निगेटिव हों), को भी अस्पताल में भर्ती कर उनका ईलाज किया जाए। स्वास्थ्य विभाग ने इस संबंध में जो आदेश जारी किया है उसका अनुपालन अच्छे से कराया जाए।
- सारे मेटीलेटर को घालू किया जाए। इसके लिए स्वास्थ्य विभाग एवं जिला पदाधिकारी अपने अपने स्तर से सभी आवश्यक कार्रवाई करेंगे। जिला पदाधिकारी को स्थानीय व्यवस्था के अंतर्गत आवश्यकतानुसार निजी क्षेत्र के सहयोग से गैटलेटरों को चलान हेतु प्राधिकृत किया जाए।
- जांच की सख्या बढ़ाई जाए और आर०टी०वी०सी०आर० टेस्ट हेतु और अधिक मशीन कय कर (मानत बल की भी व्यवस्था के साथ) इसे कार्यशील किया जाए।
- चुनव से लौटे (पश्चिम बंगाल सहित अन्य राज्यों से) पुलिस कर्मियों की कोविड जांच की जाए। इसमें यह ध्यान रखा जाए कि वे अन्य लोगों से मिलें नहीं जिससे को कोविड का संक्रमण नहीं फैले।
- रमडेसिविर एवं अन्य दवाएँ आवश्यकता पडने पर मरीजों को आसानी से एच एक निधोसिा प्रक्रिया के अंदर मिल जाए इसकी सुनिश्चित व्यवस्था स्वास्थ्य विभाग करे।
- बढ़ते संक्रमण को देखते हुए आवश्यकतानुसार एम्बुलेस किराए पर हर जिले में लिया जाए।
- सख्य मुख्यालय स्तर पर एवं जिला मुख्यालय स्तर पर कंटरल हेल्पलाइन को और संवेदनशील, सुदृढ़ एवं उत्तरदायी बनाया जाए और दूर सुनिश्चित किया जाए की आम लोगों की शिकायतों एवं सुझावों का शीघ्र निराकरण हो।
- स्वास्थ्य विभाग में ऐसी व्यवस्था की जाए कि सभी जिलों के जिला पदाधिकारियों से स्वास्थ्य संबंधी सभी प्रकलर के अहरण आंकड़े एच सुझाव हर 2 दिन पर विभाग को मिल जाए। इन आंकड़ों के आधार पर यदि आवश्यक हो तो विभाग समीक्षा कर आवश्यक निर्णय लेगा।
- निजी अस्पताल, जो केवल कोरोना मरीजों के इलाज में लगे हुए हैं उनकी समस्या के निराकरण के लिए स्स्थगत व्यवस्था स्वास्थ्य विभाग बना ले और इसके माध्यम से नियमित बैठक कर समस्याओं का निराकरण करे।
- गत वर्ष की तरह मुजफरपुर में कोरोना संक्रमण के लिए आंतोरिक्त अस्थायी अस्पताल का निर्माण कराया जाय।
- अस्पतालों में चिकित्सक एवं चिकित्सा कर्मी कोविड मरीजों के इलाज को देखें। चिकित्सक एवं चिकित्सा कर्मी की सुरक्षा के लिए गृह विभाग एवं जिला प्रशासन आवश्यक कार्रवाई करे।

राभी जिला पदाधिकारी इस आदेश के अनुपालन हेतु दृ० प्र० सं० की धारा 144 के अन्तर्गत निषेधाज्ञा निर्गत करेंगे।

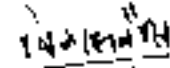
उपरोक्त आदेशों का सल्लंघन करने हुए पाए जाने पर संबंधित के विरुद्ध आमदा प्रबंधन अधिनियम, 2005 की धारा 51-60 एवं भा.द.वि. की धारा 188 के प्रावधानों के अन्तर्गत दण्डात्मक कार्रवाई की जाएगी।



25.4.21

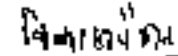
मुख्य सचिव, बिहार

ज्ञापक - जी/आपदा-08-02/2020- 44/वि०स०को० पटना, दिनांक- 28 अप्रैल, 2021  
प्रतिलिपि:- सभी विभागों के अपर मुख्य सचिव/प्रधान सचिव/सचिव/राभी विभागाध्यक्ष/सभी प्रमंडलीय आयुक्त/सभी संजेंट पुलिस नहानिरीक्षक/ उप-नहानिरीक्षक/सभी जिला पदाधिकारी/सभी वरीय पुलिस अधीक्षक/पुलिस अधीक्षक को सूचनार्थ एव आवश्यक कार्रवाई हेतु प्रेषित।



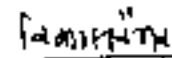
सरकार के विशेष सचिव

ज्ञापक - जी/आपदा-08-02/2020- 44/वि०स०को० पटना, दिनांक- 28 अप्रैल, 2021  
प्रतिलिपि:- मुख्य सचिव/विक'रा आयुक्त/पुलिस नहानिदेशक/माननीय मुख्यमंत्री के प्रधान सचिव/मुख्य निर्वाचन पदाधिकारी, निर्वाचन विभाग, बिहार/माननीय मुख्यमंत्री के सचिव, बिहार, पटना को सूचनार्थ प्रेषित।



सरकार के विशेष सचिव

ज्ञापक - जी/आपदा-08-02/2020- 44/वि०स०को० पटना, दिनांक- 28 अप्रैल, 2021  
प्रतिलिपि:- गृह सचिव, भारत सरकार, नई दिल्ली को सूचनार्थ प्रेषित।



सरकार के विशेष सचिव

ज्ञापांक - जी/आपदा-06-02/2020-2633

पटना, दिनांक 09 अप्रैल, 2021

दिनांक-09.04.2021 को आपदा प्रबंधन समूह (CMG) की बैठक में कोविड-19 के संक्रमण के प्रसार की समीक्षा के क्रम में बिहार राज्य में कोविड संक्रमण के मामलों में अप्रत्याशित वृद्धि को देखते हुए नियंत्रण हेतु विशेष अभियान चलाकर अनुपालन कराने का निर्णय लिया गया।

उपर्युक्त संबंध में एतद् द्वारा निम्न आदेश पारित किये जाते हैं:-

1. सभी स्कूल/कॉलेज/कोचिंग संस्थान 18 अप्रैल 2021 तक बंद रहेंगे। पूर्व निर्धारित परीक्षाएं घोषित कार्यक्रम के अनुसार कोविड प्रोटोकॉल का पालन करते हुए आयोजित की जाएंगी।

निम्नलिखित क्रमांक 02 से 12 पर अंकित निर्णयों को 30 अप्रैल, 2021 तक लागू किया जाएगा-

2. सभी दुकानों/प्रतिष्ठान संध्या 07 बजे तक ही खुलेंगे। उक्त रोक भोजनालय, ढाबा, रेस्टोरेंट, होटल पर लागू नहीं होगी।

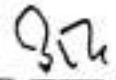
दुकानों/प्रतिष्ठानों का संचालन निम्नलिखित शर्तों के साथ किया जाएगा:-

- दुकानों/प्रतिष्ठानों में सभी के लिए मास्क पहनना अनिवार्य होगा।
  - दुकानों/प्रतिष्ठानों के काउंटर पर दुकानदार कर्मियों एवं आगंतुकों के उपयोग हेतु सैनिटाईजर की व्यवस्था अनिवार्य रूप से की जाएगी।
  - दुकान एवं प्रतिष्ठान परिसर में सोशल डिस्टेंसिंग मानकों (2 गज की दूरी) का अनुपालन किया जाएगा, जिसके लिए सफेद वृत्त चिन्हित किए जाएंगे।
3. रेस्टोरेंट/ढाबा/भोजनालय निर्धारित बैठने की क्षमता के 50 प्रतिशत का उपयोग करेंगे। होम डिलीवरी तथा टेक अवे सर्विस (Take away service) का संचालन अनुमान्य होगा।
4. सभी सिनेमा हॉल बैठने की निर्धारित क्षमता के 50 प्रतिशत का उपयोग करेंगे।
5. सभी पार्कों एवं उद्यानों में मास्क का उपयोग तथा कोविड बचाव के अनुकूल व्यवहार करना अनिवार्य होगा।
6. सभी धार्मिक स्थल आमजनों के लिए बंद रहेंगे।
7. सरकारी कार्यालयों में उप सचिव या समकक्ष तथा उनसे वरीय अधिकारी शत-प्रतिशत एवं उनसे कनीय अधीनस्थ अधिकारी/कर्मचारी प्रतिदिन बारी-बारी से 33 प्रतिशत उपस्थित रहेंगे। आवश्यक सेवाओं यथा-पुलिस, फायरब्रिगेड, स्वास्थ्य, आपदा प्रबंधन, दूरसंचार, डाक इत्यादि से संबंधित विभागों पर ये शर्तें लागू नहीं होंगी।

8. सरकारी कार्यालयों में सामान्य आगंतुकों के प्रवेश पर रोक रहेगी।
9. प्राईवेट कार्यालयों एवं संस्थाओं के व्यवसायिक/गैर व्यवसायिक कार्यालयों को 33 प्रतिशत कर्मियों के साथ खोलने की अनुमति होगी। औद्योगिक प्रतिष्ठानों पर यह बंधेज लागू नहीं होगा।
10. सार्वजनिक स्थलों पर किसी भी प्रकार के आयोजनों-सरकारी एवं निजी- पर रोक रहेगी।
11. अंतिम संस्कार के लिए 50 तथा श्राद्ध एवं विवाह के लिए 200 व्यक्तियों की अधिसीमा रहेगी।
12. पब्लिक ट्रांसपोर्ट में निर्धारित बैठने की क्षमता के 50 प्रतिशत के उपयोग की अनुमति रहेगी।

उपर्युक्त आदेश का उल्लंघन करते हुए पाए जाने पर आपदा प्रबंधन अधिनियम, 2005 की धारा 51-60 एवं भा.द.वि. की धारा 188 के प्रावधानों के अंतर्गत दण्डात्मक कार्रवाई की जाएगी।

सभी जिला पदाधिकारी एवं जिला पुलिस अधीक्षक उपर्युक्त का अनुपालन सुनिश्चित कराएंगे। भीड़-भाड़ वाले स्थलों, यथा-फूड कोर्ट, जलपान गृह, सब्जी मंडी, बस स्टैंड, रेलवे स्टेशन, रेहड़ी आदि पर व्यक्तियों के जमावड़े को नियंत्रित करने हेतु अधिक-से-अधिक संख्या में पुलिस बल की प्रतिनियुक्ति सुनिश्चित की जाय। सार्वजनिक स्थलों पर जिला प्रशासन सुनिश्चित करेगा कि कोविड सुरक्षात्मक उपाय, यथा-मास्क का उपयोग, सामाजिक दूरी इत्यादि का अनुपालन हो।

  
(अरुण कुमार सिंह)  
मुख्य सचिव, बिहार

ज्ञापांक - जी/आपदा-06-02/2020-2633

पटना, दिनांक 09 अप्रैल, 2021


प्रतिलिपि:- सभी विभागों के अपर मुख्य सचिव/प्रधान सचिव/सचिव/सभी विभागाध्यक्ष/सभी प्रमंडलीय आयुक्त/सभी क्षेत्रीय पुलिस महानिरीक्षक/ उप-महानिरीक्षक/सभी जिला पदाधिकारी/सभी वरीय पुलिस अधीक्षक/पुलिस अधीक्षक को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

  
सरकार के विशेष सचिव

ज्ञापांक- जी/आपदा-06-02/2020- 2633

पटना, दिनांक 09 अप्रैल, 2021


प्रतिलिपि:- मुख्य सचिव/विकास आयुक्त/पुलिस महानिदेशक/माननीय मुख्यमंत्री के प्रधान सचिव/मुख्य निर्वाचन पदाधिकारी, निर्वाचन विभाग, बिहार/माननीय मुख्यमंत्री के सचिव, बिहार, पटना को सूचनार्थ प्रेषित।

  
सरकार के विशेष सचिव

ज्ञापांक - जी/आपदा-06-02/2020-2633

पटना, दिनांक 09 अप्रैल, 2021

प्रतिलिपि:- गृह सचिव, भारत सरकार, नई दिल्ली को सूचनार्थ प्रेषित।

  
सरकार के विशेष सचिव



# ANNEXURE-3

40-3/2020-DM-I(A)  
Government of India  
Ministry of Home Affairs

North Block, New Delhi  
Dated 22<sup>nd</sup> April, 2021

## ORDER

Whereas, an Order bearing No. 40-3/2020- DM-I(A) dated 23.03.2021, alongwith guidelines for effective control of COVID-19 have been issued under section 10(2)(I) of the Disaster Management Act, 2005 (*hereinafter referred to as the DM Act*) wherein, inter alia, it is mandated that there shall be no restriction on inter-State and intra-State movement of persons and goods;


And whereas, due to rapid rise in COVID-19 cases and with increasing case positivity rate, various States/UTs have imposed some additional restrictions on certain activities and weekend lockdowns/curfews etc. to break the chain of transmission and to contain the spread of Covid-19;

And whereas, the availability of adequate and uninterrupted supply of Medical Oxygen is an important pre-requisite for managing moderate and severe cases of COVID-19 and with the increasing cases, the medical oxygen supply will need to keep pace with the requirements of the States/ UTs;

And whereas, medical oxygen is an essential public health commodity and any impediment in the supplies of Medical Oxygen in the country may critically impact the management of patients suffering from COVID-19 disease in other parts of the country;

And whereas, Empowered Group-II (EG-II), is mandated for coordinating medical logistics, including medical oxygen. EG-II has reviewed the supply of oxygen for industrial use in order to divert the same to meet the rising demand for medical oxygen in the country and save precious lives. Accordingly, EG II has recommended to prohibit the supply of Oxygen for industrial purposes by manufacturers and suppliers forthwith from 22.04.2021 till further orders, with the exception of nine specified industries. The recommendations of the EG-II have been accepted by the Central Government and the said decision, alongwith the list of nine exempted industries, have been conveyed by Secretary, Ministry of Health & Family Welfare, vide his DO letter dated 18th April 2021 (**Annexure-I**).

And whereas, keeping in view the requisitions of Medial oxygen and to ensure smooth supplies of it to the States/ UTs concerned, EG-II, in consultations with the States/UTs and oxygen manufactures etc., prepares supply plan, which is required to be followed by all States, UTs and all the agencies concerned. The oxygen supply plans, as revised from time to time by EG-II based on the assessment of the situation, are circulated by MoHFW to all the States/UTs concerned, and the last revised plan has been circulated vide MoHFW letter dated 21.04.2021 (**Annexure II**);

  
22/04/2021

Now, therefore, to ensure the uninterrupted supply of medical oxygen across the country for management of COVID-19 patients, in exercise of powers conferred under section 10(2)(l) of the DM Act, the undersigned, in the capacity as Chairperson, National Executive Committee, hereby directs the State/Union Territory Governments and State/ Union Territory Authorities to ensure the following measures within their areas of jurisdiction:

- (i) No restriction shall be imposed on the movement of Medical Oxygen between the States and transport authorities shall be instructed to accordingly allow free inter-state movement of oxygen carrying vehicles;
- (ii) No restrictions shall be imposed on oxygen manufacturers and suppliers to limit the oxygen supplies only to the hospitals of the State/ UT in which they are located;
- (iii) There shall be free movement of oxygen carrying vehicles into the cities, without any restriction of timings, while also enabling inter-city supply without any restriction;
- (iv) No authority shall attach the oxygen carrying vehicles passing through the district or areas for making supplies specific to any particular district(s) or area;
- (v) Supply of oxygen for industrial purposes, except those exempted by the Government, is prohibited w.e.f. 22<sup>nd</sup> April, 2021 and till further orders;
- (vi) States/UTs shall strictly abide by the supply plan of medical oxygen prepared by EG-II and as revised from time-to-time;
- (vii) The District Magistrates/ Deputy Commissioners and Senior Superintendents of Police/ Superintendents of Police/ Deputy Commissioners of Police will be personally liable for implementation of the above directions.

  
Union Home Secretary

**and, Chairman, National Executive Committee (NEC)**

To,

1. Secretaries of Ministries/Department of Government of India
2. Chief Secretaries/Administrators of States/Union Territories  
(As per list attached)

Copy to:

- i. All members of the national Executive Committee
- ii. Member Secretary, National Disaster Management Authority



भारत सरकार

स्वास्थ्य एवं परिवार कल्याण विभाग  
स्वास्थ्य एवं परिवार कल्याण मंत्रालय

Government of India

Department of Health and Family Welfare  
Ministry of Health and Family Welfare

D.O. No.17/S(HFW)/MO/2021

18<sup>th</sup> April 2021राजेश भूषण, आईएएस  
सचिव**RAJESH BHUSHAN, IAS**  
SECRETARY

The Empowered Group-II (EG-II) headed by Secretary, Department for Promotion of Industry & Internal Trade (DPIIT) is mandated by Govt. of India to manage requisite supplies of medical equipments, drugs including medical oxygen across the country in the wake of resurgence of COVID-19 cases. Medical oxygen is one life saving drug, whose supplies are being regularly monitored and managed by this Group.

2. There has been a significant surge in the demand for medical oxygen. Department for Promotion of Industry and Internal Trade (DPIIT) has conveyed that this has already reached about 60 percent of the total daily Oxygen production, and is expected to rise further.

3. While every effort is being made to meet the rising demand for medical oxygen, including augmenting daily production and stocks and States/UTs are taking appropriate steps for optimum and rationalized utilisation of available stock of oxygen, the present trend necessitates additional measures. The matter has been deliberated by the DPIIT with all the stakeholders and after due deliberations, it has been considered prudent to restrict industrial usage of oxygen to meet the rising demand for medical oxygen.

4. Accordingly, the EG-II has recommended that the supply of Oxygen for industrial purposes by manufacturers and suppliers be prohibited forthwith from 22.04.2021 till further orders. This recommendation has been accepted & the said prohibition on supply would come into effect from 22/04/2021.

5. The aforesaid prohibition, however, shall not apply to the supply of oxygen for the industries listed hereunder:


- i) Ampoules & Vials
- ii) Pharmaceutical
- iii) Petroleum refineries
- iv) Steel plants
- v) Nuclear energy facilities
- vi) Oxygen cylinder manufacturers
- vii) Waste water treatment plants
- viii) Food & water purification
- ix) Process industries which require uninterrupted operation of furnaces, processes, etc. as approved by respective State governments

6. The industrial units (other than those listed above) which would not be in a position to obtain oxygen are advised to consider alternate measures such as import of Oxygen or setting up their own Air Separator Units (ASU) for generation of Oxygen for their captive requirements.

.....contd/-


7. All Chief Secretaries are advised to ensure effective implementation & compliance of this Order.

Yours sincerely


  
(Rajesh Bhushan)

**Chief Secretary /Administrator  
All States/UTs**


Copy to : **Principal Secretary to PM** for information

  
(Rajesh Bhushan)

Copy to : **Cabinet Secretary** for information

  
(Rajesh Bhushan)

✓ Copy to : **Home Secretary** with the request to issue appropriate directions to States / UTs to facilitate effective implementation of the above Order.

  
(Rajesh Bhushan)



भारत सरकार  
स्वास्थ्य एवं परिवार कल्याण मंत्रालय  
निर्माण भवन

GOVERNMENT OF INDIA  
MINISTRY OF HEALTH & FAMILY WELFARE  
NIRMAN BHAVAN

निपुण विनायक, भा.प्र.से.  
संयुक्त सचिव  
NIPUN VINAYAK, IAS  
Joint Secretary

D. No:17/S(HFW)MO/2021  
Dated:21<sup>st</sup> April, 2021

Dear Madam/Sir,

In continuation of the orders issued on 15<sup>th</sup> April and 18<sup>th</sup> April 2021 regarding supply plan for medical oxygen, an updated Order as below is being issued for the States of Maharashtra, Gujarat, Karnataka, Madhya Pradesh, Delhi, Haryana, Uttar Pradesh, Punjab, Tamil Nadu, Kerala, Chhattisgarh, Rajasthan, Telangana, Andhra Pradesh, Uttrakhand, Jammu and Kashmir, Goa, Chandigarh and Himachal Pradesh.

This is keeping in view increased demands from the States on quantity of Oxygen supply and its source. The supply plan has been done as recommended by the DPIIT in consultation with States, Oxygen manufacturers, AIIGMA and Steel Ministry under the overall guidance of the Empowered Group-II.

Yours Sincerely,

*Nipun Vinayak*  
(Nipun Vinayak)

**Addl. Chief Secretary/ Principal Secretary/ Secretary (Health)**  
Maharashtra, Gujarat, Karnataka, Madhya Pradesh, Delhi, Haryana, Uttar Pradesh, Punjab, Tamil Nadu, Kerala, Chhattisgarh, Rajasthan, Telangana, Andhra Pradesh, Uttrakhand, J&K, Goa, Chandigarh and Himachal Pradesh.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	<b>Demand for 20.04.2021 onwards</b>	1500	1000	300	445	700	180	800	126	200	89	215	205	360	440	103	12	11	20	15
State	Manufacturer Name, Location	MH	GJ	KR	MP	DL	HR	UP	PB	TN	KL	CG	RJ	TL	AP	UK	J&K	Goa	CH	HP
AP	Liquinox Gases Pvt Ltd																			
AP	Ellenbarrie Industrial Gases Ltd														50					
AP	RINL Vishakhapatnam Steel Plant	97													40					
AS	Premier Cryogenics, Nagari														100					
CG	Jindal Steel & Power Ltd Raigarh										12									
CG	UNDE SAIL-Bhilai	60									118									
CG	SAIL, Bhilai Captive plant				40															
GJ	Sirree Ram Oxy Gases																			
GJ	Reliance Industries Ltd, Jamnagar	125	400																	
GJ	Air Liquide, Jhagadia		69																	
GJ	Inox Karjan		80																	
GJ	Inox Hazira		104																	
GJ	Inox Simelj		109																	
GJ	LINDE Dahej		60																	



MH	Air Liquide, Pune	125																							
MH	Kolhapur Oxygen & Acetylene	20																				11			
MH	Inox Vile Bhagad	125																							
MH	Inox Dalvi	95																							
MH	Inox Chakan	175																							
MH	Inox Butbori (Nagpur)	75			10																				
MH	LINDE Murbad	175																							
MH	LINDE Talaja	245																							
OD	Jindal Steel & Power Ltd, Angul Odisha				20																		20	60	
OD	LINDE Rourkela RSP BOO-1/2				80	40							37												
OD	LINDE Kalinganagar TATA-KPOL/2					30				70													20	30	
OD	LINDE JSL-421																								
OD	TATA-BSL Angul																						40	40	
OD	SAIL Rourkela Capitive plant																						24	20	
RJ	Inox Bhivadi					20																			
TN	National Oxygen Ltd						20																30		
TN	JSW Steel Limited, Salem Works																							10	
TN	Sigplisol Gases Pvt Ltd, Tanjore																							20	
TN	Inox Sripetumbudur																							50	
TN	LINDE St. Gobain																							20	







भारत सरकार  
Government of India  
विद्युत मंत्रालय  
Ministry of Power  
केन्द्रीय विद्युत प्राधिकरण  
Central Electricity Authority  
सूचना प्रौद्योगिकी एवं साइबर सुरक्षा प्रभाग  
Information Technology & Cyber Security Division  
\*\*\*\*\*

**विषय :** CEA (Cyber Security in Power Sector) Guidelines, 2021.

CEA is mandated to prepare 'Guidelines on Cyber Security' in Power Sector under the provision of regulation (10) of the Central Electricity Authority (Technical Standards for Connectivity to the Grid) (Amendment) Regulations, 2019. Guidelines on Cyber Security in Power Sector incorporating the cardinal principles has been prepared by CEA. In compliance to the provision of the above regulation, CEA (Cyber Security in Power Sector) Guidelines, 2021 are issued for compliance by all entities listed in the clause 2.3 (Applicability of the Guidelines) of the guidelines.

**Encl:** Guidelines on Cyber Security

  
07/10/21  
(V.K. Mishra)  
Secretary CEA

## **CEA (Cyber Security in Power Sector) Guidelines, 2021**

### **1.0 Background**

- 1.1 Cyber intrusion attempts and Cyber-attacks in any critical sector are carried out with a malicious intent. In Power Sector it's either to compromise the Power Supply System or to render the grid operation in-secure. Any such compromise, may result in mal-operations of equipments, equipment damages or even in a cascading grid brownout/blackout. The much hyped air gap myth between IT and OT Systems now stands shattered. The artificial air gap created by deploying firewalls between any IT and OT System can be jumped by any insider or an outsider through social engineering. Cyber-attacks are staged through tactics & techniques of Initial Access, Execution, Persistence, Privilege Escalation, Defence Evasion, Command and Control, Exfiltration. After gaining the entry inside the system through privilege escalation, the control of IT network and operations of OT systems can be taken over even remotely by any cyber adversary. The gain of sensitive operational data through such intrusions may help the Nation/State sponsored or non-sponsored adversaries and cyber attackers to design more sinister and advanced cyber-attacks.
- 1.2 Government of India has set up the Indian Computer Emergency Response Team (CERT-In) for Early Warning and Response to cyber security incidents and to have collaboration at National and International level for information sharing on mitigation of cyber threats. CERT-In regularly issues advisories on safeguarding computer systems and publishes Security Guidelines which are widely circulated for compliances. All Central Government Ministries/ Departments and State/Union Territory Governments have been advised to conduct cyber security audit of their entire Cyber Infrastructure including websites at regular interval through CERT-In empanelled Auditors so as to identify gaps and appropriate corrective actions to be taken in cyber security practices. CERT-In extends supports to enable Responsible Entity in conducting cyber security mock drills and in assessment of their preparation to withstand cyber-attacks. The Responsible Entity must submit Reports of Cyber Audit of cyber security controls, architecture, vulnerability management, network security and periodic cyber security drills to sectoral CERT as well as CERT-In. Team of experts shall review these reports and shortcomings if any in the compliances shall be flagged by them. CERT-In on regular basis also conducts workshops and training programs to enhance Cyber awareness of all Stakeholders.
- 1.3 Ministry of Power has created 6(six) sectoral CERTs namely Thermal, Hydro, Transmission, Grid Operation, RE and Distribution for ensuring cyber security in Indian Power Sector. Each Sectoral CERT has prepared their sub-sector specific model Cyber Crisis Management Plan(C-CMP) for countering cyber-attacks and cyber terrorism. Each Sectoral CERT has circulated their model C-CMPs for preparation and implementation of organization specific C-CMP by each of their Constituent Utility.
- 1.4 All Responsible Entities, Service Providers, Equipment Suppliers/Vendors and Consultants engaged in Power Sector are equally responsible for ensuring cyber security of the Indian Power Supply System. They are to act timely upon each threat intelligence,

advisories and other inputs received from authenticated sources, for continuous improvement in their cyber security posture.

- 1.5 In the current Indian scenario though many cyber security directives and guidelines exists, but none of them are power sector specific. Ministry of Power has directed CEA to prepare Regulation on Cyber Security in Power Sector. And as an interim measures CEA has been directed to issue Guideline on Cyber Security in Power Sector, under the provision of Regulation 10 on Cyber Security in the “Central Electricity Authority (Technical Standards for Connectivity to the Grid) (Amendment) Regulations, 2019”.
- 1.6 The Guidelines on Cyber Security, in the form of Articles written below, requires mandatory Compliance by all Responsible Entities. The Guidelines shall come into effect from the date of issue by Central Electricity Authority, New Delhi.
- 2.0 Hereby the Guidelines on Cyber Security are drawn in the form of Articles for compliance by the Requester as well as User under the following provision of Regulation 10 on Cyber Security, in the “Central Electricity Authority (Technical Standards for Connectivity to the Grid) (Amendment) Regulations, 2019”.

***“The requester and the user shall comply with cyber security guidelines issued by the Central Government, from time to time, and the technical standards for communication system in Power Sector laid down by the Authority.”***

2.1 **Objective of issuing Guideline:**

- a) Creating cyber security awareness
- b) Creating a secure cyber ecosystem,
- c) Creating a cyber-assurance framework,
- d) Strengthening the regulatory framework,
- e) Creating mechanisms for security threat early warning, vulnerability management and response to security threats,
- f) Securing remote operations and services,
- g) Protection and resilience of critical information infrastructure,
- h) Reducing cyber supply chain risks,
- i) Encouraging use of open standards,
- j) Promotion of research and development in cyber security,
- k) Human resource development in the domain of Cyber Security,
- l) Developing effective public private partnerships,
- m) Information sharing and cooperation
- n) Operationalization of the National Cyber Security Policy

2.2 Within the text of these Articles, ‘**Responsible Entity**’ shall mean all:

- a) Transmission Utilities as well as Transmission Licensees,
- b) Load despatch centres (State, Regional and National),
- c) Generation utilities (Hydro, Thermal, Nuclear, RE),
- d) Distribution Utilities
- e) Generation Aggregators,
- f) Trading Exchanges,
- g) Regional Power Committees, and
- h) Regulatory Commissions.

### 2.3 **Applicability:**

All Responsible Entities as well as System Integrators, Equipment Manufacturers, Suppliers/Vendors, Service Providers, IT Hardware and Software OEMs engaged in the Indian Power Supply System.

### 2.4 **Scope:**

#### 2.4.1 **Control Systems for System Operation and Operation Management.**

- a) Grid Control and Management Systems,
- b) Power Plant Control Systems,
- c) Central Systems used to monitor and control of distributed generation and loads e.g. virtual power plants, storage management, central control rooms for hydroelectric plants, photovoltaic/wind power installations,
- d) Systems for fault management and work force management,
- e) Metering and measurement management systems,
- f) Data archiving systems,
- g) Parameterisation, configuration and programming systems,
- h) Supporting systems required for operation of the above mentioned systems,

#### 2.4.2 **Communication System.**

- a) Routers switches and firewalls,
- b) Communication technology-related network components,
- c) Wireless digital systems.
- d) Control Centre to Control Centre Communications for data exchange on ICCP. (IEC 61850/60850-5/TASE.2/)

#### 2.4.3 **Secondary, Automation and Tele control technologies**

- a) Control and Automation components,
- b) Control and field devices,
- c) Tele control devices,
- d) Programmable logic controllers / Remote Terminal Units, including digital sensor and actuators elements,
- e) Protection devices,
- f) Safety components,
- g) Digital measurement and metering installations,
- h) Synchronisation devices,
- i) Excitation Systems,

### 3.0 **Definition of Terms:**

1. **Access Management:** shall mean set of policies and procedures of the Responsible Entity for allowing Personnel, devices and IoT to securely perform a broad range of operational, maintenance, and asset management tasks either on site or remotely as laid down in Clause 5.2.5 of IS 16335.
2. **Accreditation:** shall mean the process of verifying that an organisation is capable of conducting the tests and assessments against a product/process that are required to be certified.

3. **Accreditation Body:** shall mean an organisation that has been accredited to verify the credentials and capabilities of the organisations that wish to become a certification body.
4. **Act:** shall mean the Information Technology Act, 2000 (21 of 2000)
5. **Asset:** shall mean anything that has value to the organization.
6. **Certification:** shall mean the process of verifying that a product has been manufactured in conformance with a set of predefined standards and/or regulations by an organisation, that is accredited to conduct the certification process
7. **Certification Body:** shall mean an organisation that has been accredited by an accreditation body to certify products / process against a certification scheme.
8. **Certification Scheme:** shall mean the processes, paperwork, tools, and documentation that define how a product or manufacturer is certified
9. **Chief Information Security Officer:** shall mean the designated employee of Senior management level directly reporting to Managing Director/Chief Executive Officer/Secretary of the Responsible Entity, having knowledge of Information Security and related issues, responsible for cyber security efforts and initiatives including planning, developing, maintaining, reviewing and implementation of Information Security Policies
10. **Critical Assets:** shall mean the facilities, systems and equipment which, if destroyed, degraded or otherwise declared unavailable, would affect the reliability or operability of the Power Supply System.
11. **Critical System:** shall mean cyber assets essential to the reliable operation of critical asset. Critical System consists of those cyber assets that have at least one of the following characteristics:
  - a) The cyber asset uses a routable protocol to communicate outside the electronic security perimeter.
  - b) The cyber asset uses a routable protocol within a control centre.
  - c) The cyber asset is dial-up accessible.
12. **Critical Information Infrastructure:** shall mean Critical Information Infrastructure as defined in explanation of sub-section (1) of Section 70 of the Act.
13. **Cyber Assets:** shall mean the programmable electronic devices, including the hardware, software and data in those devices that are connected over a network, such as LAN, WAN and HAN.
14. **Cyber Crisis Management Plan:** shall mean a framework for dealing with cyber related incidents for a coordinated, multi-disciplinary and broad-based approach for rapid identification, information exchange, swift response and remedial actions to mitigate and recover from malicious cyber related incidents impacting critical processes.
15. **Cyber Security Breach:** shall mean any cyber incident or cyber security violation that results in unauthorized or illegitimate access or use by a person as well as an entity, of data, applications, services, networks and/or devices through bypass of the underlying cyber security protocols, policies and mechanisms resulting in the compromise of the confidentiality, integrity or availability of data/information maintained in a computer resource or cyber asset.
16. **Cyber Security Incident:** shall mean any real or suspected adverse cyber security event that violates, explicitly or implicitly, cyber security policy of Responsible Entity resulting in unauthorized access, denial of service or disruption, unauthorized use of computer resource for processing or storage of information or changes to data or information

without authorization, leading to harm to the power grid or its critical sub-sectoral elements Generation, Transmission and Distribution.

17. **Cyber Security Policy:** shall mean documented set of business rules and processes for protecting information, computer resources, networks, devices, Industrial Control Systems and other OT resources.
18. **Electronic Security Perimeter:** shall mean the logical border surrounding a network to which the Cyber Systems of Power Supply System are connected using a routable protocol.
19. **Information Security Division:** shall mean a division accountable for cyber security and protection of the Critical System of the Responsible Entity.
20. **Protected System:** shall mean any computer, computer system or computer network of the Responsible Entity notified under section 70 of the Act, in the official gazette by appropriate Government.
21. **Security Architecture:** shall mean a framework and guidance to implement and operate a system using the appropriate security controls with the goal to maintain the system's quality attributes like confidentiality, integrity, availability, accountability and assurance.
22. **Vulnerability:** shall mean intrinsic properties of something resulting in susceptibility to a risk source that can lead to an event with a consequence
23. **Vulnerability Assessment:** shall mean a process of identifying and quantifying vulnerabilities

#### 4.0 Standards

Reference	Description
ISO/IEC 15408	Common Criteria Certification Standard
ISO/IEC 17011	General requirements for accreditation bodies accrediting conformity assessment bodies
ISO/IEC 17025	General requirements for the competence of testing and calibration laboratories
ISO/IEC 21827	Systems Security Engineering - Capability Maturity Model (SSE-CMM)
ISO/IEC 24748-1	Systems and software engineering — Life cycle management — Part 1: Guidelines for life cycle management.
ISO 27001/2	Information Security Management
ISO/ IEC 27019	Information technology — Security techniques — Information Security controls for the energy utility industry
ISO/IEC 61508	Functional Safety of Electrical / Electronic / Programmable Electronic Safety-related Systems
IEC 61850	Communication networks and systems for power utility automation
IEC 62351	Standards for Securing Power System Communications
IEC 62443	Cyber Security for Industrial Control Systems
IS 16335	Power Control Systems – Security Requirements.

#### 5.0 Abbreviations

Abbreviations	Description
a) BES	Bulk Electric System

b)	CDAC	Centre for Development of Advanced Computing
c)	CEA	Central Electricity Authority
d)	CERC	Central Electricity Regulatory Commission
e)	CERT	Computer Emergency Response Team
f)	CERT-In	Indian Computer Emergency Response Team
g)	CII	Critical Information Infrastructure
h)	CISO	Chief Information Security Officer
i)	CSK	Cyber Swachhta Kendra
j)	COTS	Commercial off-the Shelf
k)	ESP	Electronic Security perimeter
l)	ICS	Industrial Control Systems
m)	ICT	Information and Communications Technology
n)	IEC	International Electro Technical Commission
o)	ISAC	Information Sharing and Analysis Centre
p)	ISD	Information Security Division
q)	ISO	International Organization for Standardization
r)	ISMS	Information Security Management System
s)	IT	Information Technology
t)	FAT	Factory Acceptance Test
u)	NABL	National Accreditation Board for Testing and Calibration Laboratories
v)	NCIIPC	National Critical Information Infrastructure Protection Centre
w)	NLDC	National Load Dispatch Centre
x)	NPTI	National Power Training Institute
y)	NSCS	National Security Council Secretariat
z)	OEM	Original Equipment Manufacturer
aa)	OT	Operational Technology
bb)	RLDC	Regional Load Dispatch Centres
cc)	SAT	Site Acceptance Test
dd)	SERC	State Electricity Regulatory Commission
ee)	SCADA	Supervisory Control and Data Acquisition Systems
ff)	SIEM	Security Information and Event Management
gg)	SLA	Service Level Agreement
hh)	SLDC	State Load Dispatch Centre
ii)	QCI	Quality Council of India



## CEA (Cyber Security in Power Sector) Guidelines, 2021

### **Article 1. Cyber Security Policy.**

#### **a. Cardinal Principles: The Responsible entity will strictly adhere to following cardinal principles while framing cyber security policy:**

- i. There is hard isolation of their OT Systems from any internet facing IT system.
  - ii. May keep only one of their IT systems with internet facing at any of their site/location if required which is isolated from all OT zones and kept in a separate room under the security and control of CISO.
  - iii. Downloading/Uploading of any data/information from their internet facing IT system is done only through an identifiable whitelisted device followed by scanning of both for any vulnerability/malware as per the SOP laid down and for all such activities digital logs are maintained and retained under the custody of CISO for at least 6 months. The log shall be readily to carry out the forensic analysis if asked by investigation agency.
  - iv. List of whitelisted IP addresses for each firewall is maintained by CISO and each firewall is configured for allowing communication with the whitelisted IP addresses only.
  - v. Communication between OT equipment/systems is done through the secure channel preferably of POWERTEL through the fibre optic cable. Security configuration of the communication channel is also to be ensured.
  - vi. All ICT based equipment/system deployed in infrastructure/system mandatorily CII are sourced from the list of the “Trusted Sources” as and when drawn by MoP/CEA.
- b. The Responsible Entity shall be ISO/IEC 27001 certified (including sector specific controls as per ISO/IEC 27019).
  - c. The Responsible Entity shall have a Cyber Security Policy drawn upon the guidelines issued by NCIIPC.
  - d. The Responsible Entity shall ensure annual review of their Cyber Security Policy by subject matter expert and changes shall be made therein only after obtaining the due approval from Board of Directors.
  - e. The process of Access Management for all Cyber Assets owned or under control of the Responsible Entity shall be detailed in the Cyber Security Policy.
  - f. The Cyber Security Policy shall leverage state-of-art cyber security technologies and relevant processes at multiple layers to mitigate the cyber security risks.
  - g. The Responsible Entity shall be solely responsible to get Cyber Security Policy implemented through its Information Security Division (ISD).
  - h. The CISO shall record the reason(s) for exemption required, if any, in case, unable to comply with any of the provision(s) of the Cyber Security Policy. Any exception shall be allowed only after an approval of provisions of compensatory control(s) to mitigate residual cyber security risks.

- i. The CISO shall record the exemptions sought in statement of applicability controls, while getting the ISO 27001 certified. All exemptions and its justification need to be in conformance with Cyber Security Policy of the Responsible Entity.
- j. The Responsible Entity shall allocate sufficient Annual budget for enhancing cyber security posture, enhanced year over year.
- k. The Responsible Entity shall work in collaboration with other Industry Stakeholders as well as Academia to promote R&D activity in the domain of cyber security.
- l. The Responsible Entity shall ensure that cyber security issues are taken up as agenda items in their Board meetings once in every three months.

## **Article 2 Appointment of CISO.**

- a) The Responsible Entity shall mandatorily appoint a CISO and shall confirm to qualification, if any, **laid** by Quality Council of India (QCI). In absence, the work of CISO shall be looked upon by Alternate CISO. In case qualification for appointment of Alternate CISO has been relaxed for reasons recorded thereof, Alternate CISO has to mandatorily acquire the minimum required cyber security skill sets within six months from the date of his appointment.
- b) The Responsible Entity shall regularly update details of CISO and Alternate CISO, with the Sectoral CERT, as well as on ISAC-Power Portal.
- c) Roles and Responsibility of CISOs shall be as laid by CERT-In and ring-fenced to ensure cyber security of the Cyber Assets of the Responsible Entity.

## **Article 3: Identification of Critical Information Infrastructure (CII).**

- a) The Responsible Entity shall submit to NCIIPC through Sectoral CERT, details of Cyber Assets which uses a routable protocol to communicate outside the Electronic Security Perimeter drawn by the Responsible Entity or a routable protocol within a control centre and dial-up accessible Cyber Assets, within 30 days from the date of their commissioning in the System.
- b) The Responsible Entity shall submit details of Critical Business Processes and underlying information infrastructure along with mapped impact and Risk Profile to NCIIPC and shall get their CIIs identified in consultation with NCIIPC. The process of the notification/declaration by Appropriate Government shall follow thereafter.
- c) The Responsible Entity shall review their declared/notified CIIs at least once a year to examine changes if any in the functional dependencies, protocols and technologies or upon any change in security architecture. The Responsible Entity shall review their declared/notified CIIs once in every 6 months, in case if NCIIPC has directed them to constitute an Information Security Steering Committee.
- d) The Responsible Entity shall ensure that all cyber assets of their identified/notified CIIs are recorded in the asset register and considered for risk assessment as well as for finalization of controls in statement of applicability.

## **Article 4. Electronic Security Perimeter**

- a) The Responsible Entity shall identify and document the Electronic Security Perimeter(s) and all Access Points to the perimeter(s).

- b) The Responsible Entity shall follow procedure of identifying “Electronic Security Perimeter” in case of distributed and/or hybrid information infrastructure, as per IEC 62443 / IS16335 (as amended from time to time).
- c) The Responsible Entity shall ensure that every Critical System resides within an Electronic Security Perimeter.
- d) The Responsible Entity shall perform a cyber-Vulnerability Assessment of each electronic Access Points to the Electronic Security Perimeter(s) at least once in every 6 (six) months and/or after any change in Security Architecture.
- e) The Responsible Entity shall ensure that all critical, high and medium vulnerabilities identified as a result of cyber Vulnerability Assessment shall be closed and verified for the effective closure.

#### **Article 5. Cyber Security Requirements**

- a) The Responsible Entity shall have an Information Security Division (ISD), headed by CISO.
- b) The Responsible Entity shall ensure that the ISD must be functional on 24x7x365 basis and is manned by sufficient numbers of Engineers having valid certificate of successful completion of course on cyber security of Power Sector from the Training Institutes designated by CEA.
- c) The Responsible Entity shall ensure that ISD
  - 1) has on-boarded Cyber Swachhta Kendra(CSK) of CERT-In, if they have public IPs.
  - 2) has timely acted upon the advisories, guidelines and directive of NCIIPC, CSK, CERT-In and Sectoral CERTs,
  - 3) has deployed an Intrusion Detection System and Intrusion Prevention System capable of identifying behavioural anomaly in both IT as well as OT Systems.
  - 4) shares reports on incident response and targeted malware samples with CERT-In,
  - 5) updates the firmware/software with the digitally signed OEM validated patches only.
  - 6) enables only those ports and services that are required for normal operations. In case of any emergency the procedure as laid in Access management be followed.
  - 7) maintains firewall logs for the last 6 months duration. Firewall logs shall be analysed and all critical and high severity comments shall be addressed for effective closure.
  - 8) retains document of FAT, SAT test results and report/ certificate of cyber tests carried out for compliance of Government Orders and Cyber Security Audit.\*
  - 9) maintains all cyber logs and cyber forensic records of any incident for at least\*\* 90 days.
    - \* FAT, SAT must include comprehensive cyber security tests of the component/equipment/system to be delivered/delivered at site.
    - \*\* 90 days from date of the commissioning of the system/recovery from any incident, whichever is later.
- d) The Responsible Entity shall routinely audit and test security properties of the Critical System and must act upon, in case if any new vulnerabilities is identified through testing or by the equipment manufacturer.

- e) The Responsible Entity shall design a secure architecture for control system appropriate for their process control environment\*.
- f) All State Load Dispatch Centres(SLDCs) shall comply with the directions issued by the National Load Dispatch Centre(NLDC) as well as Regional Load Dispatch Centres(RLDCs) U/s 29 (1) of the Electricity Act, 2003 to ensure stability and cyber security of grid operation and achieve efficiency in the grid operation. In case of any non-compliance, the Head of SLDC shall be responsible and shall be liable for Penalty as per the provision of CERC/SERC.

\*There are so many different types of systems in existence and so many possible solutions, it is important that the selection process ensures that the level of protection is commensurate with the business risk and the Responsible Entity shall not rely on one single security measure for its defence. *(Reference IEC/TR62351-10 Edition 1.0 2012-10 Power systems management and associated information exchange –Data and communications security – Part 10: Security architecture guidelines).*

#### **Article 6 Cyber Risk Assessment and Mitigation Plan**

- a) The Responsible Entity shall document in their Cyber Security Policy a Cyber Risk Assessment and Mitigation Plans drawn upon the best practises being followed in the Power Sector, and the same shall be approved by Board of Directors.
- b) The Cyber Risk Assessment and Mitigation Plans shall clearly define the matrix for assessing the cyber risk of both IT and OT environment and risk acceptance criteria.
- c) The Cyber Risk Assessment Plan shall be capable to demonstrate that repeated cyber security risk assessment delivers consistent, valid and comparable results.
- d) The review of cyber risk assessment shall be carried out at least once in a Quarter. The actionable of risk treatment and mitigation shall be tracked in this review for their effectiveness.
- e) The CISO shall be responsible for implementation and regular review, on the basis of internal and external feedbacks, of the Cyber Risk Assessment and Mitigation Plans.

#### **Article 7 Phasing out of Legacy System**

- a) As the life cycle of the Power System Equipment/System is longer than that of IT Systems deployed therein, the Responsible Entity shall ensure that all IT technologies in the Power System Equipment/System should have the ability to be upgraded.
- b) The Responsible Entity shall ensure that the Information Security Division shall draw the list of all communicable equipments/systems nearing end life or are left without support from OEM. Thereafter CISO shall identify equipment/systems to be phased out from the list drawn, firm up their replacement plan and put up the replacement plan for approval before the Board of Directors.
- c) The CISO shall ensure that till equipments/systems nearing end life or left without support from OEM are not replaced, their cyber security is hardened and ensured through additional controls provisioned in consultation with the OEM or alternate Supplier(s)\*.  
\*e.g. Use of CDAC developed AppSamvid and whitelisting of applications installed may be explored across all legacy systems.
- d) The Responsible Entity shall document in their Cyber Security Policy a Standard Operating Procedure for safe and secure disposal of outlived or legacy devices.

## **Article 8. Cyber Security Training.**

- a) The Responsible Entity shall establish, document, implement, and maintain an annual cyber security training program for personnel having authorized cyber or authorized physical access (unescorted or escorted) to their Critical Systems.
- b) The Responsible Entity shall review annually their cyber security training program and shall update it whenever necessary. Annual Review shall record evaluation of the effectiveness of the trainings held.
- c) The Responsible Entity shall ensure that Cyber Security training program designed for their IT as well as OT O&M Personnel must include following topics and as per their functional requirements and security concerns additional topics shall be added:
  - 1) User authentication and authorization.
  - 2) Cyber Security and Protection mechanisms of IT/OT/ICS Systems.
  - 3) Introduction to various standards i.e. ISO/IEC:15408, ISO/IEC:24748-1, ISO: 27001, ISO: 27002, ISO 27019, IS 16335, IEC/ISO:62443.
  - 4) Training on implementation of ISO/IEC 27001 and awareness on IEC 62443.
  - 5) Vulnerability Assessment in the Critical System.
  - 6) Monitoring and preserving of electronic logs of access of Critical Assets.
  - 7) Detecting cyber-attacks on SCADA and ICS systems
  - 8) The handling of Critical System during cyber crisis.
  - 9) Action plans and procedures to recover or re-establish normal functioning of Critical Assets and access thereto following a Cyber Security Incident.
  - 10) Hands on SCADA operation at any of the Regional Load Dispatch Centre.
  - 11) Handling of risks involved in the procurement of COTS Products.
- d) All Personnel engaged in O&M of IT & OT Systems shall mandatorily undergo courses on cyber security of Power Sector from any of the training institute designated by CEA, immediately within 90 days from the notification of CEA Guidelines on Cyber Security in Power Sector.
- e) The Responsible Entity shall ensure that none of their newly hired or the current Personnel have access to the Critical System, prior to the satisfactory completion of cyber security training programme from the Training Institutes designated in India, except in specified circumstances such as cyber crisis or an emergency.
- f) NPTI in consultation with CEA shall identify and design domain specific courses on Cyber Security for different target groups. The “Governing Board for PSO Training and Certification” shall approve the content, duration etc of these courses and shall review it Annually. NPTI shall conduct these courses at all of their branches on regular basis and shall maintain the list of the Participants successfully completing the course.

## **Article 9 Cyber Supply Chain Risk Management**

- a) The Responsible Entity shall ensure that, as and when Ministry of Power, Government of India notifies the Model Contractual Clauses on cyber security, these clauses are included in their every Bid invited for procurement of any ICT based components/equipments/System to be used for Power System.
- b) The Responsible Entity shall ensure that all the Communicable Intelligent Equipments and the Service Level Agreements (SLAs) for their Critical Systems shall be sourced from the list of the “Trusted Sources” as and when drawn by MoP/CEA.

- c) The Responsible Entity shall ensure that, in case, for the any Communicable Intelligent Devices, if no Trusted Source has been identified, then the successful bidder in compliance with the provisions made in MoP order dated 2.7.2020 and any other relevant MoP order has got the product cyber tested for any kind of embedded malware/Trojan/cyber threat and for adherence to Indian Standards at the designated lab.
- d) The Responsible Entity shall ensure that the essential cyber security tests are carried out successfully during FAT, SAT as detailed in **Annexure A**. The equipment/System besides for functionality shall also be tested in the factory for vulnerabilities, design flaws, parts being counterfeit or tainted, so as to minimize problems during on-site-testing and installation. Cyber Security Conformance Testing are to be carried out in the designated Lab as listed in **Annexure-I of MoP Order No. 12/13/2020-T&R dt. 8<sup>th</sup> June, 2021(Order at Annexure-B)**.
- e) The Responsible Entity shall ensure that the Equipment/System supplied by the successful bidder shall accompany with a certificate<sup>§, #</sup> obtained by OEM from a certification body accredited to assess devices and process for conformance to IEC 62443-4 standards during design and manufacture. The Responsible Entity shall accept the certificate submitted along with the supplied Equipment/System only if it's in line with the Testing Protocol as notified by Ministry of Power, Government of India, from time to time.
- f) The Responsible Entity in compliance to the requirement of Article 9(e) shall also accept, till the setting up of an adequate certification facility in the India, a digitally signed self-declaration of conformance to the IEC 62443-4 standards during design and manufacture of the equipment/system, if submitted by the OEM.
- g) The Responsible Entity shall dispose all unserviceable or obsolete Communicable Intelligent Devices as per the procedure laid in their Cyber Risk Assessment and Mitigation Plans which shall be in line with the prevailing best practices.

§ The National & International certification may be specified in the tender for critical systems/sub-systems being procured by the Responsible Entity.

# Certification Schemes:

**Embedded Device Security Assurance Certification** is for an individual product,  
**System Security Assurance Certification** is for a set of products in a system (possibly from different vendors)

**Security Development Lifecycle Assurance Certification** is for the development processes that a manufacturer uses for developing products.

#### **Article 10 Cyber Security Incident Report and Response Plan**

- a) The CISO of the Responsible Entity shall report in the formats prescribed by CERT-In, all Cyber Security Incidents, classified as reportable events.
- b) Root cause analysis for all reportable events shall be carried out and corrective action taken, so as to ensure that any re-occurrence of such event can be managed with ease.
- c) The Responsible Entity shall mandatorily define in their Cyber Security Policy, criteria(s) identified on the basis of impact analysis, for declaring the occurrence of

Cyber Security Incident(s) as a Cyber Crisis in the System owned or controlled by them.

- d) The Responsible Entity shall mandatorily designate an Officer along with his/her standby by name and designation and empower them to declare an occurrence of the incident(s) as “Cyber Crisis”. The contact details of these Officers shall be updated in the C-CMP within 15 days of changes if any due to transfer or superannuation etc.
- e) The CISO shall ensure that during any Cyber Security Incident, ISD monitors and minutely records every details of cyber security events and incidents in both IT as well as the OT System owned or controlled by the Responsible Entity.
- f) The CISO shall ensure that each cyber incident is handled strictly as per Cyber Security Incident Response Plan detailed in the latest C-CMP approved by the Board of Directors.
- g) The Responsible Entity shall ensure that the efficacy of the Cyber Security Incident Response Plan is tested annually through mock drill(s) carried out, if feasible, as simulation exercise(s) or as table top exercise(s) with wider participation of their employees, in consultation with CERT-In and sectoral CERT. In case if any shortcoming is observed in the Cyber Security Incident Response Plan suitable changes shall be made in it.
- h) The Responsible Entity shall ensure that the CISO compiles details of incident detection, incident handling, learnings from each incident and damage claims made if any and shall report to CERT-In as well as upload information on ISAC-Power Portal.

#### **Article 11 Cyber Crisis Management Plan(C-CMP)**

- a) The Responsible Entity shall prepare a Cyber Crisis Management Plan and submit to their sectoral-CERT for review with intimation to Ministry of Power/CISO-MoP. Responsible Entity shall update their C-CMP on the basis of comments made by sectoral-CERT and then submit for vetting to CERT-In. The C-CMP shall be updated once again to include the observations made by CERT-In before seeking approval of Board of Directors for implementation of C-CMP.
- b) The Responsible Entity shall ensure that the C-CMP is reviewed at least annually. The CISO shall ensure that all changes are made in C-CMP only with the due approval of Board of Directors and the changes made in C-CMP have been communicated through a verifiable means to all the concerned Personnel of the Responsible Entity.
- c) The CISOs shall be the custodian of all the cyber security related documents including Cyber Crisis Management Plan, Risk Treatment Plan, Statement of Applicability of controls, and compliance to regulator’s requirement.
- d) The CISO shall be accountable for ensuring enforcement of C-CMP by Information Security Division of the Responsible Entity, during a cyber-crisis, as and when declared by the designated Officer. (refer Article 10(d))

#### **Article 12: Sabotage Reporting%**

- a) The Responsible Entity shall incorporate procedure for identifying and reporting of sabotage in their Cyber Security Policy within 30 days from issue of the Guidelines, or grant of licence under the appropriate legal provisions to the Responsible Entity.
- b) The CISO shall be held liable for non-reporting of identified sabotage(s) as per procedure laid for identifying and reporting of sabotage in the Cyber Security Policy of the Responsible Entity.

- c) The CISO shall prepare a detailed report on disturbances or unusual occurrences, identified, suspected or determined to be caused by sabotage in the Critical System of the Responsible Entity, and shall submit the report to the Sectoral CERT as well as to CERT-In within 24 hours of its occurrence.
- d) The CISO shall submit to NCIIPC within 24 hours of occurrence the report on every sabotage classified as cyber incidents(s) on "Protected System".
- e) The CISO upon occurrence on every sabotage shall take custody of all log records as well as digital forensic records of affected Cyber Assets, Intrusion Detection System, Intrusion Protection System, SIEM and shall preserve them for at least 90 days and shall make them available as and when called upon for investigation by the concerned Agencies.

*%Disturbances or unusual occurrences, suspected or determined to be caused by sabotage.*

*Sabotage e.g. can be a forced intrusion in un-manned/manned facility and taking control of operation of Critical System through a communicating device.*

### **Article 13 Security and Testing of Cyber Assets**

- a) The Responsible Entity shall ensure security of all in-service phase as well as standby Cyber Assets through regular firmware/Software updates and patching, Vulnerability management, Penetration testing (of combined installations), securing configuration, supplementing security controls. CISO shall maintain details of update version of each firmware and software and their certification if received from OEMs.
- b) The Responsible Entity shall carry out regularly Vulnerability Assessment of all Cyber Assets owned or under their control. If a Cyber Asset is found vulnerable to any exploits or upon any patch updates or major configuration changes, then further Penetration Testing may be carried out offline or in a suitably configured laboratory test-bed to determine other vulnerabilities that may have not been identified so far.
- c) The Responsible Entity shall specify security requirement and evaluation criteria during each phase of their procurement Process.
- d) The Responsible Entity shall ensure that all Cyber Assets being procured shall conform to the type tests as mentioned in the specification for type testing listed in the bid document. Type test reports of tests conducted in NABL accredited Labs or internationally accredited labs (with in last 5 years from the date of bid opening) shall be mandated to be submitted along with bid. In case, the submitted Type Test reports are not as per specification, the re-tests shall be conducted without any cost implication to the Responsible Entity.
- e) The Responsible Entity shall ensure that all Communicable devices are tested for communication protocol as per the ISO/IEC/IS standards listed in **MoP Order No. 12/13/2020-T&R dated 8<sup>th</sup> June, 2021(Annexure-B).**
- f) The Responsible Entity shall ensure that all Critical Systems designed with Open Source Software are adequately cyber secured.
- g) The Responsible Entity as a best practise upon any incidence of Cyber Security Breach shall carry out cyber security tests at any lab designated for cyber testing by Ministry of Power. These tests shall be similar to Pre Commissioning Security Test and those essential for carrying out Post Incident Forensics Analysis.

### **Article 14 Cyber Security Audit**



- a) The Responsible Entity shall implement Information Security Management System (ISMS) covering all its Critical Systems.
- b) The Responsible Entity shall through a CERT-In Empanelled Cyber Security OT Auditor shall get their IT as well as OT System audited at least once in every 6 (six) months and shall close all critical and high vulnerabilities within a period of one month and medium as well as low non-conformity before the next audit. Effective closure of all non-conformities shall be verified during the next audit.
- c) The Cyber Security Audit shall be as per ISO/IEC 27001 along with sector specific standard ISO/IEC 27019, IS 16335 and other guidelines issued by appropriate Authority if any. These mentioned standards shall be current with all amendments if any and in case if any standard is superseded, the new standard shall be applicable. CISO shall ensure immediate closure of non-conformance, based on the criticality and by means all non-conformances are to be closed before the next audit.
- d) The Responsible Entity shall ensure that CISO has all the required systems and documents in place, as mandated by NSCS for base line cyber security audit.

## FAT & SAT

1. During FAT stage, the customer has to verify all types test reports / certificates including Communication protocol and security conformance tests of the devices offered for FAT.
2. FAT of SCADA involves testing as a whole system in the integrated scale down set up. For SCADA, Indian standard IS 15953: 2011 “SCADA System for Power System Applications” provides definition and guidelines for the specification, performance analysis and application of SCADA systems for use in electrical utilities (for transmission & Distribution) including guidance on Tests and inspections.
3. The SAT will be done at customer site as per the SAT document mutually agreed by buyer and supplier. For SAT also, guidance from IS 15953: 2011 need to be applied.
4. IEC 61850-10-3 Communication Networks and Systems For Power Utility Automation- Functional testing of IEC 61850 systems (in draft stage - CDTR) covers testing of applications within substations covering
  - a. A methodical approach to the verification and validation of a substation solution
  - b. The use of IEC 61850 resources for testing in Edition 2.1
  - c. Recommended testing practices for different use cases
  - d. Definition of the process for testing of IEC 61850 based devices and systems using communications instead of hard wired system interfaces (ex. GOOSE and SV instead of hardwired interfaces)
  - e. Use cases related to protection and control functions verification and testing.

This standard may be used as a guidelines for FAT & SAT for Substation Automation System (SAS) based on IEC 61850.

**Annexure - B**

**Annexure – 1**

**List of designated laboratories for cyber security conformance testing**

**Table -A. Field Equipment /Operational Technology (OT)**

<b>Sl. No.</b>	<b>Equipment</b>	<b>Communication Protocol Conformance Standards</b>	<b>Protocol Security Conformance Standards</b>	<b>Designated Laboratories</b>
1	Remote Terminal Units (RTUs) & PLCs with IEC communications protocols	IEC 60870-5 -101 / IEC 60870-5 -104 (Test Details Annexure 2)	IEC 60870-5- 7 Security extension & IEC 62351 series (specifically IEC 62351-100 parts 1 & 3) ( Test Details Annexure-2	Central Power Research Institute (CPRI), Prof Sir C V Raman Road, Sadashivanagar P O, Bengaluru – 560080, Karnataka
2	Intelligent Electronic Equipment / Numerical Protection Relays / Bay Control Units / Bay Protection Units, Gateways, Transformer Tap controller/ changer, etc. with IEC 61850 communication protocol	IEC 61850 – 5 to IEC 61850 – 10  ( Test Details Annexure 2)		CPRI
3	Smart meters with IEC 62056 communication protocols	IEC 62056 series / DLMS & IS 15959 series and IS 16444 series ( Test details Annexure 2)	IEC 62056 series / DLMS & IS 15959 series and IS 16444 series (Test Details Annexure 2)	1. CPRI 2. Electrical Research and Development Association (ERDA), ERDA Road, GIDC, Makarpura, Vadodara - 390 010 Gujarat 3. Yadav Measurements Pvt. Ltd. (YMPL) 373-375, RIICO Bhamashah Industrial Area Kaladwas 313003 Udaipur – Rajasthan

**Information Technology (IT) Equipment (Main / Backup / Disaster recovery (DR) Control Centre / Substation control centre IT equipment)**

All IT products procured /supplied shall have a valid Certificate of Common Criteria as per ISO/IEC 15408 issued by signatories of the Common Criteria Recognition Agreement (CCRA) ([www.commoncriteriaportal.org](http://www.commoncriteriaportal.org)).

Import/procurement/supplied from vendors sourcing from prior reference countries, the Certificate for Common Criteria shall be from Government Laboratories in India according to the IC3S scheme operated by Ministry of Electronics and Information Technology, which is a signatory to CCRA.

<https://www.commoncriteria-india.gov.in/>

## Details of tests for various identified products

### Remote Terminal Units (RTUs) (Sl. No. 1 of Table – A of Annexure – 1)

#### Test protocol:

Utilities / manufacturers will submit the sample along with all the required technical documentation for taking up testing to the designated laboratory.

#### Reference standards

- 1) IEC 60870-5-101 & IEC 60870-5-104 as applicable
- 2) IEC 60870-5-7 Telecontrol equipment and systems - Part 5-7: Transmission protocols - Security extensions to IEC 60870-5-101 and IEC 60870-5-104 protocols (applying IEC 62351)
- 3) IEC 62351-100-1 & IEC 62351-100-3 and other cross referenced standards.

#### Test cases

##### Extract from standard (IEC 62351-100-1)

The conformance test cases are divided into four clauses:

- Clause 5: Verification of configuration parameters. This clause contains the configuration parameters affecting the message contents and/or the protocol behaviour.
- Clause 6: Verification of communication. The goal of this clause is to verify that Device Under Test (DUT) is able to implement the security extension messages as described in IEC TS 60870-5-7.
- Clause 7: Verification of procedures. The goal of this clause is to verify that DUT is able to execute the security extension procedures as described in IEC TS 62351-5.
- Clause 8: Test result chart. This clause contains the results of the test cases listed in Clauses 6 and 7 for each supported value of the configuration parameters listed in Clause 5.

The test cases are organized in tables. They are numbered; their numbering syntax is: Subclause number (where the Table is located) + test case number.

In the column ‘reference’ each test case has a direct reference to IEC TS 62351-5 or IEC TS 60870-5-7 where the clause under test is defined.

Test cases are mandatory depending on the description in the column ‘Required’. The following situations are possible:

M= Mandatory test case. The test is referencing a clause that is mandatory in IEC TS 62351-5 or IEC TS 60870-5-7.

Protocol Information Conformance Statement (PICS) x, x = Mandatory test case if the functionality is enabled in the PICS (by marking the applicable check box), with a reference to the section number of the PICS (x.x).

## Conformance testing of security extension procedures

The security extension procedures can be summarized as follows:

- User management
- Update key maintenance
- Session key maintenance
- Challenge/Reply authentication
- Aggressive Mode authentication

### Extract from standard (IEC 62351-100-3)

IEC 62351-3 defines the requirements related to the authentication/encryption protocol, procedures and methods to be implemented at TCP/IP (transport) level.

The conformance test cases are divided into three clauses:

- Clause 5: Verification of configuration parameters. This clause contains the parameters specified by the standards referencing IEC 62351-3 (see IEC 62351-3:2014/AMD1:2018, Clause 7) and affecting the protocol behaviour.
- Clause 6: Verification of IEC 62351-3 requirements. The goal of this clause is to verify that DUT is conformant to the requirements of the IEC 62351-3.
- Clause 7: Test result chart. This clause contains the results of the test cases listed in Clause 6 for each supported value of the configuration parameters listed in Clause 5.

The test cases are organized in tables. They are numbered, their numbering syntax is: Subclause number (where the table is located) + test case number.

In the column 'Reference' each test case has a direct reference to IEC 62351-3 where the clause under test is defined. PICS or Protocol Implementation eXtra Information for Testing (PIXIT) could be found in the "Reference" column for some test cases whenever the execution of the test case shall take into account specific parameter values declared in the PICS or PIXIT of the DUT.

Test cases are mandatory depending on the description in the column 'Required'. The following situations are possible:

M = Mandatory test case. The test is referencing to a clause that is mandatory in IEC 62351-3.

PICS

or

PIXIT = Mandatory test case if the functionality is enabled in the PICS or PIXIT by marking the applicable check box or declaring the applicable value.

### **Intelligent Electronic Devices (IEDs) (Sl. No. 2 of Table – A of Annexure – 1)**

Utilities / manufacturers will submit the sample along with all the required technical documentation for taking up testing to the designated laboratory.

#### **Reference standards**

IEC 61850 series

Specifically IEC 61850-5, IEC 61850-6, IEC 61850-7, IEC 61850-8, IEC 61850-9 and IEC 61850-10

#### **Test cases**

Communication protocol conformance as per IEC 61850 -10. This part of standard defines methods and abstract test cases for conformance testing of client, server and sampled values devices used in power utility automation systems, the methods and abstract test cases for conformance testing of engineering tools used in power utility automation systems, and the metrics to be measured within devices according to the requirements defined in IEC 61850-5. Further this part of standard specifies standard techniques for testing of conformance of client, server and sampled value devices and engineering tools, as well as specific measurement techniques to be applied when declaring performance parameters. The use of these techniques will enhance the ability of the system integrator to integrate IEDs easily, operate IEDs correctly, and support the applications as intended.

### **Smart Meters (Sl. No. 3 of Table – A of Annexure – 1)**

Utilities / manufacturers will submit the sample along with all the required technical documentation for taking up testing to the designated laboratory.

IEC 62056 series of standards (Electricity metering data exchange – The DLMS/COSEM suite) specifies details of communication protocol requirements, conformance testing and security requirements. The Part 5-3 (DLMS/COSEM application layer) specifies the DLMS/COSEM application layer in terms of structure, services and protocols for DLMS/COSEM clients and servers, and defines rules to specify the DLMS/COSEM communication profiles. It defines services for establishing and releasing application associations, and data communication services for accessing the methods and attributes of COSEM interface objects, defined in IEC 62056-6-2 using either logical name (LN) or short name (SN) referencing.

Clause 5 and sub clauses specifies security requirements. It cover security concepts, Identification and authentication, Cryptographic algorithms, Cryptographic keys – overview, Key used with symmetric key algorithms, Keys used with public key algorithms and Applying cryptographic protection.

**Note:** All above referred standards shall be latest with amendments if any at the time of submission of sample(s) for testing.

## **Testing Criteria**

### **1) Supply from Trusted Sources**

The sample size shall be as specified by CEA as per the approved criteria for Trusted Vendors

### **2) Supply from other than trusted vendors**

The sample size shall be shall be 5% of the supply lot / ordered quantity (minimum one). The manufacturer shall submit request to the Nodal agency along with vendor's / manufacturer's certifications for supply chain management system practices and secure product development process implementations based on any one or more of standards ISO / IEC 27036, ISO / IEC 20243, IEC 62443 for verification.

After scrutiny of vendor's / manufacturer's certifications the supplier / utilities shall be asked to submit product to the designated laboratory for communication and cyber security conformance testing.

The supply lot shall stand rejected on failure to comply with the test requirements.

### **3) Supply from prior reference countries**

The utility shall obtain prior permission from the Government of India for importing the product / system from prior reference countries.

The sample size shall be shall be 10 % of the supply lot / ordered quantity (minimum one). The manufacturer shall submit request to the Nodal agency along with vendor's / manufacturer's certifications for supply chain management system practices and secure product development process implementations based on any one or more of standards ISO / IEC 27036, ISO / IEC 20243, IEC 62443 for verification.

After scrutiny of vendor's / manufacturer's certifications the supplier / utilities shall be asked to submit product to the designated Government / Government controlled Autonomous laboratory for type tests (Annexure – 4) and communication & cyber security conformance testing.

The supply lot shall stand rejected on failure to comply with the test requirements.



**Type Tests**

Products imported from prior reference countries shall also undergo type testing as per following standards in addition to communication protocol and security conformance testing at the designated Government / Government controlled Autonomous laboratory:

**Type test standards for RTUs**

1. IEC 60870-1-2:1989 Telecontrol equipment and systems. Part 1: General considerations. Section Two: Guide for specifications.
2. IEC 60870-2-1:1995 Telecontrol equipment and systems - Part 2: Operating conditions - Section 1: Power supply and electromagnetic compatibility.
3. EC 60870-2-2:1996 Telecontrol equipment and systems - Part 2: Operating conditions -Section 2: Environmental conditions (climatic, mechanical and other non-electrical influences).
4. IEC 60870-3:1989 Telecontrol equipment and systems. Part 3: Interfaces (electrical characteristics)

**Type test standard for IEDs / Numerical Protection Relays / Bay controls units**

1. IEC 61850-3: 2013, Ed. 2 Communication networks and systems for power utility automation – Part 3: General requirements.

**Type test standards for Smart meters**

1. IS 16444: 2015 AC static direct connected watthour smart meter class 1 and 2 – Specification.
2. IS 16444 Part 2: 2017 AC static transformer operated watthour and var - Hour smart meters, class 0.2 S, 0.5 S and 1.0 S: Part 2 specification transformer operated smart meters.

**Note:**

1. All above referred standards shall be latest with amendments if any at the time of submission of sample(s) for testing.
2. Type tests generally covers functionality, environmental, mechanical, EMI/ EMC and electrical safety related tests.



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 भारत हेवी इलेक्ट्रिकल्स लिमिटेड

**Bharat Heavy Electricals Limited**

(A Government of India Undertaking)

ELECTRONICS DIVISION

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

PHONE : 080-26998281

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E-MAIL : prakashdevadas@bhel.in

Ref: GM-NTPC/404/CE-HMI-02

Dated 21/09/2022

Sub: Recommendation for HMI Upgrade

The Windows XP/ Windows 7 based workstation hardware and Microsoft Operating System available at sites (projects listed in annexure-1) is out of mainstream support from OEM and Microsoft respectively. Also the support for Symantec Antivirus version 10.0 has been withdrawn by the OEM and no more security updates / virus definitions are available for that version. Hence the HMIs-maxStations are prone to vulnerabilities which can tamper the operation of plant.

HMI Upgrade for the projects mentioned in Annexure-1 is proposed due to various obsolescence in the DCS components as detailed below.

DCS Component		Existing version / model / Specification	Obsolescence
Workstation / Engineering server / Historian server	Hardware	<b>Workstation:</b> Intel Core 2 Duo processor, 1GB RAM, 146 GB SAS disk, 10 Mbps Ethernet port. <b>Server:</b> Intel Xeon dual core processor, 2 GB RAM, 3x76GB HDD, 10 Mbps Ethernet port.	Lower Processor cores and speed, lower HDD capacity and RAM requirements incompatible for latest software requirements; Lower network bandwidth of 10Mbps restricting communication speed capability of latest DCS components and attributing to latency.
	Operating System	Windows 7 SP1 / Windows XP / Windows Server 2008 R2	Operating Systems were declared End of Support by the OEM- Microsoft as mentioned below: Windows XP - April' 2014 Windows 7 - Jan' 2020 Windows Server 2008 R2 - Jan' 2020
	maxDNA software	maxDNA 4.2.1 / 4.5 / 4.5.1 / 6.0.x	These versions are not compatible with latest Operating Systems; more improved version of maxDNA- release 7.x is available suiting the latest OS.
	Antivirus Software	Symantec 10.x / Symantec 11.x / Symantec 12.x	Declared obsolete by the OEM- Broadcom and no longer updates or virus definitions are available.



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Network	Switch	10 Mbps backbone	Lower network bandwidth of 10Mbps restricting communication speed capability of latest DCS components.
	Network Hardening settings	No validated Network hardening settings	Not suitable for latest network requirements with hardening features.

Prakash D  
AGM (CE-Engg-I)

Annexure-1 List of upgrade projects	
Sl No	Project Name
1	Barauni_Stage-2
2	Bongaigaon_Stage-1
3	Dadri-Thermal_Stage-1
4	Dadri-Thermal_Stage-2
5	Darlipalli_Stage-1
6	Farakka_Stage-2
7	Farakka_Stage-3
8	Gadarwara_Stage-1
9	KoldamHydro
10	Korba_Stage-1
11	Korba_Stage-3
12	Mauda_Stage-1
13	Mauda_Stage-2
14	NorthKaranpura_Stage-1
15	Rihand_Stage-2
16	Rihand_Stage-3
17	Simhadri_Stage-2
18	TANDA_Stage-1
19	TANDA_Stage-2
20	Unchahar_Stage-4
21	Vindhyachal_Stage-4
22	Vindhyachal_Stage-5
23	BRBCL Stage-I
24	Jhajjar Stage-I
25	KBUNL Stage-I
26	KBUNL Stage-II
27	NPGCL Stage-I
28	NSPCL Bhilai Stage-I
29	NTECL Stage-I



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### **List of abbreviations:**

1.	APTEL	-	Appellate Tribunal for Electricity
2.	CEA	-	Central Electricity Authority
3.	CERC	-	Central Electricity Regulatory Commission
4.	CIL	-	Coal India Limited
5.	COD	-	Commercial Operation Date
6.	CSA	-	Coal Supply Agreement
7.	DISCOMS	-	Distribution Companies
8.	ECL	-	Eastern Coalfield Limited
9.	EFC	-	Evacuation Facility Charges
10.	FSA	-	Fuel Supply Agreement
11.	GCV	-	Gross Calorific Value
12.	LoA	-	Letter of Assurance
13.	LPS	-	Late Payment Surcharge
14.	MAT	-	Minimum Alternate Tax
15.	MCL	-	Mahanadi Coalfield Limited
16.	MERC	-	Maharashtra Electricity Regulatory Commission
17.	MoC	-	Ministry of Coal
18.	MoP	-	Ministry of Power
19.	MSEDCL	-	Maharashtra State Electricity Distribution Company Limited
20.	NCDP	-	New Coal Distribution Policy
21.	PPAs	-	Power Purchase Agreements
22.	RFP	-	Request for Proposal
23.	SBAR	-	State Bank Advance Rate
24.	SECL	-	South Eastern Coal Limited
25.	SHAKTI	-	Scheme for Harnessing and Allocating Koyala (Coal) Transparently in India
26.	SHR	-	Station Heat Rate
27.	TANGEDCO-	-	Tamil Nadu Generation and Distribution Corporation
28.	UHV	-	Useful Heat Value

## J U D G M E N T

**B.R. GAVAI, J.**

### **I. INTRODUCTION**

1. When we heard this batch of Electricity appeals, it was agreed between all the parties that this Court should first decide Civil Appeal No. 684 of 2021 (**Maharashtra State Electricity Distribution Company Limited v. Adani Power Maharashtra Limited & Ors.**<sup>1</sup>) [*“MSEDCL v. APML & Ors.”* for short] and Civil Appeal No. 6927 of 2021 (**Maharashtra State Electricity Distribution Company Limited v. GMR Warora Energy Ltd. & ors.**), inasmuch as three of the issues involved in all the appeals in the batch were common. It was submitted that those two appeals could be decided by deciding the three common issues. However, insofar as the other appeals are concerned, it was submitted that, in addition to the three common issues, certain

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<sup>1</sup> 2023 SCC OnLine 233

additional issues were also involved and it was agreed that after those two appeals are decided, the other appeals should be heard for considering these additional issues.

**2.** The said three common issues are thus:

- (i) Whether 'Change in Law' relief on account of New Coal Distribution Policy, 2013 ("NCDP 2013" for short) should be on 'actuals' viz. as against 100% of normative coal requirement assured in terms of New Coal Distribution Policy, 2007 ("NCDP 2007" for short) OR restricted to trigger levels in NCDP 2013 viz. 65%, 65%, 67% and 75% of ACQ?
- (ii) Whether for computing 'Change in Law' relief, the operating parameters should be considered on 'actuals' OR as per technical information submitted in bid?
- (iii) Whether 'Change in Law' relief compensation is to be granted from 1<sup>st</sup> April 2013 (start of Financial Year) or 31<sup>st</sup> July 2013 (date of NCDP 2013)?



3. After extensively hearing all the learned counsel for the parties, vide the judgment and order dated 3<sup>rd</sup> March 2023 in the case of **MSEDCL v. APML & Ors.** (supra), this Court decided those two appeals after considering the aforesaid three issues.

4. The first issue was answered by this Court, holding that the ‘Change in Law’ relief for domestic coal shortfall should be on ‘actuals’, i.e. as against 100% of normative coal requirement assured in terms of the NCDP, 2007. Insofar as the second issue is concerned, it was held that the Station Heat Rate (“SHR” for short) and Auxiliary consumption should be considered as per the Regulations or actuals, whichever is lower. The third issue was answered holding that the Start date for the ‘Change in Law’ event for the NCDP, 2013 is 1<sup>st</sup> April 2013.

5. After we decided those appeals, we have heard the present appeals in which some of the issues which were decided by us vide the said judgment in the case of **MSEDCL v. APML & Ors.** (supra) also arose for consideration along with other issues. However, most of the issues in all these appeals are overlapping

and, therefore, we propose to decide these appeals by this common judgment.

## **II. BRIEF FACTS AND SUBMISSIONS**

### **Civil Appeal No. 11095 of 2018 and Civil Appeal Nos. 11910-11911 of 2018**

6. These cross appeals challenge the common judgment and order dated 14<sup>th</sup> August 2018 passed by the learned Appellate Tribunal for Electricity, New Delhi (hereinafter referred to as “APTEL”) in Appeal No. 111 of 2017 & I.A. No.450 of 2018 and in Appeal No.290 of 2017 & I.A. No.519 of 2017.

7. Civil Appeal No.11095 of 2018 is filed by GMR Warora Energy Ltd. (hereinafter referred to as “GWEL”/”Generator”) to the extent it was denied compensatory benefits on certain components on the ground of ‘Change in Law’.

8. Civil Appeal Nos. 11910-11911 of 2018 have been filed by DNH Power Distribution Co. Ltd. (DPDCL) (hereinafter referred to as “DNH-DISCOM”), being aggrieved by the order of the learned

APTEL accepting the claim of GWEL on certain issues and holding the same to be 'Change in Law'.

**9.** The facts, in brief, giving rise to these appeals are as under:

**10.** GWEL had set up a Thermal Power Station at Warora, District Chandrapur in the State of Maharashtra with an installed capacity of 600 MW (2 x 300 MW). The Commercial Operation Date ("COD" for short) of Unit 1 was 19<sup>th</sup> March 2013 and that of Unit 2 was 1<sup>st</sup> September 2013.

**11.** GWEL had entered into long term Power Purchase Agreements ("PPAs" for short) with DNH-DISCOM for supply of 200 MW power to Maharashtra State Electricity Distribution Company Limited ("MSEDCL" for short) on 17<sup>th</sup> March 2010 ["MSEDCL PPA") and for supply of 200 MW power on 21<sup>st</sup> March 2013 ("DNH PPA"), after it emerged as the successful bidder for supply of power to MSEDCL/ DNH-DISCOM. The Scheduled delivery date under the MSEDCL PPA was 17<sup>th</sup> March 2014, whereas under the DNH PPA, it was 1<sup>st</sup> April 2013. GWEL is also supplying 150 MW power from its power plant to Tamil Nadu

Generation and Distribution Corporation (“TANGEDCO” for short) by way of back-to-back arrangement with trading company GMR Energy Trading Limited, for which purpose, a PPA was signed on 27<sup>th</sup> November 2013 (“TANGEDCO PPA”).

**12.** In terms of the PPAs, the cut-off date, which is 7 days prior to the bid deadline, is to be considered for the purpose of claims under ‘Change in Law’. Following are the cut-off dates under the said PPAs.

	DNH PPA	MSEDCL PPA	TANGEDCO PPA
Cut-off date	1.6.2012	31.7.2009	27.2.2013

**13.** Certain ‘Change in Law’ events occurred with regard to MSEDCL PPA and DNH PPA after the cut-off date. The same were notified by GWEL to MSEDCL/ DNH-DISCOM.

**14.** GWEL filed Petition No. 8/MP/2014 before the Central Electricity Regulatory Commission (hereinafter referred to as “CERC”) seeking relief for ‘Change in Law’.

**15.** Vide Order dated 1<sup>st</sup> February 2017, certain claims were allowed and certain claims were disallowed by the CERC.

**16.** The claims which were allowed by the CERC are thus:

- “i. Increase in CVD from 8% to 10% and 10% to 12%;
- ii. Increase in Excise Duty;
- iii. Increase in Service Tax;
- iv. Increase in other taxes [Work Contract Tax (WCT), VAT, CST];
- v. Change in Excise Duty on coal;
- vi. Increase in the rate of Royalty on coal;
- vii. Levy of Clean Energy Cess by Government of India (Gol);
- viii. Increase in service tax on transportation of goods by IR;
- ix. Levy of Swachh Bharat Cess.”

**17.** The claims which were disallowed by the CERC are thus:

- “i. Withdrawal of deemed export benefit by DGFT;

- ii. Design changes in Coal Handling Plant (CHP);
- iii. Increase in the rate of Minimum Alternate Tax (MAT);
- iv. Increase in Busy Season Surcharge and Development surcharge on transportation of coal by Indian Railways (IR);
- v. Increase in sizing charges and surface transportation charges by Coal India Ltd. (CIL);
- vi. Increase in operating cost on account of specification of coal quality to be used for the TPS;
- vii. Change from UHV to GCV based pricing of coal;
- viii. Incremental increase in Interest on Working Capital (IWC) on account of increase in Project costs.”

**18.** Being aggrieved by the judgment and order passed by the CERC, cross-appeals were filed by both GWEL and DNH-DISCOM.

**19.** Vide the impugned judgment, the learned APTEL, while concurring with the view of CERC on the claims allowed by it,

further allowed the claims on the ground of 'Change in Law' on the following components:

- (i) Busy Season Surcharge and Development Surcharge;
- (ii) Ministry of Environment and Forest ("MoEF") Notification on coal quality; and
- (iii) Change in NCDP and Carrying Cost.

**20.** However, the rest of the claims were disallowed by the learned APTEL, concurring with the view taken by the CERC. Insofar as the appeal filed by DNH-DISCOM is concerned, the same was dismissed by the learned APTEL. Hence, these cross-appeals.

**21.** We have heard Mr. Vishrov Mukherjee, learned counsel appearing on behalf of the GWEL and Mr. Samir Malik, learned counsel appearing on behalf of MSEDCL and Mr. M.G. Ramachandran, learned Senior Counsel appearing on behalf of the DNH-DISCOM.

**22.** Mr. Vishrov Mukherjee submits that the learned APTEL has erred in disallowing the claim on the following items:

- (i) Withdrawal of Deemed Export Benefit by way of Circular dated 28<sup>th</sup> December 2011 and Notification dated 28<sup>th</sup> December 2011 issued by the Directorate General of Foreign Trade (“DGFT”) and amendment to the Foreign Trade Policy dated 21<sup>st</sup> March 2012;
- (ii) Imposition of Crushing/Sizing charges and Surface Transportation Charges by Notification dated 15<sup>th</sup> October 2009;
- (iii) Change in system of classification of coal by Coal India Limited (“CIL” for short) from Useful Heat Value (“UHV” for short) to Gross Calorific Value (“GCV” for short) system of pricing by way of Notification dated 30<sup>th</sup> December 2011;
- (iv) Increase in levy of Minimum Alternate Tax (“MAT” for short) pursuant to amendment of Section 115JB of the Income Tax Act, 2012;



- (v) Design changes in Coal Handling Plant in terms of letter issued by the Central Electricity Authority (“CEA” for short) dated 19<sup>th</sup> April 2011;
- (vi) Increase in working capital.

**23.** It is submitted that all these changes have taken place on account of the Notifications/Orders/Circulars issued by the instrumentalities of the State and as such, the learned APTEL ought to have allowed the claim for compensation on account of ‘Change in Law’ on the aforesaid items also.

**24.** It is submitted that the compensation on account of the ‘Change in Law’ is based on the principle of restitution so as to put back the party to the same economic position it was in, had the ‘Change in Law’ event not taken place. However, this has not been considered in the correct perspective by the learned APTEL.

**25.** Learned counsel appearing on behalf of the DNH-DISCOM and MSEDCL, on the contrary, submit that the learned APTEL has erred in considering the Busy Season Surcharge and

Development Surcharge, MoEF Notification on coal quality, Change in NCDP and Carrying Cost as ‘Change in Law’ events. He submits that when the Generator had submitted its bid, it was aware that there was a likelihood of variations on certain payments to be made and the same were factored in while submitting the bid. It is, therefore, submitted that the learned APTEL erred in granting ‘Change in Law’ benefits on the said issues.

**Civil Appeal Nos. 4628-4629 of 2021**

**26.** These appeals have been filed by Uttar Haryana Bijli Vitran Nigam Limited and Dakshin Haryana Bijli Vitran Nigam Limited (hereinafter referred to as “Haryana Discoms”) challenging the common judgment and order dated 7<sup>th</sup> June 2021 passed by the learned APTEL in Appeal No.158 of 2017 & I.A. No.575 of 2018 and Appeal No. 316 of 2017. Appeal No.158 of 2017 & I.A. No.575 of 2018 were filed by Adani Power (Mundra) Limited (hereinafter referred to as “AP(M)L”), being aggrieved by the order passed by the CERC dated 6<sup>th</sup> February 2017, whereby the CERC

had denied certain claims for compensation on certain components on account of ‘Change in Law’, whereas Appeal No.316 of 2017 was filed by Haryana Discoms challenging grant of claim of compensation on certain components on the ground of ‘Change in Law’.

**27.** The Chart of claims which were allowed and disallowed by the CERC is as under:

“107. Based on the above analysis and decisions, the summary of our decision under the Change in Law during the operating period of the project is as under:

<b>Components</b>	<b>Change in Law Event</b>
Change in Rate of Royalty	Allowed
Levy of Central Excise Duty subject to directions in para 32 of the order	Allowed
Levy of Clean Energy Cess	Allowed
Levy of Customs Duty on energy removed from SEZ to DTA	Allowed
Increase in Busy Season Surcharge on transportation of coal	Not Allowed

Increase in Development Surcharge on transportation of coal	Not Allowed
Levy of Service Tax on transportation of coal	Allowed
Levy of Green Energy Cess in Gujarat	Liberty granted to approach after Hon`ble Supreme Court's Decision
Increase in Sizing Charges of coal	Not Allowed
Increase in Surface Transportation	Not Allowed
Change in pricing of coal from UHV to GCV basis	Not Allowed
Change in class from 140 to 150 for Railway freight for coal for trainload movement	Not Allowed
Levy of Minimum Alternate Tax on plants situated in SEZ	Not Allowed
Linking railway tariff revision with movement in cost of fuel	Not Allowed
Imposition of Swachh Bharat Cess	Allowed
Payment to National Mineral Exploration Trust	Allowed

Payment to District Mineral Foundation	Allowed
Installation of FGD as per Environmental clearance dated 20.5.2010  Auxiliary consumption due to FGD installation affecting capacity charges  Additional operating expenditure on FGD	Not decided and liberty granted
Carrying cost	Not Allowed

”

**28.** Being aggrieved by the order of the CERC, cross-appeals were filed by AP(M)L so also by Haryana Discoms before the learned APTEL. The Haryana Discoms challenged that part of the order of the CERC which allowed claim on components on the ground of ‘Change in Law’, whereas AP(M)L challenged that part of the order of the CERC which disallowed its claim on various components.

**29.** Though AP(M)L had sought 'Change in Law' compensation on various components, the same was allowed by the learned APTEL by the impugned order only on the ground of:

- (i) 'Busy Season Surcharge and Developmental Surcharge on transportation of coal', and
- (ii) 'Carrying Cost'.

**30.** The claim of AP(M)L pertaining to increase in Surface Transportation Charges so also Sizing Charges of coal were denied by the learned APTEL, concurring with the view taken by the CERC.

**31.** Being aggrieved by the orders passed by the CERC and the learned APTEL allowing 'Change in Law' on certain components, the Haryana Discoms have approached this Court.

**32.** We have heard Ms. Poorva Saigal, learned counsel appearing on behalf of the Haryana Discoms and Dr. A.M. Singhvi, learned Senior Counsel appearing on behalf of AP(M)L.

**33.** Ms. Poorva Saigal submits that the learned APTEL grossly erred in reversing the well-reasoned findings of the CERC on the issue of Busy Season Surcharge and Developmental Surcharge on transportation of coal. She, therefore, submits that the finding of the learned APTEL with regard to the same needs to be set aside.

**34.** Dr. A.M. Singhvi, on the contrary, submits that the Busy Season Surcharge as well as the Developmental Surcharge are revised as per the Notifications/Circulars issued by the Ministry of Railways and as such, they would come within the definition of 'Change in Law'.

**Civil Appeal Nos. 12055-12056 of 2018**

**35.** These appeals, filed by Jaipur Vidyut Vitran Nigam Ltd., Ajmer Vidyut Vitaran Nigam Ltd. and Jodhpur Vidhyut Vitaran Nigam Ltd. (hereafter referred to as "Rajasthan Discoms"), challenge the common judgment and order dated 14<sup>th</sup> August 2018, passed by the learned APTEL in Appeal No. 119 of 2016 &

I.A. Nos. 668 and 674 of 2016 and in Appeal No.277 of 2016 & I.A. No.572 of 2016.

**36.** Appeal No. 119 of 2016 & I.A. Nos. 668 & 674 of 2016 were filed by M/s Adani Power Rajasthan Ltd. (“APRL” for short), being aggrieved by the judgment and order dated 15<sup>th</sup> March 2016, passed by the Rajasthan Electricity Regulatory Commission (hereinafter referred to as “State Commission”) thereby disallowing some of its claims on account of ‘Change in Law’, whereas Appeal No. 277 of 2016 and I.A. No.572 of 2016 were filed by the Rajasthan Discoms, being aggrieved by the order of the State Commission of the same date vide which some of the ‘Change in Law’ claims were allowed by the CERC.

**37.** The ‘Change in Law’ claims which were allowed by the State Commission are as under:

- i. Change in Rate of Royalty Payable on Domestic Coal;
- ii. Levy of Service Tax on Transportation of Goods by Indian Railways (IR); and
- iii. Increase in Fee for ‘Consent to Operate’.



**38.** The ‘Change in Law’ claims which were not allowed by the State Commission are thus:

1.	Change in Pricing Mechanism of Coal from Useful Heat Value (UHV) Basis to Gross Calorific Value Basis (GCV)
2.	Increase in Sizing Charges for coal charged by Coal India Ltd. (CIL)
3.	Increase in Surface Transportation Charges
4.	Increase in Busy Season Surcharge on Transportation of Coal by Indian Railways
5.	Increase in Development Surcharge levied on Transportation of Coal by Railways
6.	Levy of Fuel Adjustment Component
7.	Levy of Port Congestion Surcharge
8.	Levy of Forest Tax
9.	Change in Classification of Coal for Train Load Movement

**39.** Vide the impugned judgment, the learned APTEL dismissed the appeal of the Rajasthan Discoms and partly allowed the appeal of APRL allowing its claims on the ground of ‘Busy Season

Surcharge’, ‘Development Surcharge’, ‘Port Congestion Surcharge, ‘Forest Tax’ and ‘Carrying Cost’. Being aggrieved thereby, the Rajasthan Discoms have approached this Court.

**40.** We have heard Mr. V. Giri, learned Senior Counsel appearing on behalf of the Rajasthan Discoms and Dr. A.M. Singhvi, learned Senior Counsel appearing on behalf of the APRL.

**41.** Mr. V. Giri submits that clause 10 in the PPA is referable only to taxes under Article 268 of the Constitution of India. He submits that the learned APTEL has, therefore, erred in allowing ‘Change in Law’ benefits on the issues related to Busy Season Surcharge, Development Surcharge, Port Congestion Charges, Forest Tax and Carrying Cost which are not taxes referable to Article 268 of the Constitution.

**42.** Dr. Singhvi made arguments on similar lines as have been made in the other appeals.

**Civil Appeal Nos. 2935-2936 of 2020**

**43.** These appeals have been filed by the Rajasthan Discoms and Rajasthan Urja Vikas Nigam Ltd. challenging the common

judgment and order dated 29<sup>th</sup> January 2020, passed by the learned APTEL in Appeal no.284 of 2017 and Appeal No. 09 of 2018.

**44.** Appeal No. 284 of 2017 was filed by APRL challenging the order dated 8<sup>th</sup> June 2017 passed by the State Commission, being aggrieved by the disallowance of its claim on some components on the ground of ‘Change in Law’ and carrying cost, whereas Appeal No.9 of 2018 was filed by Rajasthan Discoms being aggrieved by the claims which were allowed by the State Commission.

**45.** The list of the components which were allowed and which were not allowed on the ground of ‘Change in Law’ is thus:

“Sr. No.	Change in Law's items	Decision of the Commission
A	Levies on Royalty (i) National Mineral Exploration Trust effective from 14.08.2015 (ii) District Mineral Foundation effective from 12.01.2015	Allowed
B	Levy of Swachh Bharat Cess (SBC) along with Service Tax for rail	Allowed

	transportation effective from 15.11.2015	
C	Levy of Swachh Bharat Cess @0.5% along with Service Tax - Operation Period effective from 15.11.2015	Not Allowed
D	Levy of Krishi Kalyan Cess (KKC) along with Service Tax and Swachh Bharat Cess for rail transportation from 1st June 2016	Allowed
E	Levy of Krishi Kalyan Cess @0.5% along with Service Tax and Swachh Bharat Cess - Operation Period from 1 <sup>st</sup> June 2016.	Not Allowed
F	Amendment to Environmental (Protection) Rules 1986	Not Allowed
G	Levy of Coal Terminal Surcharge (CTS) effective from 22.08.2016	Not Allowed
H	Utilization of Fly Ash generated from coal and lignite based thermal power projects	Not Allowed
I	CG Paryavaran Upkar	Not Allowed
J	CG Vikas Upkar	Not Allowed
K	Service Tax on transportation of goods by a vessel from a place outside India up to the custom station of clearance in India	Not Allowed

L	Carrying Cost	Not Allowed”

**46.** As stated above, being aggrieved by that part of the order which disallowed its claim, APRL preferred the aforesaid Appeal before the learned APTEL, whereas the Rajasthan Discoms, being aggrieved by that part of the order which allowed claims on certain components, also filed an Appeal before the learned APTEL.

**47.** The learned APTEL, while dismissing the appeal of the Rajasthan Discoms, partly allowed the appeal of the APRL by allowing compensation on certain other components on the ground of ‘Change in Law’.

**48.** The components on which ‘Change in Law’ benefits were granted by the learned APTEL are thus:

- (i) Coal Terminal Surcharge;
- (ii) Chhattisgarh Paryavaran Upkar;
- (iii) Chhattisgarh Vikas Upkar;

- (iv) Change in Swacch Bharat Cess at the rate of 0.5% on Service Tax for Operation Period;
- (v) Change in Krishi Kalyan Cess at the rate 5% on Service Tax for Operation Period;

**49.** In addition to grant of relief on the ground of ‘Change in Law’, the learned APTEL also granted ‘Carrying Cost’.

**50.** Arguments similar to the ones advanced in Civil Appeal No. 12055-12056 of 2018 were advanced by Mr. V. Giri, learned Senior Counsel appearing on behalf of the Rajasthan Discoms, as well as by the learned counsel for the respondents.

**Civil Appeal No. 3123 of 2019 and Civil Appeal No.5372 of 2019**

**51.** These are cross appeals. Civil Appeal No.3123 of 2019 has been filed by Bihar State Power (Holding) Company Ltd. (hereinafter referred to as “Bihar Discoms”) and Civil Appeal No.5372 of 2019 has been filed by GMR Kamalanga Energy Limited and GMR Energy Limited (hereinafter referred to as “GKEL”), challenging the judgment and order dated 21<sup>st</sup>

December 2018 passed by the learned APTEL in Appeal No.193 of 2017 & I.A. No. 449 of 2018.

**52.** Appeal No.193 of 2017 & I.A. No.449 of 2018 were filed by GKEL challenging the order of the CERC dated 7<sup>th</sup> April 2017, aggrieved by the denial of its claims on certain components on the ground of 'Change in Law'. The Bihar Discoms have challenged that part of the order of the learned APTEL which allowed claims of GKEL on the ground of 'Change in Law'.

**53.** By the impugned order, the learned APTEL granted claims on the ground of:

- (i) Change in NCDP (cancellation of Captive Block vis-à-vis tapering linkage),
- (ii) busy season surcharge and developmental surcharge,
- (iii) carrying cost; and
- (iv) add on premium price.

**54.** We have heard Mr. Vishrov Mukerjee, learned counsel appearing on behalf of the GKEL/Generator and Ms. Anushree

Bardhan, learned Counsel appearing on behalf of the Bihar Discoms.

**55.** Mr. Vishrov Mukerjee submits that the learned APTEL as well as the CERC have grossly erred in rejecting the claim for compensation on the ground of:

- (i) change in source of coal from Mahanadi Coalfields Ltd. (“MCL” for short) to Eastern Coalfields Ltd. (“ECL” for short) vide Notification dated 26<sup>th</sup> February 2014 issued by the CIL;
- (ii) change in mode of transportation from rail to road vide Notification dated 29<sup>th</sup> September 2014 issued by MCL;
- (iii) increase in levy of Minimum Alternate Tax (“MAT” for short); and
- (iv) interest on working capital.

**56.** Learned counsel submitted that change in source of coal from MCL to ECL was on account of the notification issued by the CIL, which is an instrumentality of the State. Similarly, he



submitted that the change in mode of transportation from rail to road was on account of the notification issued by the MCL. Learned counsel submits that, since, on account of these notifications, the cost of transportation of coal increased, applying the restitutionary principle, the CERC as well as the learned APTEL ought to have granted claims on the basis of 'Change in Law'. He further submits that increase in levy of MAT has also been increased by the Union of India and, as such, the same would also amount to 'Change in Law'. It is further submitted that interest on working capital was also increased on account of the orders of the instrumentalities of the State and, as such, compensation also ought to have been granted for the same.

**57.** Learned counsel for the Bihar Discoms submits that the CERC as well as the learned APTEL have grossly erred in allowing claims on certain components on the ground of 'Change in Law'.

**Civil Appeal No. 6641 of 2019**

**58.** This appeal filed by GKEL arises out of the judgment and order dated 27<sup>th</sup> May 2019, passed by the learned APTEL in Appeal No.195 of 2016, thereby partly allowing the appeal.

**59.** GKEL filed Petition No.79/MP/2013 before the CERC claiming compensation on various component on the ground of ‘Change in Law’ events.

**60.** The CERC, vide order dated 3<sup>rd</sup> February 2016, disallowed compensation for the following components:

- (a) Change from UHV to GCV based pricing of coal pursuant to notification issued by the Government of India;
- (b) Increase/revision in the railway freight charges pursuant to notifications issued by Ministry of Railways and Ministry of Finance;
- (c) Increase in the rate of Minimum Alternate Tax (“MAT”) rates;

- (d) Increase in Value Added Tax in the State of Odisha;
- (e) Increase in water charges pursuant to notifications issued by the Government of Odisha;
- (f) Incremental increase in interest on working capital on account of increase in costs during the operating period.

**61.** Being aggrieved thereby, Appeal No.195 of 2016. was preferred by GKEL. As stated above, the learned APTEL partly allowed the appeal and held that GKEL was entitled to compensation on following grounds.

- (i) Increase/revision in the railway freight charges in terms of notifications issued by the Ministry of Railways and Ministry of Finance on account of imposition of development surcharge, busy season surcharge and service tax;
- (ii) VAT rate enhancement from 4% to 5% from 30.03.2012 onwards;

(iii) Carrying cost/interest on compensation on the above items after ascertainment of the same by computation, which shall be assessed from the date of respective notification/circular/order from the concerned Ministry/Department/Governmental instrumentality till payment is made.

**62.** Appellant-GKEL, being unsatisfied with the same, has approached this Court praying for a direction that it is also entitled to compensation on various other components, viz.,

- (i) Increase in Water Charges;
- (ii) Shift from UHV to GCV methodology of pricing of coal;
- (iii) Increase in rate of MAT; and
- (iv) Interest on working capital.

**63.** Arguments similar to the ones advanced in Civil Appeal No. 3123 of 2019 and Civil Appeal No.5372 of 2019 were advanced by the learned counsel for the parties.

**Civil Appeal Nos. 5583-5584 of 2021**

**64.** These appeals, filed by Bihar Discoms, arise out of the judgment and order dated 6<sup>th</sup> August 2021, passed by the learned APTEL in Appeal No. 423 of 2019 and in Appeal No.173 of 2021.

**65.** In the said case, the learned APTEL, vide order dated 21<sup>st</sup> December 2018, had allowed the following claims as ‘Change in Law’ and remanded the matter back to the CERC to determine compensation due to GKEL:

- (a) Shortfall in linkage coal and deviation in NCDP;
- (b) Cancellation of captive coal block;
- (c) Imposition of Busy Season Surcharge and Development Surcharge;
- (d) Levy of Add-On Premium over and above the notified price of coal; and
- (e) Carrying Cost.

**66.** Upon remand, the CERC passed order dated 16<sup>th</sup> September 2019, thereby granting compensation on certain components on the ground of 'Change in Law' including carrying cost.

**67.** Contending that the order passed by the CERC did not give effect to the 'Change in Law' components as directed by the learned APTEL, an appeal being Appeal No. 423 of 2019 came to be preferred by GKEL before the learned APTEL.

**68.** Bihar Discoms had also filed an appeal being Appeal No.173 of 2021, before the learned APTEL, being aggrieved by the benefits which were granted by the CERC.

**69.** By the impugned order, the learned APTEL held that the GKEL was entitled to recover expenditure involved in procurement of alternate coal due to shortfall in domestic coal supply corresponding to scheduled generation pertaining to the obligations under the Bihar PPA. The learned APTEL held that this was required to be done in order to restore the appellant-GKEL to the same economic position as before as if no 'Change in Law' event had occurred.

**70.** We have heard Ms. Anushree Bardhan, learned counsel appearing on behalf of the appellant-Bihar Discoms and Mr. Maninder Singh, learned Senior Counsel appearing on behalf of GKEL.

**71.** Ms. Anushree Bardhan submits that the learned APTEL ought to have granted benefit of 'Change in Law' restricting it to shortfall for only 894.5 MW, which was the amount specified in the PPA, and not for the entire 1050 MW, which is the installed capacity. She further submits that the learned APTEL had also erred in granting add on premium on account of extension of tapering linkage by three years.

**72.** Shri Maninder Singh, learned Senior Counsel submits that insofar as the first issue with regard to shortfall of coal supply is concerned, the same is squarely covered by the judgments of this Court in the cases of ***Energy Watchdog v. Central Electricity Regulatory Commission and others***<sup>2</sup>, ***Jaipur Vidyut Vitaran***

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<sup>2</sup> (2017) 14 SCC 80

***Nigam Ltd. and others v. Adani Power Rajasthan Limited and another***<sup>3</sup> (hereinafter referred to as “**Adani Rajasthan case**”) and ***MSEDCL v. APML & Ors.*** (supra).

**73.** He further submits that the delay in operationalization of the captive mines was not on account of any reason attributable to GKEL. He submits that, since the allotment of coal blocks was cancelled on account of the judgment of this Court in the case of ***Manohar Lal Sharma v. The Principal Secretary & Ors.***<sup>4</sup>, GKEL was also entitled for the benefit for the said period.

**74.** Insofar as Busy Season Surcharge is concerned, he submits that there is a concurrent finding of fact. He submits that, in any case, the said charges are issued by the Railway Board by issuing Notifications/Circulars. He submits that since the Railway is an instrumentality of the State, both the CERC and the learned APTEL have concurrently held that the Generator would be entitled to compensation on the ground of ‘Change in Law’.

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<sup>3</sup> 2020 SCC Online SC 697

<sup>4</sup> (2014) 9 SCC 516 and 2014 (9) SCC 614



**Civil Appeal No. 39 of 2021**

**75.** This appeal filed by the DNH-DISCOM arises out of the judgment and order dated 13<sup>th</sup> October 2020, passed by the learned APTEL in Appeal No.283 of 2019 & I.A. Nos. 2188 & 1229 of 2019, thereby dismissing the said appeal arising out of the judgment and order passed by the CERC dated 16<sup>th</sup> May 2019.

**76.** The DNH-DISCOM had initiated a competitive bidding process through issuance of a Request for Proposal (“RFP” for short) in March 2012 for procurement of power on Long Term Basis under Case-1 bidding procedure. As per the RFP, the cut-off date was 1<sup>st</sup> June 2012.

**77.** The respondent-GWEL emerged as the successful bidder for supplying Aggregated Contracted Capacity of 200 MW at a levelized tariff of Rs.4.618 per Unit.

**78.** Accordingly, Letter of Intent (LoI) was issued by DNH-DISCOM on 14<sup>th</sup> August 2012. An application/petition being Petition No.87/2012 came to be filed before the Joint Electricity Regulatory Commission (hereinafter referred to as “Joint

Commission”) for approval of the PPA and adoption of tariff. GWEL was also joined as a co-petitioner in the said Petition. The Joint Commission, vide order dated 19<sup>th</sup> February 2013, approved the PPA. Accordingly, the PPA came to be executed on 21<sup>st</sup> March 2013.

**79.** GWEL filed Petition No. 8/MP/2014 before the CERC seeking compensation on certain components on the ground of ‘Change in Law’. The same was decided by the CERC vide order dated 1<sup>st</sup> February 2017. Aggrieved thereby, both the appellant-DNH-DISCOM and the respondent-GWEL filed appeals before the learned APTEL. In appeal, the learned APTEL remanded the matter to the CERC vide order dated 14<sup>th</sup> August 2018 for considering certain issues. Being aggrieved by the order dated 14<sup>th</sup> August 2018, the appellant-DNH-DISCOM filed an appeal, being Civil Appeal No.11910 of 2018, before this Court. The said appeal is also being decided in the present batch of appeals, by this common judgment.

**80.** On remand, the CERC passed an order dated 16<sup>th</sup> May 2019 and allowed the claim of GWEL/Generator on the ground of ‘Change in Law’ occurring on account of the enforcement of the ‘Scheme for Harnessing and Allocating Koyala (Coal) Transparently in India’ (“SHAKTI Policy” for short). Being aggrieved thereby, DNH-DISCOM had filed an appeal before the learned APTEL. As stated herein above, the same was dismissed by the learned APTEL vide the impugned judgment.

**81.** We have heard Mr. C.A. Sundaram, learned Senior Counsel appearing on behalf of the DNH-DISCOM and Mr. Niranjana Reddy, learned Senior Counsel appearing on behalf of the respondent-GWEL.

**82.** Mr. C.A. Sundaram submits that, from the presentation which was given by the GWEL, it was apparent that it was given on the basis that coal supply would be restricted only to 65%. He submits that, as such, the grant of benefit on account of ‘Change in Law’ on the ground that there was 100% assurance by CIL is

not permissible. He, therefore, submits that the judgment and order of the learned APTEL deserves to be set aside to that extent.

**83.** Mr. Niranjan Reddy, on the contrary, submits that the bid of GWEL was submitted on 8<sup>th</sup> June 2012, on which date NCDP 2007 was in force. He submits that, subsequently, the NCDP 2007 was modified on 31<sup>st</sup> July 2013 and thereafter SHAKTI Policy has come into effect on 22<sup>nd</sup> May 2017 and, as such, judgment and order of the learned APTEL warrants no interference.

**Civil Appeal No. 5005 of 2022 and Civil Appeal No. 4089 of 2022**

**84.** These appeals challenge the common judgment and order dated 22<sup>nd</sup> March 2022 passed by the learned APTEL in Appeal No. 118 of 2021 and 40 of 2022, filed by Rattan India Power Limited (hereinafter referred to as “Rattan India”) and Adani Power Maharashtra Limited (for short, “APML”) respectively, thereby challenging the orders dated 1<sup>st</sup> January 2019 and 3<sup>rd</sup> August 2018, passed by Maharashtra Electricity Regulatory

Commission (hereinafter referred to as 'MERC') in Case No. 227 of 2018 and Case No. 124 of 2018 respectively.

**85.** The facts in brief giving rise to the present appeals are as under:

Rattan India has entered into PPAs dated 22<sup>nd</sup> April 2010 and 5<sup>th</sup> June 2010 with MSEDCL for supply of 1200 MW aggregate power at levelized tariff of Rs.3.260 KWH for a period of 25 years. It filed a petition before MERC, being Case No. 227 of 2018, claiming compensation on the ground of 'Change in Law' occurring on account of the circular dated 19<sup>th</sup> December 2017 issued by CIL, vide which it levied the Evacuation Facility Charges (for short, "EFC"). The same was rejected by MERC, vide order dated 1<sup>st</sup> January 2019. A similar petition being Case No. 124 of 2018 was also filed by APML, raising a similar claim before MERC, which was also rejected by MERC, vide its earlier order dated 3<sup>rd</sup> August 2018.

**86.** Being aggrieved thereby, Rattan India had filed an Appeal No. 118 of 2021 and APML had preferred an Appeal No. 40 of

2022. By the impugned order, the learned APTEL had held EFC imposed by CIL vide Circular dated 19<sup>th</sup> December 2017 to be a 'Change in Law' event and, accordingly, held the Generators to be entitled to compensation on the said ground. Being aggrieved thereby, the MSEDCL has preferred these appeals.

**87.** We have heard Shri Balbir Singh, learned Additional Solicitor General (for short, "ASG") and Shri G. Saikumar, learned counsel appearing on behalf of the appellant and Shri Sajan Poovayya, learned Senior Counsel for the respondents in Civil Appeal No. 5005 of 2022 and Shri Vishrov Mukherjee, learned counsel appearing on behalf of the respondents in Civil Appeal No. 4089 of 2022.

**88.** Shri Balbir Singh, relying on Clause 9.1 of the Coal Supply Agreement (for short, "CSA") dated 28<sup>th</sup> December 2012 entered into between Southeastern Coalfields Limited and APML, submitted that CSA defines as to what shall be the base price of coal. He submitted that Clause 9.2 of the said CSA specifically provides for other charges which are permissible. Relying on

Clause 9.4 of the CSA, he submitted that in all cases, the entire freight charges, irrespective of the mode of transportation of coal supplied, shall be borne by the purchaser. The learned ASG submitted that the EFC does not partake the character of a statutory levy. However, he submitted that, in any case, it does not have the force of law. He, therefore, submitted that APTEL has grossly erred in holding the circular of CIL dated 19<sup>th</sup> December 2017 to qualify as 'Change in Law'.

**89.** Shri Singh further submitted that the direction to pay the carrying cost at the rate provided for Late Payment Surcharge (for short, "LPS") is also not permissible in law. He submitted that this Court, in ***Adani Rajasthan case*** (supra), has directed the carrying cost to be paid at the rate of 9% and as such, in the present case, it ought to have been directed to be paid at the same rate.

**90.** Shri Singh also relies on the judgment of this Court in the case of ***Ashoka Smokeless Coal India (P) Limited and Others***

***v. Union of India and Others***<sup>5</sup> in support of the proposition that CIL is free to fix the price of coal and that the Union of India has no control over it.

**91.** Shri Poovayya, on the contrary, submitted that the levy is mandatory in nature. Unless the said levies are paid, the coal would not be supplied. He further submitted that since the CIL is an instrumentality of the Government, the order issued by it would amount to a law within the definition of “Law” as defined in the PPA. He further submitted that insofar as the carrying cost is concerned, there is a specific provision in the PPA in Article 11.8.3, which is binding on the parties. He submitted that on account of non-payment of the dues of the generating companies by DISCOMS, the generating companies are required to borrow the funds at the market rate and as such, applying the restitutionary principle, it is entitled to carrying cost as provided under the agreement.

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<sup>5</sup> (2007) 2 SCC 640



### **III. ADDITIONAL ISSUES**

**92.** After hearing the learned counsel for the parties at length, we find that, apart from the three issues that were already decided by this Court in the case of *MSEDCL v. APML & Ors.* (supra), the issues as to whether the following components could be considered as 'Change in Law' events fall for consideration herein:

- (i) Busy Season Surcharge & Development Surcharge and Port Congestion Surcharge;
- (ii) MoEF Notification on coal quality;
- (iii) Shortfall in linkage coal due to Change in NCDP;
- (iv) Forest Tax;
- (v) Add on Premium price.
- (vi) Evacuation Facility Charges (EFC).

Apart from that, another question that requires consideration is, as to whether various taxes/charges imposed

by various State Governments would also fall under ‘Change in Law’ events or not.

The other question that requires considerations is, as to whether at what rate the Generators would be entitled to ‘carrying cost’.

#### **IV. CONSIDERATION**

**93.** For appreciating the rival submissions, we will have to construe the term “Law”, which has been defined in the PPAs, which reads thus:

““Law” means, in relation to this Agreement, all laws including Electricity Laws in force in India and any statute, ordinance, regulation, Notification or code, rule, or any interpretation of any of them by an Indian Governmental Instrumentality and having force of law and shall further include all applicable rules, regulations, orders, Notifications by an Indian Governmental Instrumentality pursuant to or under any of them and shall include all rules, regulations, decisions and orders of the CERC and the MERC.”

**94.** Perusal of the definition of the term “Law” itself would clearly show that the term “Law” would mean all laws including

Electricity Laws in force in India and any statute, ordinance, regulation, Notification or code, rule, or any interpretation of any of them by an Indian Governmental Instrumentality and having force of law. It would further reveal that the term “Law” shall also include all applicable rules, regulations, orders, Notifications by an Indian Governmental Instrumentality and shall also include all rules, regulations, decisions and orders of the CERC and the MERC.

**95.** In any case, the issue as to what would amount to “Law” is no more *res integra*. This Court, in the case of ***Energy Watchdog*** (supra), has observed thus:

**“57.** Both the letter dated 31-7-2013 and the revised Tariff Policy are statutory documents being issued under Section 3 of the Act and have the force of law. This being so, it is clear that so far as the procurement of Indian coal is concerned, to the extent that the supply from Coal India and other Indian sources is cut down, the PPA read with these documents provides in Clause 13.2 that while determining the consequences of change in law, parties shall have due regard to the principle that the purpose of compensating the party affected by such

change in law is to restore, through monthly tariff payments, the affected party to the economic position as if such change in law has not occurred. Further, for the operation period of the PPA, compensation for any increase/decrease in cost to the seller shall be determined and be effective from such date as decided by the Central Electricity Regulation Commission. This being the case, we are of the view that though change in Indonesian law would not qualify as a change in law under the guidelines read with the PPA, change in Indian law certainly would.”

**96.** The aforesaid view of this Court taken in the case of ***Energy Watchdog*** (supra) has been approved by a Bench of three learned Judges of this Court in ***Adani Rajasthan case*** (supra) and also followed by this Court when the two linked matters out of this batch of appeals were decided by this Court in the case of ***MSEDCL v. APML & Ors.*** (supra). It cannot be denied that CIL is an instrumentality of the Government of India and its orders, insofar as price of fuel are concerned, are binding on all its subsidiaries.

**97.** It will further be relevant to refer to Clause 9.0 of the CSA, which reads thus:

## **“9.0 PRICE OF COAL:**

The “As Delivered Price of Coal” for the Coal supplies pursuant to this Agreement shall be the sum of Base Price, Other Charges and Statutory Charges, as applicable at the time of delivery of Coal.”

It is thus clear that price of coal includes the sum of base price, other charges and statutory charges as applicable at the time of delivery of coal.

**98.** As discussed herein above, the term ‘Law’ would also include all applicable rules, regulations, orders, Notifications issued by an Indian Governmental Instrumentality.

**99.** It would thus be clear that all such additional charges which are payable on account of orders, directions, Notifications, Regulations, etc., issued by the instrumentalities of the State, after the cut-off date, will have to be considered to be ‘Change in Law’ events. The Generators would be entitled to compensation on the restitutionary principle on such changes occurring after the cut-off date.

**100.** Having held thus, we will now consider some of the components which are common in most of these appeals.

**Busy Season Surcharge, Development Surcharge And Port Congestion Surcharge**

**101.** Insofar as increase in Busy Season Surcharge, Development Surcharge on transportation of coal, and Port Congestion Surcharge by the Indian Railways are concerned, the learned APTEL had found that the Indian Railways is an instrumentality of the State. It has been found that the Busy Season Surcharge, Development Surcharge and Port Congestion Surcharge were increased from time to time vide Circulars/Notifications issued by the Ministry of Railways, through the Railway Board.

**102.** A Constitution Bench of this Court, in the case of ***Railway Board, Government of India v. M/s Observer Publications (P) Ltd.***<sup>6</sup>, has held the Railway Board to be a State within the meaning of Article 12 of the Constitution of India.

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<sup>6</sup> (1972) 2 SCC 266

**103.** As such, no error could be found in the finding of the learned APTEL that the revision of charges to be paid on Busy Season Surcharge, Development Surcharge and Port Congestion Charges from time to time by the 'Railway Board' would come within the ambit of 'Change in Law'.

**MoEF Notification on Coal Quality**

**104.** Insofar as MoEF notification on coal quality is concerned, the MoEF, vide Notification dated 2<sup>nd</sup> January 2014, i.e. subsequent to the particular cut-off date, i.e. 1<sup>st</sup> June 2012, has mandated power projects to use beneficiated coal with ash content lower than 34%. The draft notification of MoEF dated 11<sup>th</sup> July 2012 culminated into the final Notification dated 2<sup>nd</sup> January 2014. By no stretch of imagination, can it be said that MoEF is not an instrumentality of the State.

**105.** By the said Notification, MoEF has mandated power projects to use beneficiated coal with ash content lower than 34%. Admittedly, prior to the cut-off date, the same was not a requirement. It is thus clear that the said Notifications dated 11<sup>th</sup>

July 2012 and 2<sup>nd</sup> January 2014 would amount to “Change in Law’. As such, no fault can be found with the finding of the learned APTEL that the same would amount to ‘Change in Law’.

**Shortfall in Linkage Coal due to Change in NCDP**

**106.** Insofar as shortfall in linkage coal due to changes in the NCDP issued by the Ministry of Coal (“MoC” for short) is concerned, the issue is no more *res integra*. This Court in the case of ***Energy Watchdog*** (supra) so also in ***Adani Rajasthan case*** (supra) and recently in ***MSEDCL v. APML & Ors.*** (Supra) has held that the change in NCDP would amount to ‘Change in Law’.

**Forest Tax**

**107.** Insofar as Forest Tax is concerned, perusal of the material placed on record would reveal that, as on the cut-off date, there was no Forest Tax applicable on coal mined and transported from South Eastern Coalfields Limited (“SECL” for short) mines located in Forest area. For the first time, vide Notification of the Chhattisgarh State Government, Department of Forest, under



the provisions of Chhattisgarh Transit (Forest Produce Rule) 2001, a fee at the rate of Rs.7 per ton was levied. Undisputedly, the said Notification is issued by the Forest Department of the Government of Chhattisgarh, which is an instrumentality of the State. As such, no error can be found with the finding of the learned APTEL in that regard.

**Add on Premium Price**

**108.** Insofar as 'Add on premium price' is concerned, undisputedly, 'add on premium' was required to be paid on account of cancellation of captive coal blocks and inordinate delay on account of Go-No-Go policy. As such, it cannot be said that the reasoning adopted by the learned APTEL is perverse and arbitrary.

**Evacuation Facility Charges (EFC)**

**109.** Undisputedly, EFC was imposed by CIL vide its Circular dated 19<sup>th</sup> December 2017.

**110.** As already discussed herein above, CIL is an instrumentality of the State. It is thus clear that, on the cut-off

date, there was no requirement of EFC, which has been brought into effect only on 19<sup>th</sup> December 2017. As such, the circular of CIL dated 19<sup>th</sup> December 2017 would also amount to ‘Change in Law’.

**111.** As discussed herein above, it is also not in dispute that EFC has been paid by the generators while paying the base price, other charges and statutory charges at the time of delivery of coal. As such, no interference would be warranted with the said finding.

**112.** That leaves us with the issue with regard to carrying cost.

**Carrying Cost**

**113.** This is the issue on which there is a serious contest between the DISCOMS and the Generators.

**114.** On one hand, it is the submission of the DISCOMS that since there is no description of the same in the PPAs, the rate for granting carrying cost should be a reasonable rate. On the contrary, it is the submission of the Generators that there is a specific provision in the PPAs, which provides that the carrying

cost has to be paid at the rate as per the rate specified for late payment surcharge. It is submitted that this is provided in the PPA so as to give effect to the restitutionary principle.

**115.** For considering the rival submissions, it will be apposite to refer to the following Articles, which are almost common in most of the PPAs.

**“11. *Billing and payment.*—**

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**11.3. *Payment of monthly bills.*—**

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**11.3.4.** In the event of delay in payment of a monthly bill by any procurer beyond its due date, a late payment surcharge shall be payable by the procurer to the seller at the rate of two (2) per cent in excess of the applicable SBAR per annum, on the amount of outstanding payment, calculated on a day to day basis (and compounded with monthly rest), for each day of the delay.

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**11.8. *Payment of supplementary bill.*—**

**11.8.1.** Either party may raise a bill on the other party (“supplementary bill”) for payment on account of:

- (i) Adjustments required by the Regional Energy Account (if applicable);
- (ii) Tariff payment for change in parameters, pursuant to provisions in Schedule 5; or

(iii) Change in law as provided in Article 13 and such Bill shall be paid by the other party.

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**11.8.3.** In the event of delay in payment of a supplementary bill by either party beyond one month from the date of billing, a late payment surcharge shall be payable at same terms applicable to the monthly bill in Article 11.3.4.”

**116.** A perusal of Article 11.3.4 of the PPA would reveal that in the event of delay in payment of a monthly bill by any procurer beyond its due date, a late payment surcharge shall be payable by the procurer to the seller at the rate of 2% in excess of the applicable State Bank Advance Rate (“SBAR” for short) per annum, on the amount of outstanding payment, calculated on a day to day basis (and compounded with monthly rest), for each day of the delay. Article 11.8 of the PPA deals with Payment of Supplementary Bill. It enables either party to raise a supplementary bill on the other party for payment on account of certain events. Clause (iii) of Article 11.8.1 of the PPA deals with ‘Change in Law’ as provided in Article 13. It requires the bill to

be paid by the other party. Article 11.8.3 of the PPA also provides that in the event of delay in payment of a supplementary bill by either party beyond one month from the date of billing, a late payment surcharge shall be payable at same terms applicable to the monthly bill in Article 11.3.4.

**117.** This Court in the case of ***Uttar Haryana Bijli Vitran Nigam Limited (UNHVNL) and another v. Adani Power Limited and others***<sup>7</sup>, after considering the provisions of Article 11, which deals with ‘Billing’ and Article 13, which deals with ‘Change in Law’, has observed thus:

“**9.** It will be seen that Article 13.4.1 makes it clear that adjustment in monthly tariff payment on account of change in law shall be effected from the date of the change in law [see sub-clause (i) of clause 4.1], in case the change in law happens to be by way of adoption, promulgation, *amendment*, re-enactment or repeal of the law or change in law. As opposed to this, if the change in law is on account of a *change in interpretation of law* by a judgment of a Court or Tribunal

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<sup>7</sup> (2019) 5 SCC 325

or governmental instrumentality, the case would fall under sub-clause (ii) of clause 4.1, in which case, the monthly tariff payment shall be effected from the date of the said order/judgment of the competent authority/Tribunal or the governmental instrumentality. What is important to notice is that Article 13.4.1 is subject to Article 13.2 of the PPAs.

**10.** Article 13.2 is an in-built restitutionary principle which compensates the party affected by such change in law and which must restore, through monthly tariff payments, the affected party to the same economic position as if such change in law has not occurred. This would mean that by this clause a fiction is created, and the party has to be put in the same economic position as if such change in law has not occurred i.e. the party must be given the benefit of restitution as understood in civil law. Article 13.2, however, goes on to divide such restitution into two separate periods. The first period is the “construction period” in which increase/decrease of capital cost of the project in the tariff is to be governed by a certain formula. However, the seller has to provide to the procurer documentary proof of such increase/decrease in capital

cost for establishing the impact of such change in law and in the case of dispute as to the same, a dispute resolution mechanism as per Article 17 of the PPA is to be resorted to. It is also made clear that compensation is only payable to either party only with effect from the date on which the total increase/decrease exceeds the amount stated therein.

**11.** So far as the “operation period” is concerned, compensation for any increase/decrease in revenues or costs to the seller is to be determined and effected from such date as is decided by the appropriate Commission. Here again, this compensation is only payable for increase/decrease in revenue or cost to the seller if it is in excess of an amount equivalent to 1% of the Letter of Credit in aggregate for a contract year. What is clear, therefore, from a reading of Article 13.2, is that restitutionary principles apply in case a certain threshold limit is crossed in both sub-clauses (a) and (b). There is no dispute that the present case is covered by sub-clause (b) and that the aforesaid threshold has been crossed. The mechanism for claiming a change in law is then set out by Article 13.3 of the PPA.”

**118.** It could thus be seen that this Court has held that insofar as the “operation period” is concerned, compensation for any increase/decrease in revenues or costs to the seller is to be determined and effected from such date as is decided by the appropriate Commission. It has further been held that the compensation is only payable for increase/decrease in revenue or cost to the seller if it is in excess of an amount equivalent to 1% of the Letter of Credit in aggregate for a contract year. It has been held that restitutionary principles apply in case a certain threshold limit is crossed. It has been held that an in-built restitutionary principle compensates the party affected by such ‘Change in Law’ and the affected party must be restored through monthly tariff payment to the same economic position as if such ‘Change in Law’ had not occurred.

**119.** From the perusal of paragraph 9, it would also be clear that in case the ‘Change in Law’ happens to be by way of adoption, promulgation, amendment, re-enactment or repeal of the law or



‘Change in Law’, it has to be effected from the date on which such change occurs.

**120.** In this respect, it will also be apposite to refer to the following observations of this Court in the case of ***Maharashtra State Electricity Distribution Company Limited v. Maharashtra Electricity Regulatory Commission and Others***<sup>8</sup>:

“**173.** The APTEL correctly found that: (*Maharashtra Pradesh Electricity Regulatory Commission case [Maharashtra State Electricity Distribution Co. Ltd. v. Maharashtra Pradesh Electricity Regulatory Commission, 2021 SCC OnLine APTEL 13] , SCC OnLine APTEL para 13)*)

“13. ... On the contrary, there is a *conscious exclusion regarding any suo motu change in the rate to be applied while calculating LPS*, it being incorrect to argue on the assumption that the contract permits automatic change in system.”

(emphasis supplied)

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<sup>8</sup> (2022) 4 SCC 657

**174.** This Court is unable to accept Mr Singh's submission that the conclusion of APTEL that LPS is not tariff is erroneous. The meaning of the expression tariff has to be considered, and has rightly been considered by APTEL in the context of the relevant provision of the power purchase agreements. The dictionary meaning of tariff may be charge. However, in Article 13 of the Stage 1 and Article 10 of the Stage 2 power purchase agreements, tariff means monthly tariff and tariff adjustment consequential to change in law, is of monthly tariff in respect of supply of electricity.

**175.** As argued by the respondent power generating companies appearing through Mr Rohatgi, Mr Singhvi, Mr Mukherjee and Ms Anand respectively, LPS is only payable when payment against monthly bills is delayed and not otherwise.

**176.** The object of LPS is to enforce and/or encourage timely payment of charges by the procurer i.e. the appellant. In other words, LPS dissuades the procurer from delaying payment of charges. The rate of LPS has no bearing or impact on tariff. Changes in the basis of the rates of LPS do not affect the rate at which power was agreed to be sold and purchased under the power purchase agreements. The principle of restitution

under the change in law provisions of the power purchase agreements are attracted in respect of tariff.

**177.** LPS cannot be equated with carrying cost or actual cost incurred for the supply of power. The appellant has a contractual obligation to make timely payment of the invoices raised by the power generating companies, subject, of course, to scrutiny and verification of the same. Mr Mukul Rohatgi has a point that if the funding cost was so much lesser than the rate of LPS, as contended by the appellant, the appellant could have raised funds at a lower rate of interest, made timely payment of the invoices raised by the power generating companies, and avoided LPS.

**178.** The proposition that courts cannot rewrite a contract mutually executed between the parties, is well settled. The Court cannot, through its interpretative process, rewrite or create a new contract between the parties. The Court has to simply apply the terms and conditions of the agreement as agreed between the parties, as observed by this Court in *Shree Ambica Medical Stores v. Surat People's Coop. Bank* [*Shree Ambica Medical Stores v. Surat People's Coop. Bank Ltd.*, (2020) 13 SCC 564, para 20] , cited by Ms Divya Anand. This

appeal is an attempt to renegotiate the terms of the PPA, as argued by Ms Divya Anand as also other counsel. It is well settled that courts cannot substitute their own view of the presumed understanding of commercial terms by the parties, if the terms are explicitly expressed. The explicit terms of a contract are always the final word with regard to the intention of the parties, as held by this Court in *Nabha Power Ltd. v. Punjab SPCL* [*Nabha Power Ltd. v. Punjab SPCL*, (2018) 11 SCC 508, paras 45 and 72 : (2018) 5 SCC (Civ) 1], cited by Ms Anand.”

**121.** This Court has clearly held that the DISCOMS have a contractual obligation to make timely payment of the invoices raised by the power generating companies, subject to scrutiny and verification of the same. This Court has rejected the contention that the funding cost was much lesser than the rate of LPS. This Court has reiterated the proposition that the courts cannot rewrite a contract which is executed between the parties. This Court has emphasized that it cannot substitute its own view of the presumed understanding of commercial terms by the parties, if the terms are explicitly expressed. It has been held that

the explicit terms of a contract are always the final word with regard to the intention of the parties.

**122.** As already discussed hereinabove, Article 11.8 of the PPA entitles either party to raise a supplementary bill on the other party on account of 'Change in Law' as provided in Article 13 and such bills are required to be paid by the either party. Article 11.8.3 of the PPA specifically provides that in the event of delay in payment of a supplementary bill by either party beyond one month from the date of billing, a late payment surcharge shall be payable at the same terms applicable to the monthly bill in Article 11.3.4. Article 11.3.4 of the PPA specifically provides a late payment surcharge to be paid by the procurer to the seller at the rate of 2% in excess of the applicable SBAR per annum on the amount of outstanding payment calculated on day to day basis (and compounded with monthly rest), for each day of the delay.

**123.** Recently, this Court, in the case of ***Uttar Haryana Bijli Vitran Nigam Limited and Another v. Adani Power (Mundra)***

**Limited and Another**<sup>9</sup>, had an occasion to consider the similar issue. The Court observed thus:

“**20.** It is clear that the restitutionary principles encapsulated in Article 13.2 would take effect for computing the impact of change in law. We see no reason to interfere with the impugned judgment [*Adani Power (Mundra) Ltd. v. CERC*, 2021 SCC OnLine APTEL 67] , wherein it has been held by the Appellate Tribunal that Respondent 1 Adani Power had started claiming change in law event compensation in respect of installation of FGD unit along with carrying cost, right from the year 2012 and that it has approached several fora to get this claim settled. Respondent 1 Adani Power finally succeeded in getting compensation towards FGD unit only on 28-3-2018, but the carrying cost claim was denied. The relief relating to carrying cost was granted to Respondent 1 Adani Power by the Appellate Tribunal vide order dated 13-4-2018 [*Adani Power Ltd. v. CERC*, 2018 SCC OnLine APTEL 5] which was duly tested by this Court and upheld on 25-2-2019 [*Uttar Haryana Bijli Vitran Nigam Ltd. v. Adani Power Ltd.*, (2019) 5 SCC 325 : (2019) 2 SCC (Civ) 657] . Once carrying cost has been granted in favour of Respondent 1 Adani Power, it cannot be urged by the appellants that interest on carrying cost should be calculated on simple interest basis instead of

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<sup>9</sup> (2023) 2 SCC 624

compound interest basis. Grant of compound interest on carrying cost and that too from the date of the occurrence of the change in law event is based on sound logic. The idea behind granting interest on carrying cost is not far to see, it is aimed at restituting a party that is adversely affected by a change in law event and restore it to its original economic position as if such a change in law event had not taken place.

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**23.** We are not persuaded by the submission made on behalf of the appellants that since no fault is attributable to them for the delay caused in determination of the amount, they cannot be saddled with the liability to pay interest on carrying cost; nor is there any substance in the argument sought to be advanced that there is no provision in the PPAs for payment of compound interest from the date when the change in law event had occurred.

**24.** The entire concept of restitutionary principles engrained in Article 13 of the PPAs has to be read in the correct perspective. The said principle that governs compensating a party for the time value for money, is the very same principle that would be invoked and applied for grant of interest on carrying cost on account of a change in law event. Therefore, reliance on Article 11.3.4 read with Article 11.8.3 on the part of the

appellants cannot take their case further. Nor does the decision in *Priya Vart* case [*Priya Vart v. Union of India*, (1995) 5 SCC 437] have any application to the facts of the present case as the said case relates to payment of compensation under the Land Acquisition Act and the interest that would be payable in case of delayed payment of compensation.”

**124.** It is thus clear that this Court has reiterated that once carrying cost has been granted, it cannot be urged that interest on carrying cost should be calculated on simple interest basis instead of compound interest basis. It has been held that grant of compound interest on carrying cost and that too from the date of the occurrence of the ‘Change in Law’ event is based on sound logic. It has been held that it is aimed at restituting a party that is adversely affected by a ‘Change in Law’ event and restore it to its original economic position as if such a ‘Change in Law’ event had not taken place.

**125.** The argument that there is no provision in the PPAs for payment of compound interest from the date when the ‘Change



in Law' event had occurred, has been specifically rejected by this Court.

**126.** In view of this consistent position of law and application of restitutionary principles and privity of contractual obligations between the parties as contained in the PPAs, we do not find that the view taken by the learned APTEL with regard to carrying cost warrants interference.

**Concurrent Finding of Fact**

**127.** Apart from the aforesaid issues, there is one another common thread in all these appeals. Many of these appeals arise out of concurrent findings recorded by the Central/State Electricity Regulatory Commissions and the learned APTEL.

**128.** This Court, in the case of **MSEDCL v. APML & Ors.** (supra), after considering the statutory provisions in the Electricity Act, 2003, held that the CERC, SERCs and the learned APTEL are bodies consisting of experts in the field.

**129.** This Court, in the said case, observed thus:

“**120.** It could thus be seen that two expert bodies i.e. the CERC and the learned APTEL have concurrently held, after examining the material on record, that the factors of SHR and GCV should be considered as per the Regulations or actuals, whichever is lower. The CERC as well as the State Regulatory bodies, after extensive consultation with the stakeholders, had specified the SHR norms in respective Tariff Regulations. In addition, insofar as GCV is concerned, the CEA has opined that the margin of 85-100 kcal/kg for a non-pit head station may be considered as a loss of GCV measured at wagon top till the point of firing of coal in boiler.

**121.** In this respect, we may refer to the following observations of this Court in the case of *Reliance Infrastructure Limited v. State of Maharashtra* [(2019) 3 SCC 352].

“**38.** MERC is an expert body which is entrusted with the duty and function to frame regulations, including the terms and conditions for the determination of tariff. The Court, while exercising its power of judicial review, can step in where a case of manifest unreasonableness or arbitrariness is made out. Similarly, where the delegate of the legislature has

failed to follow statutory procedures or to take into account factors which it is mandated by the statute to consider or has founded its determination of tariffs on extraneous considerations, the Court in the exercise of its power of judicial review will ensure that the statute is not breached. However, it is no part of the function of the Court to substitute its own determination for a determination which was made by an expert body after due consideration of material circumstances.

39. In *Assn. of Industrial Electricity Users v. State of A.P.* [*Assn. of Industrial Electricity Users v. State of A.P.*, (2002) 3 SCC 711] a three-Judge Bench of this Court dealt with the fixation of tariffs and held thus : (SCC p. 717, para 11)

“11. We also agree with the High Court [*S. Bharat Kumar v. State of A.P.*, 2000 SCC OnLine AP 565 : (2000) 6 ALD 217] that the judicial review in a matter with regard to fixation of tariff has not to be as that of an appellate authority in exercise of its jurisdiction under Article 226 of the Constitution. All that the High Court has to be satisfied with is that the Commission has followed the proper procedure and

unless it can be demonstrated that its decision is on the face of it arbitrary or illegal or contrary to the Act, the court will not interfere. Fixing a tariff and providing for cross-subsidy is essentially a matter of policy and normally a court would refrain from interfering with a policy decision unless the power exercised is arbitrary or *ex facie* bad in law.”

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**123.** Recently, the Constitution Bench of this Court in the case of *Vivek Narayan Sharma v. Union of India* [2023 SCC OnLine SC 1] has held that the Courts should be slow in interfering with the decisions taken by the experts in the field and unless it is found that the expert bodies have failed to take into consideration the mandatory statutory provisions or the decisions taken are based on extraneous considerations or they are *ex facie* arbitrary and illegal, it will not be appropriate for this Court to substitute its views with that of the expert bodies.”

**130.** As is indicated in the aforesaid judgments, this Court should be slow in interfering with the concurrent findings of fact

unless they are found to be perverse, arbitrary and either in ignorance of or contrary to the statutory provisions.

## **V. CONCLUSION**

**131.** In the light of our aforesaid findings, we will now consider each of the appeals independently.

### **Civil Appeal No. 11095 of 2018 and Civil Appeal Nos. 11910-11911 of 2018**

**132.** In these batch of appeals, insofar as the appeal of DNH-DISCOM is concerned, they are aggrieved by the order of the learned APTEL allowing Busy Season Surcharge and Development Surcharge, MoEF Notification on coal quality and Change in NCDP. They are also aggrieved by the finding of the learned APTEL with regard to carrying cost.

**133.** Insofar as the compensation on the ground of Change in NCDP is concerned, as already discussed, the same is squarely covered by the judgment of this Court in the case of **MSEDCL v. APML & Ors.** (supra)

**134.** Insofar as the Busy Season Surcharge and Development Surcharge are concerned, they are issued under the Circulars/Notifications of Indian Railways. The notification on coal quality is issued by MoEF. All these are the instrumentalities of the State, and these would, therefore, amount to 'Change in Law'.

**135.** Insofar as rest of the claims, which are concurrently allowed and disallowed by both the CERC and the learned APTEL, are concerned, in view of the judgments of this Court on this issue, as stated above, we do not find any reason to interfere with the same, not noticing any perversity, arbitrariness and/or any contravention of the statutory provisions. The appeals of both the Generator and the DNH-DISCOM are, therefore, liable to be dismissed.

**Civil Appeal Nos.4628-4629 of 2021**

**136.** The learned APTEL allowed the claim of the Generator only on the ground of Busy Season Surcharge and Development Surcharge on transportation of coal, and the Carrying Cost.

**137.** In view of our finding on the issues as above, no error can be found with the finding of the learned APTEL in that regard. We find no merit in the appeals. The appeals are, accordingly, liable to be dismissed.

**Civil Appeal Nos. 12055-12056 of 2018**

**138.** The issue of Busy Season Surcharge, Development Surcharge and Port Congestion Surcharge have already been considered by us herein above. All these are charges under the Notifications issued by the Indian Railways, through the Railway Board. As such, no error can be found with the finding of the learned APTEL that they would amount to 'Change in Law' events.

**139.** Insofar as levy of 'Forest Tax' is concerned, the same is levied by the State Government under the statutory provisions.

**140.** The issue with regard to 'Carrying Cost' has also been discussed by us herein above.

**141.** In that view of the matter, we do not find any reason to interfere with the order of the learned APTEL. The appeals are, accordingly, liable to be dismissed.

**Civil Appeal Nos. 2935-2936 of 2020**

**142.** In addition to the 'Change in Law' benefits granted by the State Commission, 'Coal Terminal Surcharge', 'Chhattisgarh Paryavaran Upkar' and 'Chhattisgarh Vikas Upkar' were also considered to be 'Change in Law' events by the learned APTEL.

**143.** The 'Coal Terminal Surcharge' was levied by the Indian Railways subsequent to the cut-off date. Similarly, the Government of Chhattisgarh, under Section 8 of the Chhattisgarh Adhosanrachna Vikas Evam Paryavaran Upkar Adhiniyam, 2005, vide Notification dated 16<sup>th</sup> June 2015, which is admittedly after the cut-off date, introduced 'Chhattisgarh Paryavaran Upkar' and 'Chhattisgarh Vikas Upkar'. Even the Change in Swacch Bharat Cess at the rate of 0.5% on Service Tax for Operation Period and Change in Krishi Kalyan Cess at the rate of 5% on Service Tax for Operation Period, which had been



granted concurrently by the State Commission and the learned APTEL, were notified by the Union of India after the cut-off date.

**144.** It could thus be seen that all these additional taxes or cesses were introduced by the instrumentalities of the Government of India or by the Government of Chhattisgarh. The same are issued under the provisions of the concerned statutes, rules, notifications, orders, etc. It is thus clear that they would amount to 'Law' within the meaning of the term 'Law' as defined in the PPAs. As such, no error can be found with the order of the learned APTEL.

**145.** We, therefore, find no merit in the appeals. The appeals are, accordingly, liable to be dismissed.

**Civil Appeal No. 3123 of 2019 and Civil Appeal No.5372 of 2019**

**146.** In the present matter, in addition to the claims granted by the CERC, the learned APTEL also granted the following claims:

- (i) Change in NCDP (cancellation of Captive Block vis-à-vis tapering linkage),

- (ii) Busy Season Surcharge and Developmental Surcharge,
- (iii) Carrying Cost; and
- (iv) Add on Premium Price.

**147.** Insofar as the issue with regard to change in NCDP is concerned, this Court in the case of ***Energy Watchdog*** (*supra*) so also in **Adani Rajasthan case** (*supra*) and recently in ***MSEDCL v. APML & Ors.*** (*Supra*) has held that the change in NCDP would amount to 'Change in Law'. As such, the finding in that regard warrants no interference.

**148.** Insofar as Busy Season Surcharge and Development Surcharge are concerned, we have already discussed hereinabove as to how it would amount to 'Change in Law'.

**149.** Insofar as 'Add on premium price' is concerned, undisputedly, 'add on premium' was required to be paid on account of cancellation of captive coal blocks and inordinate delay on account of Go-No-Go policy. As such, it cannot be said that the reasoning adopted by the learned APTEL is perverse and arbitrary.

**150.** Insofar as the issue with regard to 'carrying cost' is concerned, we have already discussed the issue at length in the foregoing paragraphs. As such, no interference is warranted on that finding also.

**151.** Insofar as other claims which were concurrently allowed and disallowed by the CERC and the learned APTEL are concerned, in view of the concurrent findings, we are not inclined to interfere with the same.

**152.** The appeals of both DISCOMS as well as Generating Companies are, therefore, liable to be dismissed.

**Civil Appeal No. 6641 of 2019**

**153.** This appeal is filed by GKEL, being aggrieved by the concurrent denial of benefits on certain components.

**154.** As already discussed herein above by us, in view of the concurrent findings recorded by the CERC as well as the learned APTEL for disallowing the claims, we are not inclined to interfere with the same. The appeal is, accordingly, liable to be dismissed.

**Civil Appeal Nos. 5583-5584 of 2021**

**155.** In the present case, the benefit is granted on following grounds:

- (i) Shortfall in domestic coal on account of Change in NCDP;
- (ii) Add on premium on account of existing tapering linkage by three years;
- (iii) Busy Season Surcharge

**156.** The first issue stands covered by the judgments of this Court in the cases of ***Energy Watchdog*** (supra), ***Adani Rajasthan case*** (supra) and ***MSEDCL v. APML & Ors.*** (supra) and as such, no interference is warranted.

**157.** Insofar as Busy Season Surcharge is concerned, apart from there being concurrent findings of facts, we have already given reasons herein above as to how the same would amount to 'Change in Law'.

**158.** We do not find any merit in the appeals. The same are, accordingly, liable to be dismissed.

**Civil Appeal No. 39 of 2021**

**159.** The CERC has granted benefit on the following grounds.

- i. Shortfall in linkage coal on account of NCDP 2013 and SHAKTI Policy;
- ii. Change in coal quality pursuant to amendment of the Environment (Protection) Rules, 1986;
- iii. Increase in Busy Season Surcharge and Development Surcharge on transportation of coal by Indian Railways; and
- iv. Carrying cost on allowed 'Change in Law' claims.

**160.** The view taken by the CERC has been affirmed by the learned APTEL. As such, the appeal arises out of the concurrent findings of fact.

**161.** Insofar as first issue with regard to benefit of 'Change in Law' event on account of NCDP 2013 is concerned, the same is squarely covered by the judgments of this Court in the cases of

***Energy Watchdog*** (supra), ***Adani Rajasthan case*** (supra) and ***MSEDCL v. APML & Ors.*** (supra).

**162.** Insofar as the benefit of ‘Change in Law’ on account of SHAKTI Policy is concerned, it is covered by the judgment and order of the even date of this Court in the case of Civil Appeal No. 5684 of 2021<sup>10</sup> and in the case of Civil Appeal Nos. 677-678 of 2021<sup>11</sup>.

**163.** The other components, i.e. change in coal quality pursuant to amendment of the Environment (Protection) Rules, 1986, and increase in Busy Season Surcharge and Development Surcharge on transportation of coal by Indian Railways, have already been considered by us herein to amount to ‘Change in Law’ events. We have also considered the issue regarding ‘Carrying Cost’. As such, no interference is warranted in the concurrent findings by the learned APTEL, especially in view of the judgments of this Court. The appeal is, accordingly, liable to be dismissed.

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<sup>10</sup> Uttar Haryana Bijli Vitran Nigam Limited and another v. Adana Power (Mundra) Limited and another

<sup>11</sup> Maharashtra State Electricity Distribution Company Limited v. Adani Power Maharashtra Limited and another

**Civil Appeal No. 5005 of 2022 and Civil Appeal No. 4089 of 2022**

**164.** The appeals are filed being aggrieved by the order of the learned APTEL granting compensation on account of 'EFC' and 'carrying cost'.

**165.** Undisputedly, the EFC was imposed by CIL vide its Circular dated 19<sup>th</sup> December 2017.

**166.** As discussed herein above, it is not in dispute that EFC has been paid by the Generators while paying the base price, other charges and statutory charges at the time of delivery of coal. As such, no interference is warranted with the said finding.

**167.** Insofar as 'carrying cost' is concerned, we have elaborately discussed the said issue herein above. As such, no interference, therefore, is warranted on the said issue also.

**168.** We do not find any merit in the appeals. The same are, accordingly, liable to be dismissed.

## **VI. EPILOGUE**

**169.** Before we part with the judgment, we must note that we have come across several appeals in the present batch which arise out of concurrent findings of fact arrived at by two statutory bodies having expertise in the field. We have also found that in some of the matters, the appeals have been filed only for the sake of filing the same. We also find that several rounds of litigation have taken place in some of the proceedings.

**170.** Recently, this Court, in the case of ***MSEDCL v. APML & Ors.*** (supra), has noted that one of the reasons for enacting the Electricity Act, 2003 was that the performance of the Electricity Boards had deteriorated on account of various factors. The Statement of Objects and Reasons of the Electricity Act, 2003 would reveal that one of the main features for enactment of the Electricity Act was delicensing of generation and freely permitting captive generation. In the said judgment, we have recorded the statement of the learned Attorney General made in the case of ***Energy Watchdog*** (supra) that the electricity sector, having been



privatized, had largely fulfilled the object sought to be achieved by the Electricity Act. He had stated that delicensed electricity generation resulted in production of far greater electricity than was earlier produced. The learned Attorney General had further urged the Court not to disturb the delicate balance sought to be achieved by the Electricity Act, i.e. that the producers or generators of electricity, in order that they set up power plants, be entitled to a reasonable margin of profit and a reasonable return on their capital, so that they are induced to set up more and more power plants. At the same time, the interests of the end consumers also need to be protected.

**171.** However, we find that, in spite of this position, litigations after litigations are pursued. Though the concurrent orders of statutory expert bodies cannot be said to be perverse, arbitrary or in violation of the statutory provisions, the same are challenged.

**172.** It will be relevant to note the following observations of the CERC in its judgment and order dated 16<sup>th</sup> May 2019, passed in

Petition No. 8/MP/2014, which falls for consideration in Civil Appeal No. 39 of 2021 before this Court:

“(d) Approaching the Commission every year for allowance of compensation for such Change in Law is a time-consuming process. Accordingly, the mechanism prescribed above may be adopted for payment of compensation due to Change in Law events allowed as per PPA for the subsequent period as well.”

**173.** It will also be relevant to refer to some of the observations of the learned APTEL in its order dated 21<sup>st</sup> December 2021, which falls for consideration in Civil Appeal No.2908 of 2022 before this Court, which read thus:

“115. The Standing Committee of Parliament in its Report (dated 07.03.2018) on Energy titled ‘*Stressed/ Non-Performing Assets in Electricity Sector*’ has recognized the financial stress faced by generating companies on account of delay in recovery of Change in Law compensations and has recommended thus:

*“The Committee, therefore, recommend that appropriate steps should be taken to ensure that **there should be consistency and uniformity with***

**regard to orders emanating from the status of change in law. Provisions should also be made for certain percentage of payments of regulatory dues to be paid by Discoms in case the orders of regulators are being taken to APTEL/ higher judiciary for their consideration and decision”**

116. The Report lays stress on the obligation of the distribution companies to pay the approved Change in Law compensation even while Regulatory Commission's orders are challenged. ***The Policy directive dated 27.08.2018 issued in terms of Section 107 of the Electricity Act, 2003 by the Ministry of Power (MoP) to the CERC emphasized on the need to ensure expeditious recovery of Change in Law compensation. The desirability of this was recognized by this tribunal in its judgment dated 14.09.2019 in Jaipur Vidyut Vitran Nigam Limited vs. RERC & Ors, 2019 SCC Online APTEL 98. It is against such backdrop that Electricity (Timely Recovery of Costs due to Change in Law) Rules, 2021, notified by MoP on 22.10.2021, providing for timely recovery of compensation on account of occurrence of Change in Law events have been framed.*** The MoP, vide notification dated 09.11.2021, put in public domain the policy directive

on “*Automatic pass through of the fuel and power procurement cost in tariff for ensuring the viability of the power*” recognizing that in order to ensure that the power sector does not face any constraints in maintaining assured power supply to meet the demand, all the stakeholders in the value chain of power sector must ensure that there is timely recovery of cost. This involves the cost *pass through* by the generating companies to the distribution companies.

117. In sharp contrast, it is seen from the factual narrative of the events leading to the appeal at hand that the appellants (Haryana Utilities) have been adopting dilatory tactics which not only defeats the public policy but also has the undesirable fall-out of adding to the burden of the end-consumers they profess to serve on account of increasing Carrying Cost.
118. Concededly, in compliance with the Taxes and Duties Order dated 06.02.2017, the appellants paid to the generator the taxes and duties for certain period but, thereafter, unilaterally withheld such claims, raising issues (found merit-less) regarding IPT of coal for first time in January 2018. It is after the impugned order was passed that the appellants are stated to have started complying, to an

extent, by making payments. It is the case of the first respondent that the appellants have withheld past payments including towards taxes and duties its entitlement to recover corresponding Late Payment Surcharge (“LPS”) being over and above the same to be computed after discharge of the former liability. **We agree that such withholding is in violation of Articles 11.3.2 and 11.6.9 of the PPAs (quoted earlier) which cast a specific mandate on the procurer (Haryana Utilities) to honor the invoices raised, irrespective of dispute, and impose a specific bar against unilateral deductions/setting off.**

119. We find the dilatory conduct of the Haryana Utilities, to delay the implementation of the binding orders concerning compensation on account of coal shortfall and corresponding taxes and duties, detrimental to the interest of end consumers since it burdens the consumers with incremental LPS for delay in making payments to the generator. This cannot be countenanced, given the earlier dispensation on the subject by the statutory regulator and appellate forum(s), since it smacks of approach that is designed to frustrate the legislative command, and extant State policy, as indeed constitutes abject indiscipline infringing the rule of law.

Borrowing THE WORDS OF Hon'ble Supreme Court in SEBI vs. *Sahara India Real Estate Corpn. Ltd.*, (2014) 5 SCC 429 “*non-compliance with the orders passed ... shakes the very foundation of our judicial system and undermines the rule of law*” which this tribunal is also duty-bound to “*honour and protect*”, so essential “*to maintain faith and confidence of the people of this country in the judiciary*”.”

*[emphasis supplied]*

**174.** It could thus be seen that even the Standing Committee of Parliament, in its report, has recommended that there should be consistency and uniformity with regard to orders emanating from the status of ‘Change in Law’. It has also recommended that the provisions should also be made for certain percentage of payments of regulatory dues to be paid by DISCOMS in case the orders of regulators are being taken to learned APTEL/higher judiciary for their consideration and decision. The learned APTEL has also referred to the Policy Directive dated 27<sup>th</sup> August 2018 issued in terms of Section 107 of the Electricity Act, 2003 by the MoP to the CERC, where it emphasized the need to ensure

expeditious recovery of 'Change in Law' compensation. The learned APTEL has also referred to the Electricity (Timely Recovery of Costs due to Change in Law) Rules, 2021, notified by MoP on 22<sup>nd</sup> October 2021, which provide for timely recovery of compensation on account of occurrence of 'Change in Law' events. The learned APTEL found that the Haryana Utilities have been adopting dilatory tactics, which not only defeat the public policy but also have the undesirable fallout of adding to the burden of the end-consumers they profess to serve on account of increasing 'Carrying Cost'. The learned APTEL further found that withholding of past payments, including towards taxes and duties by the DISCOMS, is in violation of the provisions of the PPAs, which casts a specific mandate on the procurer to honour the invoices raised, irrespective of dispute, and impose a specific bar against unilateral deductions/setting off.

**175.** It is further to be noted that this Court, in the case of ***Uttar Haryana Bijli Vitran Nigam Limited (UNHVNL) and another***

***v. Adani Power Limited and others***<sup>12</sup>, has specifically observed that the ‘Change in Law’ events will have to accrue from the date on which Rules, Orders, Notifications are issued by the instrumentalities of the State. Even in spite of this finding, the DISCOMS are pursuing litigations after litigations.

**176.** We find that, when the PPA itself provides a mechanism for payment of compensation on the ground of ‘Change in Law’, unwarranted litigation, which wastes the time of the Court as well as adds to the ultimate cost of electricity consumed by the end consumer, ought to be avoided. Ultimately, the huge cost of litigation on the part of DISCOMS as well as the Generators adds to the cost of electricity that is supplied to the end consumers.

**177.** We further find that non-quantification of the dues by the Electricity Regulatory Commissions and the untimely payment of the dues by the DISCOMS is also detrimental to the interests of the end consumers. If timely payment is not made by DISCOMS,

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<sup>12</sup> (2019) 5 SCC 325



under the clauses in the PPA, they are required to pay late payment surcharges, which are much higher. Even in case of 'Change in Law' claims, the same procedure is required to be followed.

**178.** Ultimately, these late payment surcharges are added to the cost of electricity supplied to the end consumers. It is, thus, the end consumers who suffer by paying higher charges on account of the DISCOMS not making timely payment to the Generators.

**179.** It is further to be noted that the appeal to this Court under Section 125 of the Electricity Act, 2003 is only permissible on any of the grounds as specified in Section 100 of the Code of Civil Procedure, 1908. As such, the appeal to this Court would be permissible only on substantial questions of law. However, as already observed herein, even in cases where well-reasoned concurrent orders are passed by the Electricity Regulatory Commissions and the learned APTEL, the same are challenged by the DISCOMS as well as the Generators. On account of pendency of litigation, which in some of the cases in this batch

has been more than 5 years, non-payment of dues would entail paying of heavy carrying cost to the Generators by the DISCOMS, which, in turn, will be passed over to the end consumer. As a result, it will be the end consumer who would be at sufferance. We are of the opinion that such unnecessary and unwarranted litigation needs to be curbed.

**180.** To a pointed query, the learned counsel for the DISCOMS fairly conceded the position that the prices at which the electricity is purchased from the 'Independent Power Producers' is substantially lesser than the power purchased from the 'State Generating Companies'.

**181.** We, therefore, appeal to the Union of India through Ministry of Power ("MoP" for short) to evolve a mechanism so as to ensure timely payment by the DISCOMS to the Generating Companies, which would avoid huge carrying cost to be passed over to the end consumers.

**182.** The Union of India, through MoP, may also evolve a mechanism to avoid unnecessary and unwarranted litigation, the cost of which is also passed on to the ultimate consumer.

**183.** Before we part with the judgment, we place on record our appreciation for the valuable assistance rendered by Mr. Balbir Singh, learned Additional Solicitor General, Dr. A. M. Singhvi, Mr. V. Giri, Mr. M.G. Ramachandran, Mr. C.A. Sundaram, Mr. Maninder Singh, Mr. Sajan Poovayya and Mr. Niranjan Reddy, learned Senior Counsel, and Mr. Vishrov Mukerjee, Ms. Poorva Saigal, Ms. Anushree Bardhan, and Ms. Poonam Sengupta, learned counsel.

**184.** In view of the above, all the appeals are dismissed. No costs.

.....**J.**  
**[B.R. GAVAI]**

.....**J.**  
**[VIKRAM NATH]**

**NEW DELHI;**  
**APRIL 20, 2023**



# भारत का राजपत्र

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अधिसूचना

नई दिल्ली, 31 दिसम्बर, 2021

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- फ्लाई राख पर आधारित उत्पाद अर्थात्: ईट ब्लॉक टाइल, फाइबर सीमेंट शीट, पाइप, बोर्ड, पैन्ल का विनिर्माण;
- सीमेंट विनिर्माण, रेडी-मिक्स कंक्रीट;

उत्पादक मोहता / Umashankar Mohanty  
अवर मैनेजिंग डायरेक्टर (पर्यावरण)  
Genl. Manager (Commercial)  
एन टी पी सी लिमिटेड / NTPC Limited

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

उपचारक मोहंती / Umashanker Mohanty  
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- (5) (i) सभी खान मालिकों को खान में खाली स्थानों में राख को समायोजित करने के लिए खान बंद योजना (प्रगामी और अंतिम) तैयार करनी होगी और खान में खाली स्थान में राख के निपटान और अधिभार वाले डेर के साथ राख को मिश्रित करने के लिए खान योजनाओं को संबंधित प्राधिकारी अनुमोदित करेगा। पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय द्वारा ताप विद्युत संयंत्रों और कोयला खदानों की पर्यावरणीय मंजूरी की अपेक्षा से छूट देने के साथ-साथ ऐसे निपटान के लिए अपनाए जाने वाले दिशानिर्देशों के संबंध में तारीख 28 अगस्त, 2019 को दिशानिर्देश जारी किए गए।
- (ii) मंत्रालय, केन्द्रीय प्रदूषण नियंत्रण बोर्ड, महानिदेशक, खान सुरक्षा (डीजीएमएस) और भारतीय खान ब्यूरो (आईबीएम) के साथ परामर्श करके, खानों में खाली स्थानों में राख के निपटान करने तथा अधिभार वाले डेरों में इसे मिश्रित करना सुगम बनाने के लिए समय-समय पर आगे भी दिशानिर्देश जारी कर सकता है और यह खान मालिकों की जिम्मेदारी होगी कि वे ऐसी खानों को अभिज्ञात करने की तिथि से एक वर्ष के भीतर विभिन्न विनियामक प्राधिकरणों द्वारा जारी की गई अनुमतियों में आवश्यक संशोधन या परिवर्तन प्राप्त करेंगे।
- (6) (i) पर्यावरणीय प्रदूषण के संदर्भ में सुरक्षा, व्यवहार्यता (आर्थिक व्यवहार्यता नहीं) और पहलुओं की जांच सहित राख से खान में खाली स्थान को वापस भरने/अधिभार वाले डेर के साथ राख को मिश्रित करने के लिए खानों की पहचान करने के लिए पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, विद्युत मंत्रालय, खान मंत्रालय, कोयला मंत्रालय, महानिदेशक खान सुरक्षा और भारतीय खान ब्यूरो से प्रतिनिधियों को शामिल करते हुए अध्यक्ष, केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) की अध्यक्षता में एक समिति का गठन किया जाएगा और यह समिति पणधारी मंत्रालयों या विभागों के लिए अभिज्ञात खानों (भूमिगत और खुली, दोनों) के संबंध में तैयार की गई तिमाही रिपोर्टों को अद्यतन करेगी और यह समिति, इस अधिसूचना के प्रकाशन के तुरंत पश्चात उपयुक्त खानों की पहचान करना आरंभ करेगी।
- (ii) ताप विद्युत संयंत्र या खानों, उपरोक्त अनुसार अधिदेशित उपयोग लक्ष्यों को पूरा करने के लिए उपर्युक्त समिति द्वारा पहचान किए जाने तक राख के निपटान हेतु प्रतीक्षा नहीं करेगी।
- (7) राख से निचले क्षेत्र को भरने का कार्य, अनुमोदित परियोजनाओं के लिए राज्य प्रदूषण नियंत्रण बोर्ड की पूर्व अनुमति से और केन्द्रीय प्रदूषण नियंत्रण बोर्ड द्वारा निर्धारित दिशा-निर्देशों के अनुसार किया जाएगा और राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति द्वारा अनुमोदित स्थलों, अवस्थान, क्षेत्र और अनुमत मात्रा को अपनी वेबसाइट पर प्रतिवर्ष प्रकाशित किया जाएगा।
- (8) केन्द्रीय प्रदूषण नियंत्रण बोर्ड, संगत पणधारी के साथ मिलकर, राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) द्वारा अनुमति प्रदान करने के लिए समयबद्ध ऑनलाइन आवेदन प्रक्रिया प्रस्तुत करने के साथ-साथ इस अधिसूचना के अधीन परिकल्पित सभी प्रकार के कार्यकलापों के लिए एक वर्ष के भीतर दिशानिर्देश प्रस्तुत करेगा।
- (9) कोयला या लिग्नाइट आधारित तापीय ऊर्जा संयंत्र से तीन सौ किलोमीटर के दायरे में स्थित सभी भवन निर्माण परियोजनाएं (केन्द्रीय, राज्य और स्थानीय प्राधिकरणों सरकारी उपक्रमों, अन्य सरकारी अधिकरणों तथा सभी निजी अधिकरणों) राख की ईंटों, टाइल्स, धातुमल राख अथवा अन्य राख आधारित उत्पादों का उपयोग करेगी बशर्ते कि वे वैकल्पिक उत्पादों की कीमत से अधिक कीमत पर उपलब्ध न हों।
- (10) राख आधारित उत्पादों के विनिर्माण और ऐसे उत्पादों में राख के उपयोग में भारतीय मानक ब्यूरो, भारतीय सड़क कांग्रेस और केन्द्रीय प्रदूषण नियंत्रण बोर्ड द्वारा निर्धारित विनिर्देशों और दिशानिर्देशों की अनुपालना होगी।
- ग. गैर-अनुपालन के लिए पर्यावरणीय प्रतिकर .-**
- (1) तीन वर्ष के चक्र के प्रथम दो वर्षों में, यदि कोयला या लिग्नाइट आधारित तापीय ऊर्जा संयंत्र (कैप्टिव और/ या सह-उत्पादनक स्टेशनों या दोनों सहित) ने कम-से-कम 80 प्रतिशत राख (फ्लाई-राख और बॉटम-राख) उपयोग नहीं की है तो ऐसे गैर-अनुपालन ताप विद्युत संयंत्रों पर प्रस्तुत की गई वार्षिक रिपोर्टों के आधार पर वित्तीय वर्ष के

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

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

- (2) अधिकारियों द्वारा एकत्रित पर्यावरणीय प्रतिकर को केन्द्रीय प्रदूषण नियंत्रण बोर्ड के निर्दिष्ट छाते में जमा किया जाएगा।
- (3) लैग्रेसी राख के मामले में, यदि कोयला या लिग्नाइट आधारित तापीय ऊर्जा संयंत्र (केस्टिव या सह-उत्पादक स्टेशनों या दोनों सहित) ने स्थापित क्षमता पर आधारित उत्पन्न राख का कम-से-कम 20 प्रतिशत (प्रथम वर्ष के लिए), 35 प्रतिशत (द्वितीय वर्ष के लिए), 50 प्रतिशत (तीसरे से दसवें वर्ष तक) उपयोग के बराबर लक्ष्य प्राप्त नहीं किया है तो उस वित्तीय वर्ष के दौरान अप्रयुक्त लैग्रेसी राख पर 1000 रुपए प्रति टन की दर से पर्यावरणीय प्रतिकर लगाया जाएगा और यदि 10 वर्ष के अंत में लैग्रेसी राख का उपयोग नहीं किया जाता है तो 1000 रुपए प्रति टन की दर से शेष अप्रयुक्त मात्रा पर पर्यावरणीय प्रतिकर लगाया जाएगा जिस पर पहले पर्यावरणीय प्रतिकर नहीं लगाया गया है।
- (4) अधिकृत खरीददारों या उपभोक्ता अभिकरणों तक राख भेजने की जिम्मेदारी परिव्राहकों या वाहन मालिक की जिम्मेदारी है और यदि इसका अनुपालन नहीं किया जाता है, तो अनधिकृत उपयोगकर्ताओं अथवा गैर-अधिकृत उपयोगकर्ताओं को ऐसी मात्रा गलत तरीके से वितरित करने पर 1500 रुपए प्रति टन की दर से पर्यावरणीय प्रतिकर लगायी, इसके अतिरिक्त राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) द्वारा गैर अनुपालनकर्ता परिव्राहकों पर अभियोजन लागू होगा।
- (5) इस अधिसूचना के पैरा छ में विहित पर्यावरण अनुकूल तरीके में राख के उपयोग की जिम्मेदारी खरीददार या उपभोक्ता एजेंसियों की है और ऐसा नहीं करने पर केन्द्रीय प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) द्वारा 1500 रुपए प्रति टन की दर से पर्यावरणीय प्रतिकर लगाया जाएगा।
- (6) यदि उपयोगकर्ता अधिकरण पैरा छ के अधीन निर्धारित सीमा तक अथवा पैरा छ के उप-पैरा (1) के अधीन, दिए गए नोटिस के माध्यम से सूचित की गई सीमा, इनमें से जो भी कम हो, तक राख का उपयोग नहीं करती है, वे अतिरिक्त राख की मात्रा का 1500 रुपए प्रति टन की दर से भुगतान करने के लिए उत्तरदायी होंगी।  
परंतु भवन निर्माण के संबंध में पर्यावरणीय प्रतिकर निर्मित क्षेत्र के 75 रुपए प्रति वर्ग फीट की दर से बसूल किया जाएगा।

- (7) (i) ताप विद्युत संयंत्रों अन्य बकायादारों से केन्द्रीय प्रदूषण नियंत्रण बोर्ड द्वारा लगायी गई का पर्यावरणीय प्रतिकर उपयोग अप्रयुक्त राख के सुरक्षित निपटान हेतु किया जाएगा और राख आधारित उत्पादों सहित राख के उपयोग के संबंध में और अधिक अनुसंधान करने के लिए भी निधि का उपयोग किया जा सकता है।
- (ii) अप्रयुक्त मात्रा पर लगाए गए पर्यावरणीय प्रतिकर के पश्चात भी राख के उपयोग का उत्तरदायित्व ताप विद्युत संयंत्रों की होगी और यदि पश्चातवर्ती चक्रों में पर्यावरणीय प्रतिकर लगाने के पश्चात ताप विद्युत संयंत्र, किसी विशेष चक्र की राख के उपयोग के लक्ष्य को प्राप्त करता है तो अगले चक्र के दौरान अप्रयुक्त मात्रा पर एकत्र की गई पर्यावरणीय प्रतिकर में 10 प्रतिशत कटौती के पश्चात उक्त रकम ताप विद्युत संयंत्र को वापस कर दी जाएगी और पश्चातवर्ती चक्रों में राख के उपयोग के मामले में एकत्र की गई पर्यावरणीय प्रतिकर की 20 प्रतिशत, 30 प्रतिशत और उसी क्रम में कटौती की जानी है।



उमेशंकर मोहंती / Umeshankar Mohanty  
आपन जनरल मैनेजर (कॉमर्शियल)  
Add. General Manager (Commercial)  
एन टी पी सी लिमिटेड / NTPC Limited

**घ. राख या राख आधारित उत्पादों की आपूर्ति हेतु प्रक्रिया —**

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

**ङ. प्रवर्तन, निगरानी, लेखा परीक्षा और प्रतिबेदन करना**

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

उमसंकर मोहंठी / Umankar Mohanty  
आर. महाप्रबन्धक (नियंत्रण)  
Addl. General Manager (Commdal)  
एनटीपीसी लिमिटेड / NTPC Limited

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

[फा. सं. एचएसएम-9/1/2019-एचएसएम]

नरेश पाल गंगवार, संयुक्त सचिव

उपाबंध

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

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

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

	<p>ख) रिपोर्टिंग की अवधि के दौरान राख कुण्ड (कुण्डों) में निपटान किए गए राख की मात्रा (मीट्रिक टन):</p> <p>ग) रिपोर्टिंग की अवधि के दौरान राख कुण्डों में गारा निस्सरण हेतु खपत हुए जल की कुल मात्रा (मी<sup>3</sup>):</p> <p>घ) राख कुण्डों की कुल संख्या:</p> <p>(i) सक्रिय:</p> <p>(ii) खाली किए गए (पुनः भरा जाना है)</p> <p>(iii) पुनः भरे गए:</p> <p>ड.) राख कुण्डों के अधीन कुल क्षेत्र (हेक्टेयर):</p>	
18.	<p><b>अलग-अलग राख कुण्ड का ब्यौरा</b></p> <p>राख कुण्ड 1,2 आदि (यदि राख कुण्डों की संख्या एक से अधिक हो, तो कृपया निम्नलिखित ब्यौरा अलग से उपलब्ध कराएं)</p> <p>क) स्थिति: निर्माणाधीन या सक्रिय या खाली किया गया या पुनः भरा गया</p> <p>ख) राख कुण्ड में राख का निपटान शुरू करने की तारीख/महीना/वर्ष या महीना/वर्ष):</p> <p>ग) राख कुण्ड की क्षमता पूर्ण किए जाने के पश्चात् उसमें राख निपटान रोकने की तारीख (तारीख/महीना/वर्ष या महीना/वर्ष): (सक्रिय राख कुण्डों के लिए लागू नहीं)</p> <p>घ) क्षेत्र (हेक्टेयर):</p> <p>घ) डाइक की ऊंचाई (मी.):</p> <p>घ) आयतन (मी<sup>3</sup>):</p> <p>ड.) तारीख 31 मार्च तक निपटान किए गए राख की मात्रा (मीट्रिक टन):</p> <p>च) उपलब्ध आयतन का प्रतिशत (%) और आगे निपटान किए जा सकने वाले राख की मात्रा (मीट्रिक टन):</p> <p>ख) राख कुण्ड के भरे जाने की अनुमानित अवधि (वर्षों और महीनों की संख्या):</p> <p>ड.) निर्देशांक (अक्षांश और देशान्तर): (कृपया न्यूनतम 4 निर्देशांकों को विनिर्दिष्ट करें)</p> <p>ज) राख कुण्ड में की गई लाइनिंग का प्रकार: एचडीपीई लाइनिंग या एलडीपीई लाइनिंग या क्ले लाइनिंग या कोई लाइनिंग नहीं</p> <p>ख) निपटान की विधि: शुष्क निपटान या नम गारा (नम गारा के मामले में कृपया विनिर्दिष्ट करें कि क्या एचसीएसडी या एमसीएसडी या एलसीएसडी है)</p> <p>ज) राख का अनुपात: गारा मिश्रण में जल (1:___):</p> <p>झ) संस्थापित और कार्यशील राख जल पुनर्चक्रण प्रणाली (एडब्ल्यूआरएस): हां या नहीं</p> <p>ञ) जमीन के अंदर या जल निकास में राख कुण्ड से निस्सरित अपशिष्ट जल की मात्रा (मी<sup>3</sup>):</p> <p>ट) डाइक की स्थिरता का अध्ययन कराए जाने की पिछली तारीख और उस संगठन का नाम जिसने अध्ययन किया:</p> <p>ड) लेखा-परीक्षा किए जाने की पिछली तारीख और उस संगठन का नाम जिसने लेखा-परीक्षा की:</p>	
19.	<p>उपयोग किए गए पुराने राख की मात्रा (एमटीपीए):</p> <p>i. फ्लाई-एश आधारित उत्पाद (ईट या ब्लॉक या टाइल्स या फाइबर</p>	

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

## MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

### NOTIFICATION

New Delhi, the 31st December, 2021

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

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

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

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

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

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

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

And whereas, a draft notification on ash utilisation by coal or lignite thermal power plants in supersession of the notification of the Government of India, Ministry of Environment and Forests published in the Gazette of India, Extra Ordinary part II, section 3, sub-section (i) vide S.O.763 (E), dated the 14<sup>th</sup> September, 1999, by notification in exercise of the powers conferred under sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with clause (d) of sub-rule (3) of rule (5) of the Environment (Protection) Rules, 1986, was published in the Gazette of India, Extraordinary, Part II, section 3, sub-section (i), vide G.S.R. 285(E), dated the 22nd April, 2021 inviting objections and suggestions from all persons likely to be affected thereby before the expiry of sixty days from the date on which copies of the Gazette containing the said draft provisions were made available to the public;

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

Now, therefore, in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with clause (d) of sub-rule (3) of rule (5) of the Environment (Protection) Rules, 1986, and in supersession of the Notification S.O.763 (E), dated the 14<sup>th</sup> September, 1999 except as respect things done or omitted to be done before such supersession, the Central Government hereby issues the following notification on ash utilisation from coal or lignite thermal power plants which shall come into force on the date of the publication of this notification, namely:-

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- (4) (i) All mine owners shall get mine closure plans (progressive and final) to accommodate ash in the mine voids and the concerned authority shall approve mine plans for disposal of ash in mine voids and mixing of ash with overburden dumps. The Ministry of Environment, Forest and Climate Change (MoEFCC) has issued guidelines on 28<sup>th</sup> August, 2019 regarding exemption of requirement of Environmental Clearance of thermal power plants and coal mines along with the guidelines to be followed for such disposal.
- (ii) The Ministry in consultation with Central Pollution Control Board (CPCB), Director General of Mine Safety (DGMS) and Indian Bureau of Mines (IBM) may issue further guidelines time to time to facilitate ash disposal in mine voids and mixing with overburden dumps and it shall be the responsibility of mine owners to get the necessary amendments or modifications in the permissions issued by various regulatory authorities within one year from the date of identification of such mines.
- (5) (i) There shall be a committee headed by Chairperson, Central Pollution Control Board (CPCB) with representatives from Ministry of Environment, Forest and Climate Change, Ministry of Power, Ministry of Mines, Ministry of Coal, Director General of Mine Safety and Indian Bureau of Mines for identification of mines for backfilling of mine voids with ash or mixing of ash with overburden dump including examination of safety, feasibility (not economic feasibility) and aspects of environmental contamination and the committee shall get updated quarterly reports prepared regarding identified mines (both underground and opencast) for the stakeholder Ministries or Departments and the committee shall start identifying the suitable mines immediately after the publication of this notification.
- (ii) Thermal power plants or mines shall not wait for disposal of ash till the identification is done by the above mentioned committee, to meet the utilisation targets mandated as above.
- (6) Filling of low lying areas with ash shall be carried out with prior permission of the State Pollution Control Board or Pollution Control Committee for approved projects, and in accordance with guidelines laid down by Central Pollution Control Board (CPCB) and the State Pollution Control Board or Pollution Control Committee (PCC) shall publish approved sites, location, area and permitted quantity annually on its website.
- (7) Central Pollution Control Board after engaging relevant stakeholders, shall put in place the guidelines within one year for all types of activities envisaged under this notification including putting in place time bound online application process for the grant permission by State Pollution Control Boards (SPCBs) or Pollution Control Committees (PCCs).

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Addl. General Manager (Commercial)  
एनटीपीसी लिमिटेड / NTPC Limited

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

**C. Environmental compensation for non-compliance.—**

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

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

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

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

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

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

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

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

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

**E. Enforcement, Monitoring, Audit and Reporting.—**

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

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

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by

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

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

NARESH PAL GANGWAR, Jt. Secy.

**Annexure**Ash Compliance Report (for the period 1<sup>st</sup> April-31<sup>st</sup> March) to be submitted on or before 31<sup>st</sup> May.

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

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	<ul style="list-style-type: none"> <li>(iii) Ready mix concrete:</li> <li>(iv) Ash and Geo-polymer based construction material:</li> <li>(v) Manufacturing of sintered or cold bonded ash aggregate:</li> <li>(vi) Construction of roads, road and fly over embankment:</li> <li>(vii) Construction of dams:</li> <li>(viii) Filling up of low lying area:</li> <li>(ix) Filling of mine voids:</li> <li>(x) Use in overburden dumps:</li> <li>(xi) Agriculture:</li> <li>(xii) Construction of shoreline protection structures in coastal districts;</li> <li>(xiii) Export of ash to other countries:</li> <li>(xiv) Others (please specify):</li> </ul> <p>(c) Quantity of bottom ash utilised (MTPA):</p> <ul style="list-style-type: none"> <li>(i) Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels):</li> <li>(ii) Cement manufacturing:</li> <li>(iii) Ready mix concrete:</li> <li>(iv) Ash and Geo-polymer based construction material:</li> <li>(v) Manufacturing of sintered or cold bonded ash aggregate:</li> <li>(vi) Construction of roads, road and flyover embankment:</li> <li>(vii) Construction of dams:</li> <li>(viii) Filling up of low lying area:</li> <li>(ix) Filling of mine voids:</li> <li>(x) Use in overburden dumps:</li> <li>(xi) Agriculture:</li> <li>(xii) Construction of shoreline protection structures in coastal districts:</li> <li>(xiii) Export of ash to other countries:</li> <li>(xiv) Others (please specify):</li> </ul> <p>Total quantity of current ash unutilised (MTPA) during reporting period:</p>	
16.	Percentage utilisation of current ash generated during reporting period (per cent):	
17.	<p>Details of disposal of ash in ash ponds</p> <p>(a) Total quantity of ash disposed in ash pond(s) (Metric Tons) as on 31<sup>st</sup> March (excluding reporting period):</p> <p>(b) Quantity of ash disposed in ash pond(s) during reporting period (Metric Tons):</p> <p>(c) Total quantity of water consumption for slurry discharge into ash ponds during reporting period (m<sup>3</sup>):</p> <p>(d) Total number of ash ponds:</p> <ul style="list-style-type: none"> <li>(i) Active:</li> <li>(ii) Exhausted (yet to be reclaimed):</li> <li>(iii) Reclaimed:</li> </ul> <p>(e) total area under ash ponds (ha):</p>	
18.	<p>Individual ash pond details</p> <p><i>Ash pond-1,2, etc (please provide below mentioned details separately, if number of ash ponds is more than one)</i></p> <p>(a) Status: Under construction or Active or Exhausted or</p>	

	<p>Reclaimed</p> <p>(b) Date of start of ash disposal in ash pond (DD/MM/YYYY or MMYYYY):</p> <p>(c) Date of stoppage of ash disposal in ash pond after completing its capacity (DD/MM/YYYY or MM/YYYY): (Not applicable for active ash ponds)</p> <p>(e) area (hectares):</p> <p>(d) dyke height (m):</p> <p>(d) volume (m<sup>3</sup>):</p> <p>(e) quantity of ash disposed as on 31<sup>st</sup> March (Metric Tons):</p> <p>(f) available volume in percentage (per cent) and quantity of ash can be further disposed (Metric Tons):</p> <p>(g) expected life of ash pond (number of years and months):</p> <p>(e) co-ordinates (Lat and Long): (please specify minimum 4 co-ordinates)</p> <p>(f) type of lining carried in ash pond: HDPE lining or LDPE lining or clay lining or No lining</p> <p>g) mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD)</p> <p>(h) Ratio of ash: water in slurry mix (1: ___):</p> <p>(i) Ash water recycling system (AWRS) installed and functioning: Yes or No</p> <p>(j) Quantity of wastewater from ash pond discharged into land or water body (m<sup>3</sup>):</p> <p>(k) Last date when the dyke stability study was conducted and name of the organisation who conducted the study:</p> <p>(l) Last date when the audit was conducted and name of the organisation who conducted the audit:</p>									
19.	<p>Quantity of legacy ash utilised (MTPA):</p> <ol style="list-style-type: none"> <li>Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels):</li> <li>Cement manufacturing:</li> <li>Ready mix concrete:</li> <li>Ash and Geo-polymer based construction material:</li> <li>Manufacturing of sintered or cold bonded ash aggregate:</li> <li>Construction of roads, road and flyover embankment:</li> <li>Construction of dams:</li> <li>Filling up of low lying area:</li> <li>Filling of mine voids:</li> <li>Use in overburden dumps:</li> <li>Agriculture:</li> <li>Construction of shoreline protection structures in coastal districts;</li> <li>Export of ash to other countries:</li> <li>Others (please specify):</li> </ol>									
20.	<p>Summary:</p> <table border="1"> <thead> <tr> <th>Details</th> <th>Quantity generated (MTP)</th> <th>Quantity utilised (MTP) and (per cent)</th> <th>Balance quantity (MTP)</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Details	Quantity generated (MTP)	Quantity utilised (MTP) and (per cent)	Balance quantity (MTP)					
Details	Quantity generated (MTP)	Quantity utilised (MTP) and (per cent)	Balance quantity (MTP)							

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

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**भारत का राजपत्र**  
**The Gazette of India**

असाधारण  
 EXTRAORDINARY  
 भाग II—खण्ड 3—उप-खण्ड (ii)  
 PART II—Section 3—Sub-section (ii)  
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 नं० 2620/

पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 7 दिसम्बर, 2015

का.जा. 3305(न).—केंद्रीय सरकार, पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 6 और धारा 25 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए पर्यावरण (संरक्षण) नियम, 1986 का और संशोधन करने के लिए निम्नलिखित नियम बनाती है, अर्थात्:—

- 1.(1) इन नियमों का संक्षिप्त नाम पर्यावरण (संरक्षण) संशोधन नियम, 2015 है।  
(2) ये इनके राजपत्र में प्रकाशन की तारीख को प्रवृत्त होंगे।
2. पर्यावरण (संरक्षण) नियम, 1986 की अनुसूची 1 में,—

(क) क्रम सं. 5 और उसके संबंधित प्रविष्टियों के स्थान पर निम्नलिखित क्रम सं. और प्रविष्टि का अंतःस्थापित की जाएगी, अर्थात्:—

क्रम सं.	उद्योग	मापसूच	मानक
1	2	3	4
5क	ताप विद्युत संयंत्र (नए उपभोग सीमा)	नए उपभोग	1. एक बार शीतलन (ओटीसी) के माध्यम से सभी संयंत्र शीतलन टावरों (सीटी) को प्रतिष्ठापित करेंगे और अधिसूचना की तारीख से दो वर्ष की अवधि के भीतर अधिकतम 3.5m <sup>3</sup> /MWh के विनिर्दिष्ट जल उपभोग को हासिल करेंगे।

			<p>II. सभी विद्यमान सीटी-आधारित संयंत्र 3.5m<sup>3</sup>/MWh इस अधिसूचना के प्रकाशन की तारीख से दो वर्ष के भीतर अधिकतम 3.5m<sup>3</sup>/MWh तक के विनिर्दिष्ट जल उपभोग को कम करेंगे।</p> <p>III. जनवरी, 2017 के पश्चात् प्रतिष्ठापित किए जाने वाले नए संयंत्र अधिकतम 2.5 m<sup>3</sup>/MWh तक के विनिर्दिष्ट जल उपभोग को पूरा करेंगे और शुष्क जल दुर्भाव को हासिल करेंगे।</p>
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(घ) क्रम सं. 25 और उससे संबंधित प्रविष्टियों के पश्चात् निम्नलिखित क्रम सं. और प्रविष्टियां रखी जाएंगी, यथातः—

क्रम सं.	उद्योग	मापदंड	मातृक
1	2	3	4
		विविक्त पदार्थ	100 mg/Nm <sup>3</sup>
		सल्फर डायोक्साइड (SO <sub>2</sub> )	600 mg/Nm <sup>3</sup> (500 मेगावाट से कम क्षमता की इकाईयों से लघु इकाईयों) 200 mg/Nm <sup>3</sup> (500 मेगावाट और उससे अधिक क्षमता की इकाईयों)
		नाइट्रोजन के आक्साइड (NO <sub>x</sub> )	300 mg/Nm <sup>3</sup>
		पारा (Hg)	0.03 mg/Nm <sup>3</sup> (500 मेगावाट और उससे अधिक क्षमता की इकाईयों)
		1 जनवरी, 2003 के पश्चात् 31 दिसंबर, 2016 तक प्रतिष्ठापित टीपीपी (इकाईयों)	
		विविक्त पदार्थ	50 mg/Nm <sup>3</sup>
		सल्फर डायोक्साइड (SO <sub>2</sub> )	600 mg/Nm <sup>3</sup> (500 मेगावाट से कम क्षमता की इकाईयों से लघु इकाईयों) 200 mg/Nm <sup>3</sup> (500 मेगावाट और उससे अधिक क्षमता की इकाईयों)
		नाइट्रोजन के आक्साइड (NO <sub>x</sub> )	300 mg/Nm <sup>3</sup>
		पारा (Hg)	0.03 mg/Nm <sup>3</sup>
		1 जनवरी, 2017 से प्रतिष्ठापित टीपीपी (इकाईयों)	
		विविक्त पदार्थ	30 mg/Nm <sup>3</sup>
		सल्फर डायोक्साइड (SO <sub>2</sub> )	100 mg/Nm <sup>3</sup>
		नाइट्रोजन के आक्साइड	100 mg/Nm <sup>3</sup>

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अपर महाप्रबन्धक (व्यापारिक)  
Add. General Manager (Commercial)  
एन टी पी सी, लिमिटेड / NTPC Limited

	(NOx)	
	पारा (Hg)	0.03 mg/Nm <sup>3</sup>

- \* टीपीपी (इकाईयां) इस अधिसूचना के प्रकाशन की तारीख से दो वर्ष के भीतर परितरीमाओं को पूरा करेंगी।
- \*\* इसके अंतर्गत सभी टीपीपी (इकाईयां) हैं, जिन्हें पर्यावरणीय निकासी प्रदान की गई है और संनिर्माण के अधीन हैं।
- [फा. सं. क्रू-15017/40/2007-सीपीडब्ल्यू]

डा. राशिद हुसैन, सहायक

टिप्पण :- मूल नियम भारत के राजपत्र, असाधारण, भाग II, खंड 3, उपखंड (अ) में सं. का.अ. 844(अ) 19 नवंबर, 1986 द्वारा प्रकाशित किए गए थे और उनका पश्चातवर्ती का.अ. 433(अ) तारीख 18 मई, 1987; सा.का.नि. 176(अ) तारीख 2 अप्रैल, 1996; सा.का.नि. 97 (अ), तारीख 18 फरवरी, 2009; सा.का.नि. 149(अ) तारीख 4 मार्च, 2009; सा.का.नि. 543(अ) तारीख 22 जुलाई, 2009; सा.का.नि. 739(अ) तारीख 9 सितंबर, 2010; सा.का.नि. 809(अ) तारीख 4 अक्टूबर, 2010, सा.का.नि. 215(अ) तारीख 15 मार्च, 2011; सा.का.नि. 221(अ) तारीख 18 मार्च, 2011; सा.का.नि. 354(अ) तारीख 2 मई, 2011; सा.का.नि. 424(अ) तारीख 1 जून, 2011; सा.का.नि. 446(अ) तारीख 13 जून, 2011; सा.का.नि. 152(अ) तारीख 16 मार्च, 2012; सा.का.नि. 266(अ) तारीख 30 मार्च, 2012; सा.का.नि. 277(अ) तारीख 31 मार्च, 2012; सा.का.नि. 620(अ) तारीख 9 नवम्बर, 2012; सा.का.नि. 176(अ) तारीख 18 मार्च, 2013; सा.का.नि. 535(अ) तारीख 7 अगस्त, 2013; सा.का.नि. 771(अ) तारीख 11 दिसम्बर, 2013; सा.का.नि. 2(अ) तारीख 2 जनवरी, 2014; सा.का.नि. 229(अ) तारीख 28 मार्च, 2014; सा.का.नि. 232(अ) तारीख 31 मार्च, 2014; सा.का.नि. 325(अ) तारीख 7 मई, 2014, सा.का.नि. 612(अ) तारीख 25 अगस्त, 2014 और अन्तिम संशोधन सा.का.नि. 789(अ) तारीख 11 नवम्बर, 2014 किया गया था।

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE  
NOTIFICATION

New Delhi, the 7th December, 2015

S.O. 3305(E).— In exercise of the powers conferred by sections 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely:—

- (1) These rules may be called the Environment (Protection) Amendment Rules, 2015.
- (2) They shall come into force on the date of their publication in the Official Gazette.
- In the Environment (Protection) Rules, 1986, in Schedule - I -
  - after serial number 5 and entries relating thereto, the following serial number and entries shall be inserted, namely:—

Sr. No.	Industry	Parameter	Standards
1	2	3	4
*5A.	Thermal Power Plant (Water consumption limit)	Water consumption	I. All plants with Once Through Cooling (OTC) shall install Cooling Tower (CT) and achieve specific water consumption upto maximum of 3.5cu <sup>3</sup> /MWh within a period

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अपर महासंचालक (व्यापारिक)  
Addl. General Manager (Commercial)  
एनटीपीसी लिमिटेड / NTPC Limited

			of two years from the date of publication of this notification.
			II. All existing CT-based plants reduce specific water consumption upto maximum of 3.5m <sup>3</sup> /MWh within a period of two years from the date of publication of this notification.
			III. New plants to be installed after 1 <sup>st</sup> January, 2017 shall have to meet specific water consumption upto maximum of 2.5 m <sup>3</sup> /MWh and achieve zero waste water discharged*;

(b) for serial number 25, and the entries related thereto, the following serial number and entries shall be substituted, namely:-

Sr. No.	Industry	Parameter	Standards
1	2	3	4
25.	Thermal Power Plant	TPPs (units) installed before 31 <sup>st</sup> December, 2003*	
		Particulate Matter	100 mg/Nm <sup>3</sup>
		Sulphur Dioxide (SO <sub>2</sub> )	600 mg/Nm <sup>3</sup> (Units Smaller than 500MW capacity units) 200 mg/Nm <sup>3</sup> (for units having capacity of 500MW and above)
		Oxides of Nitrogen (NOx)	600 mg/Nm <sup>3</sup>
		Mercury (Hg)	0.03 mg/Nm <sup>3</sup> (for units having capacity of 500MW and above)
		TPPs (units) installed after 1 <sup>st</sup> January, 2003, upto 31 <sup>st</sup> December, 2016*	
		Particulate Matter	50 mg/Nm <sup>3</sup>
		Sulphur Dioxide (SO <sub>2</sub> )	600 mg/Nm <sup>3</sup> (Units Smaller than 500MW capacity units) 200 mg/Nm <sup>3</sup> (for units having capacity of 500MW and above)
		Oxides of Nitrogen (NOx)	300 mg/Nm <sup>3</sup>
		Mercury (Hg)	0.03 mg/Nm <sup>3</sup>
		TPPs (units) to be installed from 1 <sup>st</sup> January, 2017**	
		Particulate Matter	30 mg/Nm <sup>3</sup>
		Sulphur Dioxide (SO <sub>2</sub> )	100 mg/Nm <sup>3</sup>
		Oxides of Nitrogen (NOx)	100 mg/Nm <sup>3</sup>
Mercury (Hg)	0.03 mg/Nm <sup>3</sup>		

\*TPPs (units) shall meet the limits within two years from date of publication of this notification.

\*\*Includes all the TPPs (units) which have been accorded environmental clearance and are under construction\*.

[F. No. Q-15017/40/2007-CPW]

Dr. KASHID HASAN, Advisor

उत्साहकर मोहंती / Umasankar Mohanty  
अपर महाप्रबन्धक (व्यापारिक)  
Addl. General Manager (Commercial)  
एनटीपीसी लिमिटेड / NTPC Limited

**Note:** - The principal rules were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i) vide number S.O. 844(E), dated the 19<sup>th</sup> November, 1986 and subsequently amended vide the following notifications:—  
 S.O. 433(E), dated 18<sup>th</sup> April 1987; G.S.R. 176(E) dated 2<sup>nd</sup> April, 1996; G.S.R. 97(E), dated the 18<sup>th</sup> February, 2009; G.S.R. 149(E), dated the 4<sup>th</sup> March, 2009; G.S.R. 543(E), dated 22<sup>nd</sup> July, 2009; G.S.R. 739(E), dated the 9<sup>th</sup> September, 2010; G.S.R. 809(E), dated the 4<sup>th</sup> October, 2010; G.S.R. 215(E), dated the 15<sup>th</sup> March, 2011; G.S.R. 221(E), dated the 18<sup>th</sup> March, 2011; G.S.R. 354(E), dated the 2<sup>nd</sup> May, 2011; G.S.R. 424(E), dated the 1<sup>st</sup> June, 2011; G.S.R. 446(E), dated the 13<sup>th</sup> June, 2011; G.S.R. 152(E), dated the 16<sup>th</sup> March, 2012; G.S.R. 255(E), dated the 30<sup>th</sup> March, 2012; and G.S.R. 277(E), dated the 31<sup>st</sup> March, 2012; and G.S.R. 830(E), dated the 9<sup>th</sup> November, 2012; G.S.R. 176(E), dated the 18<sup>th</sup> March, 2013; G.S.R. 535(E), dated the 7<sup>th</sup> August, 2013; G.S.R. 771(E), dated the 11<sup>th</sup> December, 2013; G.S.R. 1(E), dated the 2<sup>nd</sup> January, 2014; G.S.R. 229(E), dated the 28<sup>th</sup> March, 2014; G.S.R. 232(E), dated the 31<sup>st</sup> March, 2014; G.S.R. 325(E), dated the 07<sup>th</sup> May, 2014; G.S.R. 612(E), dated the 25<sup>th</sup> August, 2014 and lastly amended vide notification G.S.R. 789(E), dated 11<sup>th</sup> November, 2014.

  
**भारत का राजपत्र**  
**The Gazette of India**

असाधारण

EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii)

PART II—Section 3—Sub-section (ii)

प्राधिकार से प्रकाशित

PUBLISHED BY AUTHORITY

सं. 590]

नई दिल्ली, सोमवार, मार्च 7, 2016/फाल्गुन 17, 1937

No. 590]

NEW DELHI, MONDAY, MARCH 7, 2016/ PHALGUNA 17, 1937

पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

शुद्धिपत्र

नई दिल्ली, 7 मार्च, 2016

का.जा. 682(ब).—भारत के राजपत्र में प्रकाशित पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय की अधिसूचना सा.का.नि. 3305(ब) तारीख 7 दिसंबर, 2015 द्वारा अधिसूचित पर्यावरण (संरक्षण) संशोधन नियम, 2015 के अंतर्गत आने वाली नीचे उल्लिखित प्रविष्टियों को निम्न पढ़ें:

1. पृष्ठ सं. 2, क्रम सं. 25, पंक्ति सं. 2 के नीचे सारणी में स्तम्भ 3 और 4 में "31 दिसंबर, 2003 से पहले संस्थापित टीपीपी (इकाईयां)"
2. पृष्ठ सं. 2, क्रम सं. 25, पंक्ति सं. 6 की सारणी के स्तम्भ 4 में "300 mg/Nm<sup>3</sup>" के स्थान पर "600 mg/Nm<sup>3</sup>" पढ़ें
3. पृष्ठ सं. 2, क्रम सं. 25, पंक्ति सं. 8 की सारणी के स्तम्भ 3 और 4 में "1 जनवरी, 2003" के स्थान पर "1 जनवरी, 2004" पढ़ें

[फा.सं. क्यू.15017/40/2007-सीपीडब्ल्यू]

डा. राशिव हसन, सलाहकार



## MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

## CORRIGENDUM

New Delhi, the 7th March, 2016

**S.O. 682(E).**—In the notification of the Government of India in the Ministry of Environment, Forest and Climate Change vide number S.O. 3305(E), dated the 7<sup>th</sup> December, 2015, published in the Gazette of India, Part II, Section 3, Sub-section (ii), in page 4, in the Table, against serial number 25, for “1<sup>st</sup> January, 2003” substitute “1<sup>st</sup> January, 2004”.

[F.No. Q-15017/40/2007-CPW]

Dr. RASHID HASAN, Advisor



# ANNEXURE-E

रजिस्ट्री सं० डी० एल०—(एन)04/0007/2003—20

REGISTERED NO. DL—(N)04/0007/2003—20



सी.जी.-डी.एल.-अ.-29092020-222112  
CG-DL-E-29092020-222112

असाधारण

EXTRAORDINARY

भाग II — खण्ड 1

PART II — Section 1

प्राधिकार से प्रकाशित

PUBLISHED BY AUTHORITY

सं० 62] नई दिल्ली, मंगलवार, सितम्बर 29, 2020/ आश्विन 7, 1942 (शक)  
No. 62] NEW DELHI, TUESDAY, SEPTEMBER 29, 2020/ASVINA 7, 1942 (SAKA)

इस भाग में भिन्न पृष्ठ संख्या दी जाती है जिससे कि यह अलग संकलन के रूप में रखा जा सके।  
Separate paging is given to this Part in order that it may be filed as a separate compilation.

## MINISTRY OF LAW AND JUSTICE (Legislative Department)

*New Delhi, the 29th September, 2020/Asvina 7, 1942 (Saka)*

The following Act of Parliament received the assent of the President on the 28th September, 2020 and is hereby published for general information:—

### THE OCCUPATIONAL SAFETY, HEALTH AND WORKING CONDITIONS CODE, 2020

No. 37 OF 2020

[28th September, 2020.]

An Act to consolidate and amend the laws regulating the occupational safety, health and working conditions of the persons employed in an establishment and for matters connected therewith or incidental thereto.

BE it enacted by Parliament in the Seventy-first Year of the Republic of India as follows:—

#### CHAPTER I

##### PRELIMINARY

1. (1) This Act may be called the Occupational Safety, Health and Working Conditions Code, 2020.

Short title,  
commencement  
and  
application.

(2) It shall come into force on such date as the Central Government may, by notification appoint; and different dates may be appointed for different provisions of this Code and any reference in any such provision to the commencement of this Code shall be construed as a reference to the coming into force of that provision.

(b) has obtained the registration of his establishment so fraudulently or otherwise that the registration has become useless or ineffective to run the establishment,

then, in case of clause (a) such misrepresentation or suppression of any material fact shall be deemed to be the contravention of the provisions of this Code for prosecution of the employer under section 94 without affecting the registration and running of the establishment and in case of clause (b) the registering officer may, after giving an opportunity to the employer of the establishment to be heard, revoke the registration by an order and such process for revocation shall be completed by the registering officer within sixty days from coming into his notice the facts specified in clause (b).

(7) No employer of an establishment who—

(a) has not registered the establishment under this section; or

(b) has not preferred appeal under section 4 against the cancellation of the registration certificate of the establishment under sub-section (5) or revocation of the registration of the establishment under sub-section (6) or the appeal so preferred has been dismissed,

shall employ any employee in the establishment.

(8) Notwithstanding anything contained in this Code, where any establishment, to which this Code applies, has already been registered under any—

(a) Central Labour law; or

(b) any other law which may be notified by the Central Government and which applies to the establishment which is in existence at the time of the commencement of this Code,

shall be deemed to have been registered under the provisions of this Code, subject to the condition that the registration holder provides the details of registration to the concerned registering officer within such time and in such form as may be prescribed.

Appeal.

4. (1) Any person aggrieved by an order made under section 3 may, within thirty days from the date on which the order is communicated to him, prefer an appeal to an appellate officer who shall be a person notified in this behalf by the appropriate Government:

Provided that the appellate officer may entertain the appeal after the expiry of the said period of thirty days, if he is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time.

(2) On receipt of an appeal under sub-section (1), the appellate officer shall, after giving the appellant an opportunity of being heard, dispose of the appeal within a period of thirty days from the date of receipt of such appeal.

Notice by employer of commencement and cessation of operation.

5. (1) No employer of an establishment being factory or mine or relating to contract labour or building or other construction work shall use such establishment to commence the operation of any industry, trade, business, manufacturing or occupation thereon without sending notice of such purpose in such form and manner and to such authority and within such time as may be prescribed and shall also intimate the cessation thereof to the said authority in such manner as may be prescribed by the appropriate Government.

(2) The notice or intimation under sub-section (1) shall be given electronically.

### CHAPTER III

#### DUTIES OF EMPLOYER AND EMPLOYEES, ETC.

Duties of employer.

6. (1) Every employer shall,—

(a) ensure that workplace is free from hazards which cause or are likely to cause injury or occupational disease to the employees;

(b) comply with the occupational safety and health standards declared under section 18 or the rules, regulations, bye-laws or orders made under this Code;

(c) provide such annual health examination or test free of costs to such employees of such age or such class of employees of establishments or such class of establishments, as may be prescribed by the appropriate Government;

(d) provide and maintain, as far as is reasonably practicable, a working environment that is safe and without risk to the health of the employees;

(e) ensure the disposal of hazardous and toxic waste including disposal of e-waste;

(f) issue a letter of appointment to every employee on his appointment in the establishment, with such information and in such form as may be prescribed by the appropriate Government and where an employee has not been issued such appointment letter on or before the commencement of this Code, he shall, within three months of such commencement, be issued such appointment letter;

(g) ensure that no charge is levied on any employee, in respect of anything done or provided for maintenance of safety and health at workplace including conduct of medical examination and investigation for the purpose of detecting occupational diseases;

(h) relating to factory, mine, dock work, building or other construction work or plantation, ensure and be responsible for the safety and health of employees, workers and other persons who are on the work premises of the employer, with or without his knowledge, as the case may be.

(2) Without prejudice to the generality of the provisions of sub-section (1), the duties of an employer shall particularly in respect of factory, mines, dock, building or other construction work or plantation include—

(a) the provision and maintenance of plant and systems of work in the workplace that are safe and without risk to health;

(b) the arrangements in the workplace for ensuring safety and absence of risk to health in connection with the use, handling, storage and transport of articles and substances;

(c) the provision of such information, instruction, training and supervision as are necessary to ensure the health and safety of all employees at work;

(d) the maintenance of all places of work in the workplace in a condition that is safe and without risk to health and the provision and maintenance of such means of access to, and egress from, such places as are safe and without such risk;

(e) the provision, maintenance or monitoring of such working environment in the workplace for the employees that is safe, without risk to health as regards facilities and arrangements for their welfare at work.

7. (1) The owner and agent of every mine shall jointly and severally be responsible for making financial and other provisions and for taking such other steps as may be necessary for compliance with the provisions of this Code and the rules, regulations, bye-laws and orders made thereunder, relating to mine.

Duties and responsibilities of owner, agent and manager in relation to mine.

(2) In the event of any contravention by any person whatsoever of any of the provisions of this Code or of the rules, regulations, bye-laws or orders made thereunder, relating to mine, except those which specifically require any person to do any act or thing or prohibit any person from doing an act or thing, besides the person who contravenes, then, each of the following persons shall also be deemed to be guilty of such contravention unless he

proves that he had used due diligence to secure compliance with the provisions and had taken reasonable means to prevent such contravention, namely:—

(a) the official or officials appointed to perform duties of supervision in respect of the provisions contravened;

(b) the manager of the mine;

(c) the owner and agent of the mine;

(d) the person appointed, if any, to carry out the responsibility under section 24.

(3) It shall not be a defence in any proceedings brought against the owner or agent of a mine under this section that the manager and other officials have been appointed in accordance with the provisions of this Code or that a person to carry the responsibility under section 24 has been appointed.

Duties of designers, manufacturers, importers or suppliers.

**8. (1)** Every person who designs, manufactures, imports or supplies any article for use in any establishment shall—

(a) ensure so far as is reasonably practicable, that the article is so designed and constructed in the establishment as to be safe and without risk to the health of the workers when properly used;

(b) carry out or arrange for the carrying out of such tests and examination in the establishment as may be considered necessary for the effective implementation of the provisions of clause (a);

(c) take steps as may be necessary to ensure that adequate information will be available—

(i) in connection with the use of the article in any establishment;

(ii) about the use for which such article is designed and tested; and

(iii) about any conditions necessary to ensure that the article, when put to such use, shall be safe, and without risk to the health of the workers:

Provided that where an article is designed or manufactured outside India, then it shall be obligatory on the part of the importer to see—

(A) that the article conforms to the same standards of such article manufactured in India; or

(B) if the standards adopted in the country outside India for the manufacture of such article is above the standards adopted in India, that the article conforms to such standards in such country;

(C) if there is no standard of such article in India, then, the article conforms to the standard adopted in the country from where it is imported at its national level.

(2) The designer, manufacturer, importer or supplier shall also comply with such duties as the Central Government may, in consultation with the National Occupational Safety and Health Advisory Board referred to in sub-section (1) of section 16, by regulations specify.

(3) Every person, who undertakes to design or manufacture any article and substance for use in any factory, may carry out or arrange for the carrying out of necessary research with a view to the discovery and, so far as is reasonably, practicable, the elimination or minimisation of any risks to the health or safety of the workers to which the design or manufacture of article and substance may give rise to such risk.

**THE SOLID WASTE  
MANAGEMENT RULES,  
2016**

**(as amended to date)**

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

New Delhi, the 8th April, 2016

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

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

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

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

**1. Short title and commencement. –**

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

**2. Application.-** These rules shall apply to every urban local body, outgrowths in urban agglomerations, census towns as declared by the Registrar General and Census Commissioner of India, <sup>1</sup>[villages with population more than 3000,] notified areas, notified industrial townships, areas under the control of Indian Railways, airports, airbases, Ports and harbours, defence establishments, special economic zones, State and Central government organisations, places of pilgrims, religious and historical importance as may be notified by respective State government from time to time and to every domestic, institutional, commercial and any other non-residential solid waste generator situated in the areas except industrial waste, hazardous waste, hazardous chemicals, bio medical wastes, e-waste, lead acid batteries and radio-active waste, that are covered under separate rules framed under the Environment (Protection) Act, 1986.

**3. Definitions –** (1) In these rules, unless the context otherwise requires, -

1. **“aerobic composting”** means a controlled process involving microbial decomposition of organic matter in the presence of oxygen;
2. **“anaerobic digestion”** means a controlled process involving microbial decomposition of organic matter in absence of oxygen;
3. **“authorisation”** means the permission given by the State Pollution Control Board or Pollution Control Committee, as the case may be, to the operator of a facility or urban local authority, or any other agency responsible for processing and disposal of solid waste;
4. **“biodegradable waste ”** means any organic material that can be degraded by micro-

<sup>1</sup> Ins. the words and figure vide S.O. 1152(E) dated 19th March, 2020

organisms into simpler stable compounds;

5. **"bio-methanation"** means a process which entails enzymatic decomposition of the organic matter by microbial action to produce methane rich biogas;
6. **"brand owner"** means a person or company who sells any commodity under a registered brandlabel.
7. **"buffer zone"** means zone of no development to be maintained around solid waste processing and disposal facility, exceeding 5 TPD of installed capacity. This will be maintained within total land area allotted for the solid waste processing and disposal facility.
8. **"bulk waste generator"** means and includes buildings occupied by the Central government departments or undertakings, State government departments or undertakings, local bodies, public sector undertakings or private companies, hospitals, nursing homes, schools, colleges, universities, other educational institutions, hostels, hotels, commercial establishments, markets, places of worship, stadia and sports complexes having an average waste generation rate exceeding 100kg per day;
9. **"bye-laws"** means regulatory framework notified by local body, census town and notified area townships for facilitating the implementation of these rules effectively in their jurisdiction.
10. **"census town"** means an urban area as defined by the Registrar General and Census Commissioner of India;
11. **"combustible waste"** means non-biodegradable, non-recyclable, non-reusable, non-hazardous solid waste having minimum calorific value exceeding 1500 kcal/kg and excluding chlorinated materials like plastic, wood pulp, etc;
12. **"composting"** means a controlled process involving microbial decomposition of organic matter;
13. **"contractor"** means a person or firm that undertakes a contract to provide materials or labour to perform a service or do a job for service providing authority;
14. **"co-processing"** means use of non-biodegradable and non recyclable solid waste having calorific value exceeding 1500 kcal as raw material or as a source of energy or both to replace or supplement the natural mineral resources and fossil fuels in industrial processes;
15. **"decentralised processing"** means establishment of dispersed facilities for maximizing the processing of bio-degradable waste and recovery of recyclables closest to the source of generation so as to minimize transportation of waste for processing or disposal;
16. **"disposal"** means the final and safe disposal of post processed residual solid waste and inert street sweepings and silt from surface drains on land as specified in Schedule I to prevent contamination of ground water, surface water, ambient air and attraction of animals or birds;
17. **"domestic hazardous waste"** means discarded paint drums, pesticide cans, CFL bulbs, tube lights, expired medicines, broken mercury thermometers, used batteries, used needles and syringes and contaminated gauge, etc., generated at the household level;
18. **"door to door collection"** means collection of solid waste from the door step of households, shops, commercial establishments, offices, institutional or any other non residential premises and includes collection of such waste from entry gate or a designated location on the ground floor in a housing society, multi storied building or apartments, large residential, commercial or institutional complex or premises;
19. **"dry waste"** means waste other than bio-degradable waste and inert street sweepings and includes recyclable and non recyclable waste, combustible waste and sanitary napkin and diapers, etc;

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



37. **“redevelopment”** means rebuilding of old residential or commercial buildings at the same site, where the existing buildings and other infrastructures have become dilapidated;
38. **“refused derived fuel”(RDF)** means fuel derived from combustible waste fraction of solid waste like plastic, wood, pulp or organic waste, other than chlorinated materials, in the form of pellets or fluff produced by drying, shredding, dehydrating and compacting of solid waste;
39. **“residual solid waste”** means and includes the waste and rejects from the solid waste processing facilities which are not suitable for recycling or further processing;
40. **“sanitary land filling ”** means the final and safe disposal of residual solid waste and inert wastes on land in a facility designed with protective measures against pollution of ground water, surface water and fugitive air dust, wind-blown litter, bad odour, fire hazard, animal menace, bird menace, pests or rodents, greenhouse gas emissions, persistent organic pollutants slope instability and erosion;
41. **“sanitary waste”** means wastes comprising of used diapers, sanitary towels or napkins, tampons, condoms, incontinence sheets and any other similar waste;
42. **“Schedule”** means the Schedule appended to these rules;
43. **“secondary storage”** means the temporary containment of solid waste after collection at secondary waste storage depots or MRFs or bins for onward transportation of the waste to the processing or disposal facility;
44. **“segregation”** means sorting and separate storage of various components of solid waste namely biodegradable wastes including agriculture and dairy waste, non biodegradable wastes including recyclable waste, non- recyclable combustible waste, sanitary waste and non recyclable inert waste, domestic hazardous wastes, and construction and demolition wastes;
45. **“service provider”** means an authority providing public utility services like water, sewerage, electricity, telephone, roads, drainage, etc;
46. **“solid waste”** means and includes solid or semi-solid domestic waste, sanitary waste, commercial waste, institutional waste, catering and market waste and other non residential wastes, street sweepings, silt removed or collected from the surface drains, horticulture waste, agriculture and dairy waste, treated bio-medical waste excluding industrial waste, bio-medical waste and e-waste, battery waste, radio-active waste generated in the area under the local authorities and other entities mentioned in rule 2;
47. **“sorting”** means separating various components and categories of recyclables such as paper, plastic, card-boards, metal, glass, etc., from mixed waste as may be appropriate to facilitate recycling;
48. **“stabilising”** means the biological decomposition of biodegradable wastes to a stable state where it generates no leachate or offensive odours and is fit for application to farm land, soil erosion control and soil remediation;
49. **“street vendor”** means any person engaged in vending of articles, goods, wares, food items or merchandise of everyday use or offering services to the general public, in a street, lane, side walk, footpath, pavement, public park or any other public place or private area, from a temporary built up structure or by moving from place to place and includes hawker, peddler, squatter and all other synonymous terms which may be local or region specific; and the words “street vending” with their grammatical variations and cognate expressions, shall be construed accordingly;
50. **“tipping fee”** means a fee or support price determined by the local authorities or any state agency authorised by the State government to be paid to the concessionaire or operator of waste processing facility or for disposal of residual solid waste at the landfill;

51. **“transfer station”** means a facility created to receive solid waste from collection areas and transport in bulk in covered vehicles or containers to waste processing and, or, disposal facilities;
52. **“transportation”** means conveyance of solid waste, either treated, partly treated or untreated from a location to another location in an environmentally sound manner through specially designed and covered transport system so as to prevent the foul odour, littering and unsightly conditions;
53. **“treatment”** means the method, technique or process designed to modify physical, chemical or biological characteristics or composition of any waste so as to reduce its volume and potential to cause harm;
54. **“user fee”** means a fee imposed by the local body and any entity mentioned in rule 2 on the waste generator to cover full or part cost of providing solid waste collection, transportation, processing and disposal services.
55. **“vermi composting”** means the process of conversion of bio-degradable waste into compost using earth worms;
56. **“waste generator”** means and includes every person or group of persons, every residential premises and non residential establishments including Indian Railways, defense establishments, which generate solid waste;
57. **“waste hierarchy”** means the priority order in which the solid waste is to should be managed by giving emphasis to prevention, reduction, reuse, recycling, recovery and disposal, with prevention being the most preferred option and the disposal at the landfill being the least;
58. **“waste picker”** means a person or groups of persons informally engaged in collection and recovery of reusable and recyclable solid waste from the source of waste generation the streets, bins, material recovery facilities, processing and waste disposal facilities for sale to recyclers directly or through intermediaries to earn their livelihood.

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

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

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

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

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

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

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

(3) All waste generators shall pay such user fee for solid waste management, as specified

in the bye-laws of the local bodies.

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

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

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

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

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

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

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

## 12) Two subject experts

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

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

(a) take periodic review of the measures taken by the states and local bodies for improving solid waste management practices and execution of solid waste management projects funded by the Ministry and external agencies at least once in a year and give advice on taking corrective measures;

(b) formulate national policy and strategy on solid waste management including policy on waste to energy in consultation with stakeholders within six months from the date of notification of these rules;

(c) facilitate States and Union Territories in formulation of state policy and strategy on solid management based on national solid waste management policy and national urban sanitation policy;

(d) promote research and development in solid waste management sector and disseminate information to States and local bodies;

(e) undertake training and capacity building of local bodies and other stakeholders; <sup>1</sup>[\*\*\*]

(f) provide technical guidelines and project finance to states, Union territories and local bodies on solid waste management to facilitate meeting timelines and standards, <sup>2</sup>[and]

<sup>3</sup>[(g) ensure the implementation of these rules by the States and the Union territories as per rule 11].

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

(a) provide market development assistance on city compost; and

(b) ensure promotion of co-marketing of compost with chemical fertilisers in the ratio of 3 to 4 bags: 6 to 7 bags by the fertiliser companies to the extent compost is made available for marketing to the companies.

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

(a) provide flexibility in Fertiliser Control Order for manufacturing and sale of compost;

(b) propagate utilisation of compost on farm land;

(c) set up laboratories to test quality of compost produced by local authorities or their authorised agencies; and

(d) issue suitable guidelines for maintaining the quality of compost and ratio of use of compost visa-a-vis chemical fertilizers while applying compost to farmland.

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

(a) decide tariff or charges for the power generated from the waste to energy plants based

<sup>1</sup> Omitted the word "and" vide S.O. 1152(E) dated 19th March, 2020

<sup>2</sup> Ins. the word "and" vide S.O. 1152(E) dated 19th March, 2020

<sup>3</sup> Ins. sub-rule 4(iii) vide S.O. 1152(E) dated 19th March, 2020

on solid waste.

(b) compulsory purchase power generated from such waste to energy plants by distribution company.

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

(a) facilitate infrastructure creation for waste to energy plants; and

(b) provide appropriate subsidy or incentives for such waste to energy plants.

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

(a) prepare a state policy and solid waste management strategy for the state or the union territory in consultation with stakeholders including representative of waste pickers, self help group and similar groups working in the field of waste management consistent with these rules, national policy on solid waste management and national urban sanitation policy of the Ministry of Housing and Urban Affairs, in a period not later than one year from the date of notification of these rules;

(b) while preparing State policy and strategy on solid waste management, lay emphasis on waste reduction, reuse, recycling, recovery and optimum utilisation of various components of solid waste to ensure minimisation of waste going to the landfill and minimise impact of solid waste on human health and environment;

(c) state policies and strategies should acknowledge the primary role played by the informal sector of waste pickers, waste collectors and recycling industry in reducing waste and provide broad guidelines regarding integration of waste picker or informal waste collectors in the waste management system.

(d) ensure implementation of provisions of these rules by all local authorities;

(e) direct the town planning department of the State to ensure that master plan of every city in the State or Union territory provisions for setting up of solid waste processing and disposal facilities except for the cities who are members of common waste processing facility or regional sanitary landfill for a group of cities; and

(f) ensure identification and allocation of suitable land to the local bodies within one year for setting up of processing and disposal facilities for solid wastes and incorporate them in the master plans (land use plan) of the State or as the case may be, cities through metropolitan and district planning committees or town and country planning department;

(g) direct the town planning department of the State and local bodies to ensure that a separate space for segregation, storage, decentralised processing of solid waste is demarcated in the development plan for group housing or commercial, institutional or any other non-residential complex exceeding 200 dwelling or having a plot area exceeding 5,000 square meters;

(h) direct the developers of Special Economic Zone, Industrial Estate, Industrial Park to earmark at least five percent of the total area of the plot or minimum five plots or sheds for recovery and recycling facility.

(i) facilitate establishment of common regional sanitary land fill for a group of cities and towns falling within a distance of 50 km (or more) from the regional facility on a cost sharing basis and ensure professional management of such sanitary landfills;

(j) arrange for capacity building of local bodies in managing solid waste, segregation and transportation or processing of such waste at source;

(k) notify buffer zone for the solid waste processing and disposal facilities of more than

five tons per day in consultation with the State Pollution Control Board; and

- (l) start a scheme on registration of waste pickers and waste dealers.

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

- (a) facilitate identification and allocation of suitable land as per clause (f) of rules 11 for setting up solid waste processing and disposal facilities to local authorities in his district in close coordination with the Secretary-in-charge of State Urban Development Department within one year from the date of notification of these rules;

- (b) review the performance of local bodies, at least once in a quarter on waste segregation, processing, treatment and disposal and take corrective measures in consultation with the Commissioner or Director of Municipal Administration or Director of local bodies and secretary-in-charge of the State Urban Development.

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

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

- (a) co-ordinate with the State Pollution Control Boards and the Pollution Control Committees for implementation of these rules and adherence to the prescribed standards by local authorities;

- (b) formulate the standards for ground water, ambient air, noise pollution, leachate in respect of all solid waste processing and disposal facilities;

- (c) review environmental standards and norms prescribed for solid waste processing facilities or treatment technologies and update them as and when required;

- (d) review through State Pollution Control Boards or Pollution Control Committees, at least once in a year, the implementation of prescribed environmental standards for solid waste processing facilities or treatment technologies and compile the data monitored by them;

- (e) review the proposals of State Pollution Control Boards or Pollution Control Committees on use of any new technologies for processing, recycling and treatment of solid waste and prescribe performance standards, emission norms for the same within 6 months;

- (f) monitor through State Pollution Control Boards or Pollution Control Committees the implementation of these rules by local bodies;

- (g) prepare an annual report on implementation of these rules on the basis of reports received from State Pollution Control Boards and Committees and submit to the Ministry of Environment, Forest and Climate Change and the report shall also be put in public domain;

- (h) publish guidelines for maintaining buffer zone restricting any residential, commercial or any other construction activity from the outer boundary of the waste processing and disposal facilities for different sizes of facilities handling more than five tons per day of solid waste;

- (i) publish guidelines, from time to time, on environmental aspects of processing and disposal of solid waste to enable local bodies to comply with the provisions of these rules; and

- (j) provide guidance to States or Union territories on inter-state movement of waste.

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

- (a) prepare a solid waste management plan as per state policy and strategy on solid waste management within six months from the date of notification of state policy and strategy and submit a copy to respective departments of State Government or Union territory Administration or agency authorised by the State Government or Union territory Administration;
- (b) arrange for door to door collection of segregated solid waste from all households including slums and informal settlements, commercial, institutional and other non residential premises. From multi-storage buildings, large commercial complexes, malls, housing complexes, etc., this may be collected from the entry gate or any other designated location;
- (c) establish a system to recognise organisations of waste pickers or informal waste collectors and promote and establish a system for integration of these authorised waste-pickers and waste collectors to facilitate their participation in solid waste management including door to door collection of waste;
- (d) facilitate formation of Self Help Groups, provide identity cards and thereafter encourage integration in solid waste management including door to door collection of waste;
- (e) frame bye-laws incorporating the provisions of these rules within one year from the date of notification of these rules and ensure timely implementation;
- (f) prescribe from time to time user fee as deemed appropriate and collect the fee from the waste generators on its own or through authorised agency;
- (g) direct waste generators not to litter i.e throw or dispose of any waste such as paper, water bottles, liquor bottles, soft drink cans, tetra packs, fruit peel, wrappers, etc., or burn or bury waste on streets, open public spaces, drains, waste bodies and to segregate the waste at source as prescribed under these rules and hand over the segregated waste to authorised the waste pickers or waste collectors authorised by the local body;
- (h) setup material recovery facilities or secondary storage facilities with sufficient space for sorting of recyclable materials to enable informal or authorised waste pickers and waste collectors to separate recyclables from the waste and provide easy access to waste pickers and recyclers for collection of segregated recyclable waste such as paper, plastic, metal, glass, textile from the source of generation or from material recovery facilities; Bins for storage of bio-degradable wastes shall be painted green, those for storage of recyclable wastes shall be printed <sup>1</sup>[blue] and those for storage of other wastes shall be printed black;
- (i) establish waste deposition centres for domestic hazardous waste and give direction for waste generators to deposit domestic hazardous wastes at this centre for its safe disposal. Such facility shall be established in a city or town in a manner that one centre is set up for the area of twenty square kilometers or part thereof and notify the timings of receiving domestic hazardous waste at such centres;
- (j) ensure safe storage and transportation of the domestic hazardous waste to the hazardous waste disposal facility or as may be directed by the State Pollution Control Board or the Pollution Control Committee;
- (k) direct street sweepers not to burn tree leaves collected from street sweeping and store them separately and handover to the waste collectors or agency authorised by local body;
- (l) provide training on solid waste management to waste-pickers and waste collectors;
- (m) collect waste from vegetable, fruit, flower, meat, poultry and fish market on day to day basis and promote setting up of decentralised compost plant or bio-methanation plant at suitable locations in the markets or in the vicinity of markets ensuring hygienic conditions;

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<sup>1</sup> Substituted for the word "white" the word "blue" by G.S.R. 298(E) dated 10.4.2019

(n) collect separately waste from sweeping of streets, lanes and by-lanes daily, or on alternate days or twice a week depending on the density of population, commercial activity and local situation;

(o) set up covered secondary storage facility for temporary storage of street sweepings and silt removed from surface drains in cases where direct collection of such waste into transport vehicles is not convenient. Waste so collected shall be collected and disposed of at regular intervals as decided by the local body;

(p) collect horticulture, parks and garden waste separately and process in the parks and gardens, as far as possible;

(q) transport segregated bio-degradable waste to the processing facilities like compost plant, bio-methanation plant or any such facility. Preference shall be given for on-site processing of such waste;

(r) transport non-bio-degradable waste to the respective processing facility or material recovery facilities or secondary storage facility;

(s) transport construction and demolition waste as per the provisions of the Construction and Demolition Waste Management Rules, 2016;

(t) involve communities in waste management and promotion of home composting, bio-gas generation, decentralised processing of waste at community level subject to control of odour and maintenance of hygienic conditions around the facility;

(u) phase out the use of chemical fertilizer in two years and use compost in all parks, gardens maintained by the local body and wherever possible in other places under its jurisdiction. Incentives may be provided to recycling initiatives by informal waste recycling sector.

(v) facilitate construction, operation and maintenance of solid waste processing facilities and associated infrastructure on their own or with private sector participation or through any agency for optimum utilisation of various components of solid waste adopting suitable technology including the following technologies and adhering to the guidelines issued by the Ministry of Housing and Urban Affairs from time to time and standards prescribed by the Central Pollution Control Board. Preference shall be given to decentralised processing to minimize transportation cost and environmental impacts such as-

a) bio-methanation, microbial composting, vermi-composting, anaerobic digestion or any other appropriate processing for bio-stabilisation of biodegradable wastes;

b) waste to energy processes including refused derived fuel for combustible fraction of waste or supply as feedstock to solid waste based power plants or cement kilns;

(w) undertake on their own or through any other agency construction, operation and maintenance of sanitary landfill and associated infrastructure as per Schedule I for disposal of residual wastes in a manner prescribed under these rules;

(x) make adequate provision of funds for capital investments as well as operation and maintenance of solid waste management services in the annual budget ensuring that funds for discretionary functions of the local body have been allocated only after meeting the requirement of necessary funds for solid waste management and other obligatory functions of the local body as per these rules;

(y) make an application in Form-I for grant of authorisation for setting up waste processing, treatment or disposal facility, if the volume of waste is exceeding five metric tonnes per day including sanitary landfills from the State Pollution Control Board or the Pollution Control Committee, as the case may be;

(z) submit application for renewal of authorisation at least sixty days before the expiry of the validity of authorisation;

(za) prepare and submit annual report in Form IV on or before the 30<sup>th</sup> April of the succeeding year to the Commissioner or Director, Municipal Administration or designated Officer;



(zb) the annual report shall then be sent to the Secretary-in-Charge of the State Urban Development Department or village panchayat or rural development department and to the respective State Pollution Control Board or Pollution Control Committee by the 31<sup>st</sup> May of every year;

(zc) educate workers including contract workers and supervisors for door to door collection of segregated waste and transporting the unmixed waste during primary and secondary transportation to processing or disposal facility;

(zd) ensure that the operator of a facility provides personal protection equipment including uniform, fluorescent jacket, hand gloves, raincoats, appropriate foot wear and masks to all workers handling solid waste and the same are used by the workforce;

(ze) ensure that provisions for setting up of centers for collection, segregation and storage of segregated wastes, are incorporated in building plan while granting approval of building plan of a group housing society or market complex; and

(zf) frame bye-laws and prescribe criteria for levying of spot fine for persons who litters or fails to comply with the provisions of these rules and delegate powers to officers or local bodies to levy spot fines as per the bye laws framed; and

(zg) create public awareness through information, education and communication campaign and educate the waste generators on the following; namely: -

- (i) not to litter;
- (ii) minimise generation of waste;
- (iii) reuse the waste to the extent possible;
- (iv) practice segregation of waste into bio-degradable, non-biodegradable (recyclable and combustible), sanitary waste and domestic hazardous wastes at source;
- (v) practice home composting, vermi-composting, bio-gas generation or community level composting;
- (vi) wrap securely used sanitary waste as and when generated in the pouches provided by the brand owners or a suitable wrapping as prescribed by the local body and place the same in the bin meant for non- biodegradable waste;
- (vii) storage of segregated waste at source in different bins;
- (viii) handover segregated waste to waste pickers, waste collectors, recyclers or waste collection agencies; and
- (ix) pay monthly user fee or charges to waste collectors or local bodies or any other person authorised by the local body for sustainability of solid waste management.

(zh) stop land filling or dumping of mixed waste soon after the timeline as specified in rule 23 for setting up and operationalisation of sanitary landfill is over;

(zi) allow only the non-usable, non-recyclable, non-biodegradable, non-combustible and non-reactive inert waste and pre-processing rejects and residues from waste processing facilities to go to sanitary landfill and the sanitary landfill sites shall meet the specifications as given in Schedule-I, however, every effort shall be made to recycle or reuse the rejects to achieve the desired objective of zero waste going to landfill;

(zj) investigate and analyse all old open dumpsites and existing operational dumpsites for their potential of bio-mining and bio-remediation and wheresoever feasible, take necessary actions to bio-mine or bio-remediate the sites;

(zk) in absence of the potential of bio-mining and bio-remediation of dumpsite, it shall be scientifically capped as per landfill capping norms to prevent further damage to the environment.

<sup>1</sup>[(zl) collect and transport bio-degradable, non-bio-degradable and domestic hazardous waste from households including slums and informal settlements, commercial, institutional and other nonresidential premises, multi-storey buildings, large commercial complexes, malls, housing complexes and the like in compartmentalised and covered vehicle to the respective processing facility].

**16. Duties of State Pollution Control Board or Pollution Control Committee.** - (1) The State Pollution Control Board or Pollution Control Committee shall, -

(a) enforce these rules in their State through local bodies in their respective jurisdiction and review implementation of these rules at least twice a year in close coordination with concerned Directorate of Municipal Administration or Secretary-in-charge of State Urban Development Department;

(b) monitor environmental standards and adherence to conditions as specified under the Schedule I and Schedule II for waste processing and disposal sites;

(c) examine the proposal for authorisation and make such inquiries as deemed fit, after the receipt of the application for the same in Form I from the local body or any other agency authorised by the local body;

(d) while examining the proposal for authorisation, the requirement of consents under respective enactments and views of other agencies like the State Urban Development Department, the Town and Country Planning Department, District Planning Committee or Metropolitan Area Planning Committee, as may be applicable, Airport or Airbase Authority, the Ground Water Board, Railways, power distribution companies, highway department and other relevant agencies shall be taken into consideration and they shall be given four weeks time to give their views, if any;

(e) issue authorisation within a period of sixty days in Form II to the local body or an operator of a facility or any other agency authorised by local body stipulating compliance criteria and environmental standards as specified in Schedules I and II including other conditions, as may be necessary;

(f) synchronise the validity of said authorisation with the validity of the consents;

(g) suspend or cancel the authorization issued under clause (a) any time, if the local body or operator of the facility fails to operate the facility as per the conditions stipulated:

provided that no such authorization shall be suspended or cancelled without giving notice to the local body or operator, as the case may be; and

(h) on receipt of application for renewal, renew the authorisation for next five years, after examining every application on merit and subject to the condition that the operator of the facility has fulfilled all the provisions of the rules, standards or conditions specified in the authorisation, consents or environment clearance.

(2) The State Pollution Control Board or Pollution Control Committee shall, after giving reasonable opportunity of being heard to the applicant and for reasons thereof to be recorded in writing, refuse to grant or renew an authorisation.

(3) In case of new technologies, where no standards have been prescribed by the Central Pollution Control Board, State Pollution Control Board or Pollution Control Committee, as the case may be, shall approach Central Pollution Control Board for getting standards specified.

(4) The State Pollution Control Board or the Pollution Control Committee, as the case may be, shall monitor the compliance of the standards as prescribed or laid down and treatment technology as approved and the conditions stipulated in the authorisation and the standards specified in Schedules I and II under these rules as and when deemed appropriate but not less than once in a year.

(5) The State Pollution Control Board or the Pollution Control Committee may give

<sup>1</sup> Ins. sub-rule (zk) vide S.O. 1152(E) dated 19th March, 2020

directions to local bodies for safe handling and disposal of domestic hazardous waste deposited by the waste generators at hazardous waste deposition facilities.

(6) The State Pollution Control Board or the Pollution Control Committee shall regulate Inter-State movement of waste.

**17. Duty of manufacturers or brand owners of disposable products and sanitary napkins and diapers.** - (1) All manufacturers of disposable products such as tin, glass, plastics packaging, etc., or brand owners who introduce such products in the market shall provide necessary financial assistance to local authorities for establishment of waste management system.

(2) All such brand owners who sell or market their products in such packaging material which are non-biodegradable shall put in place a system to collect back the packaging waste generated due to their production.

(3) Manufacturers or brand owners or marketing companies of sanitary napkins and diapers shall explore the possibility of using all recyclable materials in their products or they shall provide a pouch or wrapper for disposal of each napkin or diapers along with the packet of their sanitary products.

(4) All such manufacturers, brand owners or marketing companies shall educate the masses for wrapping and disposal of their products.

**18. Duties of the industrial units located within one hundred km from the refused derived fuel and waste to energy plants based on solid waste-** All industrial units using fuel and located within one hundred km from a solid waste based refused derived fuel plant shall make arrangements within six months from the date of notification of these rules to replace at least five percent of their fuel requirement by refused derived fuel so produced.

**19. Criteria for Duties regarding setting-up solid waste processing and treatment facility.** -

(1) The department in-charge of the allocation of land assignment shall be responsible for providing suitable land for setting up of the solid waste processing and treatment facilities and notify such sites by the State Government or Union territory Administration.

(2) The operator of the facility shall design and set up the facility as per the technical guidelines issued by the Central Pollution Control Board in this regard from time to time and the manual on solid waste management prepared by the Ministry of Housing and Urban Affairs.

(3) The operator of the facility shall obtain necessary approvals from the State Pollution Control Board or Pollution Control Committee.

(4) The State Pollution Control Board or Pollution Control Committee shall monitor the environment standards of the operation of the solid waste processing and treatment facilities.

(5) The operator of the facility shall be responsible for the safe and environmentally sound operations of the solid waste processing and or treatment facilities as per the guidelines issued by the Central Pollution Control Board from time to time and the Manual on Municipal Solid Waste Management published by the Ministry of Housing and Urban Affairs and updated from time to time.

(6) The operator of the solid waste processing and treatment facility shall submit annual report in Form III each year by 30<sup>th</sup> April to the State Pollution Control Board or Pollution Committee and concerned local body.

**20. Criteria and actions to be taken for solid waste management in hilly areas.** - In the hilly areas, the duties and responsibilities of the local authorities shall be the same as mentioned in rule 15 with additional clauses as under:

(a) Construction of landfill on the hill shall be avoided. A transfer station at a suitable enclosed location shall be setup to collect residual waste from the processing facility and inert waste. A suitable land shall be identified in the plain areas down the hill within 25 kilometers for setting up sanitary landfill. The residual waste from the transfer station shall be disposed of at this sanitary

landfill.

(b) In case of non-availability of such land, efforts shall be made to set up regional sanitary landfill for the inert and residual waste.

(c) Local body shall frame Bye-laws and prohibit citizen from littering wastes on the streets and give strict direction to the tourists not to dispose any waste such as paper, water bottles, liquor bottles, soft drink cans, tetra packs, any other plastic or paper waste on the streets or down the hills and instead direct to deposit such waste in the litter bins that shall be placed by the local body at all tourist destinations.

(d) Local body shall arrange to convey the provisions of solid waste management under the bye-laws to all tourists visiting the hilly areas at the entry point in the town as well as through the hotels, guest houses or like where they stay and by putting suitable hoardings at tourist destinations.

(e) Local body may levy solid waste management charge from the tourist at the entry point to make the solid waste management services sustainable.

(f) The department in-charge of the allocation of land assignment shall identify and allot suitable space on the hills for setting up decentralised waste processing facilities. Local body shall set up such facilities. Step garden system may be adopted for optimum utilisation of hill space.

**21. Criteria for waste to energy process.** - (1) Non recyclable waste having calorific value of 1500 Kcal/kg or more shall not be disposed of on landfills and shall only be utilised for generating energy either or through refuse derived fuel or by giving away as feed stock for preparing refuse derived fuel.

(2) High calorific wastes shall be used for co-processing in cement or thermal power plants.

(3) The local body or an operator of facility or an agency designated by them proposing to set up waste to energy plant of more than five tones per day processing capacity shall submit an application in Form-I to the State Pollution Control Board or Pollution Control Committee, as the case may be, for authorisation.

(4) The State Pollution Control Board or Pollution Control Committee, on receiving such application for setting up waste to energy facility, shall examine the same and grant permission within sixty days.

**22. Time frame for implementation.** - Necessary infrastructure for implementation of these rules shall be created by the local bodies and other concerned authorities, as the case may be, on their own, by directly or engaging agencies within the time frame specified below:

Sl. No.	Activity	Time limit from the date of notification of rules
(1)	(2)	(3)
1.	Identification of suitable sites for setting up solid waste processing facilities	1 year
2.	Identification of suitable sites for setting up common regional sanitary landfill facilities for suitable clusters of local authorities under 0.5 million population and for setting up common regional sanitary landfill facilities or stand alone sanitary landfill facilities by all local authorities having a population of 0.5 million or more .	1 year
3.	Procurement of suitable sites for setting up solid waste processing facility and sanitary landfill facilities	2 years
4.	Enforcing waste generators to practice segregation of bio degradable, recyclable, combustible, sanitary waste domestic	2 years

	hazardous and inert solid wastes at source ,	
5.	Ensure door to door collection of segregated waste and its transportation in covered vehicles to processing or disposal facilities.	2 years
6.	Ensure separate storage, collection and transportation of construction and demolition wastes	2 years
7.	Setting up solid waste processing facilities by all local bodies having 100000 or more population	2 years
8.	Setting up solid waste processing facilities by local bodies and census towns below 100000 population.	3 years
9	Setting up common or stand alone sanitary landfills by or for all local bodies having 0.5 million or more population for the disposal of only such residual wastes from the processing facilities as well as untreatable inert wastes as permitted under the Rules	3 years
10.	Setting up common or regional sanitary landfills by all local bodies and census towns under 0.5 million population for the disposal of permitted waste under the rules	3years
11.	Bio-remediation or capping of old and abandoned dump sites	5years

**23. State Level Advisory Body.** – (1) Every Department in-charge of local bodies of the concerned State Government or Union territory administration shall constitute a State Level Advisory Body within six months from the date of notification of these rules comprising the following members, namely: -

Sl. No	Designation	Member
(1)	(2)	(3)
1.	Secretary, Department of Urban Development or Local self-government department of the State	Chairperson, ex-officio
2.	One representative of Panchayats or Rural development Department not below the rank of Joint Secretary to State Government	Member, ex-officio
3.	One representative of Revenue Department of State Government	Member, ex-officio
4.	One representative from Ministry of Environment, Forest and Climate Change Government of India	Member, ex-officio
5.	One representative Government of India from Ministry of Housing and Urban Affairs,	Member, ex-officio
6.	One representative Government of India from Ministry of Rural Development,	Member, ex-officio
7.	One representative from the Central Pollution Control Board	Member, ex-officio
8.	One representative from the State Pollution Control Board or Pollution Control Committee	Member, ex-officio
9.	One representative from Indian Institute of Technology or National Institute of Technology	Member, ex-officio
10.	Chief town planner of the state	Member
11.	Three representatives from the local bodies by rotation	Member
12.	Two representatives from census towns or urban agglomerations by rotation.	Member
13.	One representative from reputed Non-Governmental Organisation or Civil Society working for the waste pickers or informal recycler or solid waste management	Member

14.	One representative from a body representing Industries at the State or Central level	Member
15.	One representative from waste recycling industry	Member
16.	Two subject experts	Member
17.	Co-opt one representative each from agriculture department, and labour department of State Government.	Member

(2) The State Level Advisory Body shall meet at least one in every six months to review the matters related to implementation of these rules, state policy and strategy on solid waste management and give advice to state government for taking measures that are necessary for expeditious and appropriate implementation of these rules.

(3) The copies of the review report shall be forwarded to the State Pollution Control Board or Pollution Control Committee for necessary action.

**24. Annual report.** - (1) The operator of facility shall submit the annual report to the local body in Form-III on or before the 30<sup>th</sup> day of April every year.

(2) The local body shall submit its annual report in Form-IV to State Pollution Control Board or Pollution Control Committee and the Secretary-in-Charge of the Department of Urban Development of the concerned State or Union Territory in case of metropolitan city and to the Director of Municipal Administration or Commissioner of Municipal Administration or Officer in -Charge of Urban local bodies in the state in case of all other local bodies of state on or before the 30<sup>th</sup> day of June every year

(3) Each State Pollution Control Board or Pollution Control Committee as the case may be, shall prepare and submit the consolidated annual report to the Central Pollution Control Board and Ministry of Housing and Urban Affairs on the implementation of these rules and action taken against non complying local body by the 31<sup>st</sup> day of July of each year in Form-V.

(4) The Central Pollution Control Board shall prepare a consolidated annual review report on the status of implementation of these rules by local bodies in the country and forward the same to the Ministry of Housing and Urban Affairs and Ministry of Environment, Forest and Climate Change, along with its recommendations before the 31<sup>st</sup> day of August each year.

(5) The annual report shall be reviewed by the Ministry of Environment, Forest and Climate Change during the meeting of Central Monitoring Committee.

**25. Accident reporting.** - In case of an accident at any solid waste processing or treatment or disposal facility or landfill site, the Officer- in- charge of the facility shall report to the local body in Form-VI and the local body shall review and issue instructions if any, to the in- charge of the facility.

#### SCHEDULE I

[see rule 15 (w), (zi), 16 (1) (b) (e), 16 (4)]

#### Specifications for Sanitary Landfills

##### (A) Criteria for site selection. –

- (i) The department in the business allocation of land assignment shall provide suitable site for setting up of the solid waste processing and treatment facilities and notify such sites.
- (ii) The sanitary landfill site shall be planned, designed and developed with proper documentation of construction plan as well as a closure plan in a phased manner. In case a new landfill facility is being established adjoining an existing landfill site, the closure plan of existing landfill should form a part of the proposal of such new landfill.

- (iii) The landfill sites shall be selected to make use of nearby wastes processing facilities. Otherwise, wastes processing facility shall be planned as an integral part of the landfill site.
- (iv) Landfill sites shall be set up as per the guidelines of the Ministry of Housing and Urban Affairs, Government of India and Central Pollution Control Board.
- (v) The existing landfill sites which are in use for more than five years shall be improved in accordance with the specifications given in this Schedule.
- (vi) The landfill site shall be large enough to last for at least 20-25 years and shall develop 'landfill cells' in a phased manner to avoid water logging and misuse.
- (vii) The landfill site shall be 100 meter away from river, 200 meter from a pond, 200 meter from Highways, Habitations, Public Parks and water supply wells and 20 km away from Airports or Airbase. However, in a special case, landfill site may be set up within a distance of 10 and 20 km away from the Airport/Airbase after obtaining no objection certificate from the civil aviation authority/ Air force as the case may be. The Landfill site shall not be permitted within the flood plains as recorded for the last 100 years, zone of coastal regulation, wetland, Critical habitat areas, sensitive eco-fragile areas.
- (viii) The sites for landfill and processing and disposal of solid waste shall be incorporated in the Town Planning Department's land-use plans.
- (ix) A buffer zone of no development shall be maintained around solid waste processing and disposal facility, exceeding five Tonnes per day of installed capacity. This will be maintained within the total area of the solid waste processing and disposal facility. The buffer zone shall be prescribed on case to case basis by the local body in consultation with concerned State Pollution Control Board.
- (x) The biomedical waste shall be disposed of in accordance with the Bio-medical Waste Management Rules, 2016, as amended from time to time. The hazardous waste shall be managed in accordance with the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, as amended from time to time. The E- waste shall be managed in accordance with the e-Waste (Management) Rules, 2016 as amended from time to time.
- (xi) Temporary storage facility for solid waste shall be established in each landfill site to accommodate the waste in case of non-operation of waste processing and during emergency or natural calamities.

**(B) Criteria for development of facilities at the sanitary landfills. –**

- (i) Landfill site shall be fenced or hedged and provided with proper gate to monitor incoming vehicles, to prevent entry of unauthorised persons and stray animals
- (ii) The approach and / internal roads shall be concreted or paved so as to avoid generation of dust particles due to vehicular movement and shall be so designed to ensure free movement of vehicles and other machinery.
- (iii) The landfill site shall have waste inspection facility to monitor waste brought in for landfilling, office facility for record keeping and shelter for keeping equipment and machinery including pollution monitoring equipment. The operator of the facility shall maintain record of waste received, processed and disposed.
- (iv) Provisions like weigh bridge to measure quantity of waste brought at landfill site, fire protection equipment and other facilities as may be required shall be provided.
- (v) Utilities such as drinking water and sanitary facilities (preferably washing/bathing facilities for workers) and lighting arrangements for easy landfill operations during night hours shall be provided.
- (vi) Safety provisions including health inspections of workers at landfill sites shall be carried out made.
- (vii) Provisions for parking, cleaning, washing of transport vehicles carrying solid waste shall

be provided. The wastewater so generated shall be treated to meet the prescribed standards.

**(C) Criteria for specifications for land filling operations and closure on completion of land filling. –**

- (i) Waste for land filling shall be compacted in thin layers using heavy compactors to achieve high density of the waste. In high rainfall areas where heavy compactors cannot be used, alternative measures shall be adopted.
- (ii) Till the time waste processing facilities for composting or recycling or energy recovery are set up, the waste shall be sent to the sanitary landfill. The landfill cell shall be covered at the end of each working day with minimum 10 cm of soil, inert debris or construction material.
- (iii) Prior to the commencement of monsoon season, an intermediate cover of 40-65 cm thickness of soil shall be placed on the landfill with proper compaction and grading to prevent infiltration during monsoon. Proper drainage shall be constructed to divert run-off away from the active cell of the landfill.
- (iv) After completion of landfill, a final cover shall be designed to minimise infiltration and erosion. The final cover shall meet the following specifications, namely: --
  - a) The final cover shall have a barrier soil layer comprising of 60 cm of clay or amended soil with permeability coefficient less than  $1 \times 10^{-7}$  cm/sec.
  - b) On top of the barrier soil layer, there shall be a drainage layer of 15 cm.
  - c) On top of the drainage layer, there shall be a vegetative layer of 45 cm to support natural plant growth and to minimise erosion.

**(D) Criteria for pollution prevention. -** In order to prevent pollution from landfill operations, the following provisions shall be made, namely: -

- (i) The storm water drain shall be designed and constructed in such a way that the surface runoff water is diverted from the landfilling site and leachates from solid waste locations do not get mixed with the surface runoff water. Provisions for diversion of storm water discharge drains shall be made to minimise leachate generation and prevent pollution of surface water and also for avoiding flooding and creation of marshy conditions.
- (ii) Non-permeable lining system at the base and walls of waste disposal area. For landfill receiving residues of waste processing facilities or mixed waste or waste having contamination of hazardous materials (such as aerosols, bleaches, polishes, batteries, waste oils, paint products and pesticides) shall have liner of composite barrier of 1.5 mm thick high density polyethylene (HDPE) geo-membrane or geo-synthetic liners, or equivalent, overlying 90 cm of soil (clay or amended soil) having permeability coefficient not greater than  $1 \times 10^{-7}$  cm/sec. The highest level of water table shall be at least two meter below the base of clay or amended soil barrier layer provided at the bottom of landfills.
- (iii) Provisions for management of leachates including its collection and treatment shall be made. The treated leachate shall be recycled or utilized as permitted, otherwise shall be released into the sewerage line, after meeting the standards specified in Schedule- II. In no case, leachate shall be released into open environment.
- (iv) Arrangement shall be made to prevent leachate runoff from landfill area entering any drain, stream, river, lake or pond. In case of mixing of runoff water with leachate or solid waste, the entire mixed water shall be treated by the concern authority.

**(E) Criteria for water quality monitoring. –**

- (i) Before establishing any landfill site, baseline data of ground water quality in the area shall be collected and kept in record for future reference. The ground water quality



within 50 meter of the periphery of landfill site shall be periodically monitored covering different seasons in a year that is, summer, monsoon and post-monsoon period to ensure that the ground water is not contaminated.

- (ii) Usage of groundwater in and around landfill sites for any purpose (including drinking and irrigation) shall be considered only after ensuring its quality. The following specifications for drinking water quality shall apply for monitoring purpose, namely: -

S. No.	Parameters	IS 10500:2012, Edition 2.2(2003-09) Desirable limit (mg/l except for pH)
(1)	(2)	(3)
	Arsenic	0.01
	Cadmium	0.01
	Chromium(as Cr <sup>6+</sup> )	0.05
	Copper	0.05
	Cyanide	0.05
	Lead	0.05
	Mercury	0.001
	Nickel	-
	Nitrate as NO <sub>3</sub>	45.0
	pH	6.5-8.5
	Iron	0.3
	Total hardness (as CaCO <sub>3</sub> )	300.0
	Chlorides	250
	Dissolved solids	500
	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	0.001
	Zinc	5.0
	Sulphate (as SO <sub>4</sub> )	200

**(F) Criteria for ambient air quality monitoring. –**

- (i) Landfill gas control system including gas collection system shall be installed at landfill site to minimize odour, prevent off-site migration of gases, to protect vegetation planted on the rehabilitated landfill surface. For enhancing landfill gas recovery, use of geomembranes in cover systems along with gas collection wells should be considered.
- (ii) The concentration of methane gas generated at landfill site shall not exceed 25 per cent of the lower explosive limit (LEL).
- (iii) The landfill gas from the collection facility at a landfill site shall be utilized for either direct thermal applications or power generation, as per viability. Otherwise, landfill gas shall be burnt (flared) and shall not be allowed to escape directly to the atmosphere or for illegal tapping. Passive venting shall be allowed in case if its utilisation or flaring is not possible.
- (iv) Ambient air quality at the landfill site and at the vicinity shall be regularly monitored. Ambient air quality shall meet the standards prescribed by the Central Pollution Control Board for Industrial area.

**(G) Criteria for plantation at landfill Site. -** A vegetative cover shall be provided over the completed site in accordance with the following specifications, namely: -

- (a) Locally adopted non-edible perennial plants that are resistant to drought and extreme temperatures shall be planted;
  - (b) The selection of plants should be of such variety that their roots do not penetrate more than 30 cms. This condition shall apply till the landfill is stabilized;
  - (c) Selected plants shall have ability to thrive on low-nutrient soil with minimum nutrient addition;
  - (d) Plantation to be made in sufficient density to minimise soil erosion.
  - (e) Green belts shall be developed all around the boundary of the landfill in consultation with State Pollution Control Boards or Pollution Control Committees.
- (H) Criteria for post-care of landfill site.** - (1) The post-closure care of landfill site shall be conducted for at least fifteen years and long term monitoring or care plan shall consist of the following, namely: -
- (a) Maintaining the integrity and effectiveness of final cover, making repairs and preventing run-on and run-off from eroding or otherwise damaging the final cover;
  - (b) Monitoring leachate collection system in accordance with the requirement;
  - (c) Monitoring of ground water in and around landfill;
  - (d) Maintaining and operating the landfill gas collection system to meet the standards.
- (2) Use of closed landfill sites after fifteen years of post-closure monitoring can be considered for human settlement or otherwise only after ensuring that gaseous emission and leachate quality analysis complies with the specified standards and the soil stability is ensured.
- (I) Criteria for special provisions for hilly areas.** - Cities and towns located on hills shall have location-specific methods evolved for final disposal of solid waste by the local body with the approval of the concerned State Pollution Control Board or the Pollution Control Committee. The local body shall set up processing facilities for utilisation of biodegradable organic waste. The non-biodegradable recyclable materials shall be stored and sent for recycling periodically. The inert and non-biodegradable waste shall be used for building roads or filling-up of appropriate areas on hills. In case of constraints in finding adequate land in hilly areas, waste not suitable for road-laying or filling up shall be disposed of in regional landfills in plain areas.
- (J) Closure and Rehabilitation of Old Dumps-** Solid waste dumps which have reached their full capacity or those which will not receive additional waste after setting up of new and properly designed landfills should be closed and rehabilitated by examining the following options:
- (i) Reduction of waste by bio mining and waste processing followed by placement of residues in new landfills or capping as in (ii) below.
  - (ii) Capping with solid waste cover or solid waste cover enhanced with geomembrane to enable collection and flaring / utilisation of greenhouse gases.
  - (iii) Capping as in (ii) above with additional measures (in alluvial and other coarse grained soils) such as cut-off walls and extraction wells for pumping and treating contaminated ground water.
  - (iv) Any other method suitable for reducing environmental impact to acceptable level.

**SCHEDULE II**

[see rule 16 (1), (b), (e), 16 (4)]

**Standards of processing and treatment of solid waste**

- A. Standards for composting.** - The waste processing facilities shall include composting as one of the technologies for processing of bio degradable waste. In order to prevent pollution from compost plant, the following shall be complied with namely: -
- (a) The incoming organic waste at site shall be stored properly prior to further processing. To the extent possible, the waste storage area should be covered. If, such storage is done in an open area, it shall be provided with impermeable base with facility for collection of leachate and surface water run-off into lined drains leading to a leachate treatment and disposal facility;
  - (b) Necessary precaution shall be taken to minimise nuisance of odour, flies, rodents, bird menace and fire hazard;
  - (c) In case of breakdown or maintenance of plant, waste intake shall be stopped and arrangements be worked out for diversion of waste to the temporary processing site or temporary landfill sites which will be again reprocessed when plant is in order;
  - (d) Pre-process and post-process rejects shall be removed from the processing facility on regular basis and shall not be allowed to pile at the site. Recyclables shall be routed through appropriate vendors. The non-recyclable high calorific fractions to be segregated and sent to waste to energy or for RDF production, co-processing in cement plants or to thermal power plants. Only rejects from all processes shall be sent for sanitary landfill site(s).
  - (e) The windrow area shall be provided with impermeable base. Such a base shall be made of concrete or compacted clay of 50 cm thick having permeability coefficient less than  $10^{-7}$  cm/sec. The base shall be provided with 1 to 2 per cent slope and circled by lined drains for collection of leachate or surface run-off;
  - (f) Ambient air quality monitoring shall be regularly carried out. Odour nuisance at down-wind direction on the boundary of processing plant shall also be checked regularly.
  - (g) Leachate shall be re-circulated in compost plant for moisture maintenance.
  - (h) The end product compost shall meet the standards prescribed under Fertilizer Control Order notified from time to time.
  - (i) In order to ensure safe application of compost, the following specifications for compost quality shall be met, namely: -

<b>Parameters</b>	<b>Organic Compost (FCO 2009)</b>	<b>Phosphate Rich Organic Manure (FCO 2013)</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
Arsenic (mg/kg)	10.00	10.00
Cadmium (mg/kg)	5.00	5.00
Chromium (mg/kg)	50.00	50.00
Copper (mg/kg)	300.00	300.00
Lead (mg/kg)	100.00	100.00
Mercury (mg/kg)	0.15	0.15
Nickel (mg/kg)	50.00	50.00
Zinc (mg/kg)	1000.00	1000.00
C/N ratio	<20	Less than 20:1
pH	6.5-7.5	(1:5 solution) maximum 6.7

Moisture, percent by weight, maximum	15.0-25.0	25.0
Bulk density (g/cm <sup>3</sup> )	<1.0	Less than 1.6
Total Organic Carbon, percent by weight, minimum	12.0	7.9
Total Nitrogen (as N), percent by weight, minimum	0.8	0.4
Total Phosphate (as P <sub>2</sub> O <sub>5</sub> ) percent by weight, minimum	0.4	10.4
Total Potassium (as K <sub>2</sub> O), percent by weight, minimum	0.4	-
Colour	Dark brown to black	-
Odour	Absence of foul Odor	-
Particle size	Minimum 90% material should pass through 4.0 mm IS sieve	Minimum 90% material should pass through 4.0 mm IS sieve
Conductivity (as dsm-1), not more than	4.0	8.2

\* Compost (final product) exceeding the above stated concentration limits shall not be used for food crops. However, it may be utilized for purposes other than growing food crops.

**B. Standards for treated leachates.** -The disposal of treated leachates shall meet the following standards, namely: -

S. No	Parameter	( Mode of Disposal )		
		Inland surface water	Public sewers	Land disposal
(1)	(2)	(3)	(4)	(5)
1.	Suspended solids, mg/l, max	100	600	200
2.	Dissolved solids (inorganic) mg/l, max.	2100	2100	2100
3	pH value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
4	Ammonical nitrogen (as N), mg/l, max.	50	50	-
5	Total Kjeldahl nitrogen (as N), mg/l, max.	100	-	-
6	Biochemical oxygen demand (3 days at 27 °C) max.(mg/l)	30	350	100
7	Chemical oxygen demand, mg/l, max.	250	-	-
8	Arsenic (as As), mg/l, max	0.2	0.2	0.2
9	Mercury (as Hg), mg/l, max	0.01	0.01	-
10	Lead (as Pb), mg/l, max	0.1	1.0	-
11	Cadmium (as Cd), mg/l, max	2.0	1.0	-
12	Total Chromium (as Cr), mg/l, max.	2.0	2.0	-
13	Copper (as Cu), mg/l, max.	3.0	3.0	-
14	Zinc (as Zn), mg/l, max.	5.0	15	-
15	Nickel (as Ni), mg/l, max	3.0	3.0	-
16	Cyanide (as CN), mg/l, max.	0.2	2.0	0.2
17	Chloride (as Cl), mg/l, max.	1000	1000	600
18	Fluoride (as F), mg/l, max	2.0	1.5	-
19	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, max.	1.0	5.0	-

**Note:** While discharging treated leachates into inland surface waters, quantity of leachates being discharged and the quantity of dilution water available in the receiving water body shall be given due consideration.

**C. Standards for incineration:** The Emission from incinerators /thermal technologies in Solid Waste treatment/disposal facility shall meet the following standards, namely: -

Parameter (1)	Emission standard	
	(2)	(1)
<b>Particulates</b>	50 mg/Nm <sup>3</sup>	Standard refers to half hourly average value
<b>HCl</b>	50 mg/Nm <sup>3</sup>	Standard refers to half hourly average value
<b>SO<sub>2</sub></b>	200 mg/Nm <sup>3</sup>	Standard refers to half hourly average value
<b>CO</b>	100 mg/Nm <sup>3</sup>	Standard refers to half hourly average value
	50 mg/Nm <sup>3</sup>	Standard refers to daily average value
<b>Total Organic Carbon</b>	20 mg/Nm <sup>3</sup>	Standard refers to half hourly average value
<b>HF</b>	4 mg/Nm <sup>3</sup>	Standard refers to half hourly average value
<b>NO<sub>x</sub> (NO and NO<sub>2</sub> expressed as NO<sub>2</sub>)</b>	400 mg/Nm <sup>3</sup>	Standard refers to half hourly average value
<b>Total dioxins and furans</b>	0.1 ng TEQ/Nm <sup>3</sup>	Standard refers to 6-8 hours sampling. Please refer guidelines for 17 concerned congeners for toxic equivalence values to arrive at total toxic equivalence.
<b>Cd + Th + their compounds</b>	0.05 mg/Nm <sup>3</sup>	Standard refers to sampling time anywhere between 30 minutes and 8 hours.
<b>Hg and its compounds</b>	0.05 mg/Nm <sup>3</sup>	Standard refers to sampling time anywhere between 30 minutes and 8 hours.
<b>Sb + As + Pb + Cr + Co + Cu + Mn + Ni + V + their compounds</b>	0.5 mg/Nm <sup>3</sup>	Standard refers to sampling time anywhere between 30 minutes and 8 hours.
<i>Note.- All values corrected to 11% oxygen on a dry basis.</i>		

**Note:**

- Suitably designed pollution control devices shall be installed or retrofitted with the incinerator to achieve the above emission limits.
- Waste to be incinerated shall not be chemically treated with any chlorinated disinfectants.
- Incineration of chlorinated plastics shall be phased out within two years.
- If the concentration of toxic metals in incineration ash exceeds the limits specified in the Hazardous Waste (Management, Handling and Trans boundary Movement) Rules, 2008, as amended from time to time, the ash shall be sent to the hazardous waste treatment, storage and disposal facility.
- Only low sulphur fuel like LDO, LSHS, Diesel, bio-mass, coal, LNG, CNG, RDF and bio-gas shall be used as fuel in the incinerator.
- The CO<sub>2</sub> concentration in tail gas shall not be more than 7%.

- (g) All the facilities in twin chamber incinerators shall be designed to achieve a minimum temperature of 950<sup>0</sup>C in secondary combustion chamber and with a gas residence time in secondary combustion chamber not less than 2 (two) seconds.
- (h) Incineration plants shall be operated (combustion chambers) with such temperature, retention time and turbulence, as to achieve total Organic Carbon (TOC) content in the slag and bottom ash less than 3%, or the loss on ignition is less than 5% of the dry weight.
- (i) Odour from sites shall be managed as per guidelines of CPCB issued from time to time

**FORM – I**

[see rule 15 (y) 16 (1) (c), 21(3)]

**Application for obtaining authorisation under solid waste management rules for processing/recycling/treatment and disposal of solid waste**

To,  
The Member Secretary,  
State Pollution Control Board or Pollution Control Committee, of.....

Sir,

I/We hereby apply for authorisation under the Solid Waste Management Rules, 2016 for processing, recycling, treatment and disposal of solid waste.

1.	Name of the local body/agency appointed by them/ operator of facility	
2.	Correspondence address Telephone No. Fax No. e-mail:	
3.	Nodal Officer & designation(Officer authorised by the local body or agency responsible for operation of processing/ treatment or disposal facility)	
4.	Authorisation required for setting up and operation of the facility (Please tick mark)	waste processing recycling treatment disposal at landfill
5.	Attach copies of the Documents Site clearance (local body) Proof of Environmental Clearance Consent for establishment Agreement between municipal authority and operating agency Investment on the project and expected return	
6.	<b>Processing/recycling/treatment of solid waste</b> (i) Total Quantity of waste to be processed per day Quantity of waste to be recycled Quantity of waste to be treated Quantity of waste to be disposed into landfill (ii) Utilisation programme for waste processed (Product utilisation) (iii) Methodology for disposal (attach details)	

	Quantity of leachate Treatment technology for leachate (iv) Measures to be taken for prevention and control of environmental pollution (v) Measures to be taken for safety of workers working in the plant (vi) Details on solid waste processing/ recycling/treatment/disposal facility (to be attached)	
7.	<b>Disposal of solid waste</b> Number of sites identified Quantity of waste to be disposed per day Details of methodology or criteria followed for site selection (attach) Details of existing site under operation Methodology and operational details of landfilling Measures taken to check environmental pollution	
8	Any other information.	

Date:  
Place:

Signature:  
Designation

**Form- II**

[see rule 16 (1) (e)]

**Format for issue of authorization**

File No.: \_\_\_\_\_  
 Dated: \_\_\_\_\_  
**Authorisation No.** \_\_\_\_\_

To

Ref: Your application number \_\_\_\_\_ dt. \_\_\_\_\_

The \_\_\_\_\_ State Pollution Control Board/Pollution Control Committee after examining the \_\_\_\_\_ the \_\_\_\_\_ proposal hereby authorises \_\_\_\_\_ having administrative office at \_\_\_\_\_ to set up and operate waste processing/recycling/ treatment/disposal facility at \_\_\_\_\_

The authorisation is hereby granted to operate the facility for processing, recycling, treatment and disposal of solid waste.

The authorisation is subject to the terms and conditions stated below and such conditions as may be otherwise specified in these rules and the standards laid down in Schedules I and II under these rules.

The \_\_\_\_\_ State Pollution Control Board/Pollution Control Committees of the UT \_\_\_\_\_ may, at any time, revoke any of the conditions applicable under the authorisation and shall communicate the same in writing.

Any violation of the provision of the Solid Waste Management Rules, 2016 will attract the penal provision of the Environment (Protection) Act, 1986 (29 of 1986).

(Member Secretary)  
 State Pollution Control Board/Pollution Control Committee of the UT  
 (Signature and designation)

Date:  
 Place:

**Form – III**

[see rule 19 (6), 24 (1)]

**Format of annual report to be submitted by the operator of facility to the local body**

1	Name of the City/Town and State	
2	Population	
3	Area in sq. kilometers	
4	Name & Address of the local body Telephone No. Fax No. E-mail:	
5	Name and address of operator of the facility	
6	Name of officer in-charge of the facility Phone No: Fax No:	



	E-mail:	
7	Number of households in the city/town, Number of non-residential premises in the city Number of election/ administrative wards in the city/town	
8	Quantity of Solid waste	
	Estimated Quantity of solid waste generated in the local body area per day in metric tones	/tpd
	Quantity of solid waste collected per day	/tpd
	Per capita waste collected per day	/gm/day
9	Quantity of solid waste processed	/tpd
	Quantity of solid waste disposed at landfill	/tpd
	Status of Solid Waste Management (SWM) service	
	Segregation and storage of waste at source	
	Whether solid waste is stored at source in domestic/commercial/ institutional bins If yes,	Yes/No
	Percentage of households practice storage of waste at source in domestic bins	%
	Percentage of non-residential premises practice storage of waste at source in commercial /institutional bins	%
	Percentage of households dispose of throw solid waste on the streets	%
	Percentage of non-residential premises dispose of throw solid waste on the streets	%
	Whether solid waste is stored at source in a segregated form	Yes/No
	If yes, Percentage of premises segregating the waste at source	%
	Door to Door Collection of solid waste	
	Whether door to door collection (D2D) of solid waste is being done in the city/town	Yes/No
	if yes	
	Number of wards covered in D2D collection of waste	
	No. of households covered	
	No. of non-residential premises including commercial establishments, hotels, restaurants educational institutions/ offices etc covered	
	Percentage of residential and non-residential premises covered in door to door collection through:	
	Motorized vehicle	%
	Containerized tricycle/handcart	%
	Other device	%
If not, method of primary collection adopted		
Sweeping of streets		
	Length of roads, streets, lanes, bye-lanes in the	km

city that need to be cleaned						
Frequency of street sweepings and percentage of population covered	frequency	Daily	Alter nate days	Twice a week	Occa sional ly	
	% of population covered					
Tools used						
Manual sweeping		%				
Mechanical sweeping		%				
Whether long handle broom used by sanitation workers		Yes/No				
Whether each sanitation worker is given handcart/tricycle for collection of waste		Yes/No				
Whether handcart / tricycle is containerized		Yes/No				
Whether the collection tool synchronizes with collection/ waste storage containers utilized		Yes/No				
Secondary Waste Storage facilities						
No. and type of waste storage depots in the city/town Open waste storage sites Masonry bins Cement concrete cylinder bins Dhalao/covered rooms/space Covered metal/plastic containers Upto 1.1 m <sup>3</sup> bins 2 to 5 m <sup>3</sup> bins Above 5m <sup>3</sup> containers Bin-less city		No. Capacity in m <sup>3</sup>				
Bin/ population ratio						
Ward wise details of waste storage depots (attach): Ward No: Area: Population: No. of bins placed Total volume of bins placed						
Total storage capacity of waste storage facilities in cubic meters						
Total waste actually stored at the waste storage depots daily						
Give frequency of collection of waste from the depots	Frequency			No. of bins		
	Daily					
	Alternate day					
	Twice a week					
	Once a week					
Occasionally						
Whether storage depots have facility for storage of segregated waste in green, blue and black bins		Yes/ No (if yes, add details) No. of green bins:				

		No. of blue bins: No. of black bins:	
Whether lifting of solid waste from storage depots is manual or mechanical. Give percentage	(%) of Manual Lifting of SOLID WASTE		%
	(%) of Mechanical lifting		%
If mechanical – specify the method used	front-end loaders/ Top loaders		
Whether solid waste is lifted from door to door and transported to treatment plant directly in a segregated form	Yes/ No		
Waste Transportation per day Type and Number of vehicles used (pl tick or add)	No. Trips made waste transported		
Animal cart			
Tractors			
Non tipping Truck			
Tipping Truck			
Dumper Placers			
Refuse collectors			
Compactors			
Others			
JCB/loader			
Frequency of transportation of waste	Frequency Daily	(%) of waste transported	
	Alternate day Twice a week		
	Once a week		
	Occasionally		
Quantity of waste transported each day	/tpd		
Percentage of total waste transported daily	%		
Waste Treatment Technologies used			
Whether solid waste is processed	Yes/No		
If yes, Quantity of waste processed daily	/tpd		
Land(s) available with the local body for waste processing (in Hectares)			
Land currently utilized for waste processing			
Solid waste processing facilities in operation			
Solid waste processing facilities under construction			
Distance of processing facilities from city/town boundary			
Details of technologies adopted			
Composting,	Qty. raw material processed		
	Qty. final product produced		
	Qty. sold		
	Qty. of residual waste landfilled		
Vermi composting	Qty. raw material processed		
	Qty. final product produced		
	Qty. sold		
	Qty. of residual waste landfilled		
Bio-methanation	Qty. raw material processed		

		Qty. final product produced Qty. sold Qty. of residual waste landfilled
	Refuse Derived Fuel	Qty. raw material processed Qty. final product produced Qty. sold Qty. of residual waste landfilled
	Waste to Energy technology such as incineration, gasification, pyrolysis or any other technology ( give detail)	Qty. raw material processed Qty. final product produced Qty. sold Qty. of residual waste landfilled
	Co-processing	Qty. raw material processed
	Combustible waste supplied to cement plant	
	Combustible waste supplied to solid waste based power plants	
	Others	Qty.
	Solid waste disposal facilities	
	No. of dumpsites sites available with the local body	
	No. of sanitary landfill sites available with the local body	
	Area of each such sites available for waste disposal	
	Area of land currently used for waste disposal	
	Distance of dumpsite/landfill facility from city/town	kms
	Distance from the nearest habitation	kms
	Distance from water body	kms
	Distance from state/national highway	kms
	Distance from Airport	kms
	Distance from important religious places or historical monument	kms
	Whether it falls in flood prone area	Yes/No
	Whether it falls in earthquake fault line area	Yes/No
	Quantity of waste landfilled each day	tpd
	Whether landfill site is fenced	Yes/No
	Whether lighting facility is available on site	Yes/No
	Whether Weigh bridge facility available	Yes/No
	Vehicles and equipments used at landfill (specify)	Bulldozer, Compactors etc. available
	Manpower deployed at landfill site	Yes/No (if yes, attach details)
	Whether covering is done on daily basis	Yes/No
	If not, frequency of covering the waste deposited at the landfill	
	Cover material used	
	Whether adequate covering material is available	Yes/No
	Provisions for gas venting provided	Yes/No, (if yes, attach technical data sheet)

	Provision for leachate collection	Yes/No, (if yes, attach technical data sheet)
10	Whether an Action Plan has been prepared for improving solid waste management practices in the city	Yes/No (if Yes attach Action Plan details)
11	What separate provisions are made for: Dairy related activities: Slaughter houses waste: C&D waste (construction debris) :	Attach details on Proposals, Steps taken, Yes/No Yes/No Yes/No
12	Details of Post Closure Plan	Attach Plan
13	How many slums are identified and whether these are provided with Solid Waste Management facilities :	Yes/ No (if Yes, attach details)
14	Give details of manpower deployed for collection including street sweeping, secondary storage, transportation, processing and disposal of waste	
15	Mention briefly, the difficulties being experienced by the local body in complying with provisions of these rules	
16	Mention briefly, if any innovative idea is implemented to tackle a problem related to solid waste, which could be replicated by other local bodies.	

Signature of Operator

Dated:

Place:

**Form – IV**

[see rules 15(za), 24(2)]

**Format for annual report on solid waste management to be submitted by the local body**

<b>CALENDAR YEAR:</b>	<b>DATE OF SUBMISSION OF REPORT:</b>

1	Name of the City/Town and State	
2	Population	
3	Area in sq. kilometers	
4	Name & Address of the local body Telephone No. Fax No. E-mail:	
5	Name of officer in-charge dealing with solid waste management (SOLID WASTEM) Phone No: Fax No: E-mail:	
6	Number of households in the city/town, Number of non-residential premises in the city Number of election/ administrative wards in the city/town	
7	Quantity of Solid waste (solid waste)	
	Estimated Quantity of solid waste generated in the local body area per day in metric tones	/tpd
	Quantity of solid waste collected per day	/tpd
	Per capita waste collected per day	/gm/day
	Quantity of solid waste processed	/tpd
	Quantity of solid waste disposed at dumpsite/landfill	/tpd
8	Status of Solid Waste Management service	
	Segregation and storage of waste at source	
	Whether SOLID WASTE is stored at source in domestic/commercial/ institutional bins, If yes,	Yes/No
	Percentage of households practice storage of waste at source in domestic bins	%
	Percentage of non-residential premises practice storage of waste at source in commercial /institutional bins	%
	Percentage of households dispose or throw solid waste on the streets	%
	Percentage of non-residential premises dispose of throw solid waste on the streets	%
	Whether solid waste is stored at source in a segregated form, If yes,	Yes/No

	Percentage of premises segregating the waste at source	%				
	Door to Door Collection of solid waste					
	Whether door to door collection (D2D) of solid waste is being done in the city/town if yes	Yes/No				
	Number of wards covered in D2D collection of waste					
	No. of households covered					
	No. of non-residential premises including commercial establishments, hotels, restaurants educational institutions/ offices etc covered					
	Percentage of residential and non-residential premises covered in door to door collection through:					
	Motorized vehicle	%				
	Containerized	%				
	tricycle/handcart	%				
	Other device	%				
	If not, method of primary collection adopted					
	Sweeping of streets					
	Length of roads, streets, lanes, bye-lanes in the city that need to be cleaned	km				
	Frequency of street sweepings and percentage of population covered	Frequency	Daily	Alternate days	Twice a week	Occasionally
		% of population covered				
	Tools used					
	Manual sweeping	%				
	Mechanical sweeping	%				
	Whether long handle broom used by sanitation workers	Yes/No				
	Whether each sanitation worker is given handcart/tricycle for collection of waste	Yes/No				
	Whether handcart / tricycle is containerized	Yes/No				
	Whether the collection tool synchronizes with collection/ waste storage containers utilized	Yes/No				
	Secondary Waste Storage facilities					
	No. and type of waste storage depots in the city/town	No.	Capacity in m <sup>3</sup>			
	Open waste storage sites					
	Masonry bins					
	Cement concrete cylinder bins					
	Dhalao/covered rooms/space					
	Covered metal/plastic containers					
	Upto 1.1 m <sup>3</sup> bins					
	2 to 5 m <sup>3</sup> bins					
	Above 5m <sup>3</sup> containers					
	Bin-less city					
	Bin/ population ratio					

Ward wise details of waste storage depots (attach): Ward No: Area: Population: No. of bins placed Total volume of bins placed		
Total storage capacity of waste storage facilities in cubic meters		
Total waste actually stored at the waste storage depots daily		
Give frequency of collection of waste from the depots	Frequency	No. of bins
	Daily	
	Alternate day	
	Twice a week	
	Once a week	
Occasionally		
Whether storage depots have facility for storage of segregated waste in green, blue and black bins	Yes/ No (if yes, add details) No. of green bins: No. of blue bins: No. of black bins:	
Whether lifting of solid waste from storage depots is manual or mechanical. Give percentage (%) of Manual Lifting of solid waste (%) of Mechanical lifting	% %	
If mechanical – specify the method used	front-end loaders/ Top loaders	
Whether solid waste is lifted from door to door and transported to treatment plant directly in a segregated form	Yes/ No	
Waste Transportation per day Type and Number of vehicles used (pl tick or add)	No. Trips made waste transported	
Animal cart Tractors Non tipping Truck Tipping Truck Dumper Placers Refuse collectors Compactors Others JCB/loader		
Frequency of transportation of waste	Frequency Daily (%) of waste transported Alternate day Twice a week Once a week Occasionally	
Quantity of waste transported each day	/tpd	
Percentage of total waste transported daily	%	



	Waste Treatment Technologies used	
	Whether solid waste is processed	Yes/No
	If yes, Quantity of waste processed daily	/tpd
	Whether treatment is done by local body or through an agency	
	Land(s) available with the local body for waste processing (in Hectares)	
	Land currently utilized for waste processing	
	Solid waste processing facilities in operation	
	Solid waste processing facilities under construction	
	Distance of processing facilities from city/town boundary	
	Details of technologies adopted	
	Composting,	Qty. raw material processed Qty. final product produced Qty. sold Qty. of residual waste landfilled
	Vermi composting	Qty. raw material processed Qty. final product produced Qty. sold Qty. of residual waste landfilled
	Bio-methanation	Qty. raw material processed Qty. final product produced Qty. sold Qty. of residual waste landfilled
	Refuse Derived Fuel	Qty. raw material processed Qty. final product produced Qty. sold Qty. of residual waste landfilled
	Waste to Energy technology such as incineration, gasification, pyrolysis or any other technology ( give detail)	Qty. raw material processed Qty. final product produced Qty. sold Qty. of residual waste landfilled
	Co-processing	Qty. raw material processed
	Combustible waste supplied to cement plant	
	Combustible waste supplied to solid waste based power plants	
	Others	Qty.
	Solid waste disposal facilities	
	No. of dumpsites sites available with the local body	
	No. of sanitary landfill sites available with the local body	
	Area of each such sites available for waste disposal	
	Area of land currently used for waste disposal	

	Distance of dumpsite/landfill facility from city/town	kms
	Distance from the nearest habitation	kms
	Distance from water body	kms
	Distance from state/national highway	kms
	Distance from Airport	kms
	Distance from important religious places or historical monument	kms
	Whether it falls in flood prone area	Yes/No
	Whether it falls in earthquake fault line area	Yes/No
	Quantity of waste landfilled each day	tpd
	Whether landfill site is fenced	Yes/No
	Whether Lighting facility is available on site	Yes/No
	Whether Weigh bridge facility available	Yes/No
	Vehicles and equipments used at landfill (specify)	Bulldozer, Compacters etc. available
	Manpower deployed at landfill site	Yes/No (if yes, attach details)
	Whether covering is done on daily basis	Yes/No
	If not, Frequency of covering the waste deposited at the landfill	
	Cover material used	
	Whether adequate covering material is available	Yes/No
	Provisions for gas venting provided	Yes/No, (if yes, attach technical data sheet)
	Provision for leachate collection	Yes/No, (if yes, attach technical data sheet)
9	Whether an Action Plan has been prepared for improving solid waste management practices in the city	Yes/No (if Yes attach Action Plan details)
10	What separate provisions are made for:  Dairy related activities: Slaughter houses waste: C&D waste (construction debris) :	Attach details on Proposals, Steps taken, Yes/No Yes/No Yes/No
11	Details of Post Closure Plan	Attach Plan
12	How many slums are identified and whether these are provided with Solid Waste Management facilities :	Yes/ No (if Yes, attach details)
13	Give details of  Local body's own manpower deployed for collection including street sweeping, secondary storage, transportation, processing and disposal of waste	
14	Give details of:  Contractor/ concessionaire's manpower deployed for collection including street sweeping, secondary storage, transportation, processing and disposal of waste	
15	Mention briefly, the difficulties being experienced by the local body in complying with provisions of these rules	

16	Mention briefly, if any innovative idea is implemented to tackle a problem related to solid waste, which could be replicated by other local bodies.	
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Signature of CEO/Municipal Commissioner/  
Executive Officer/Chief Officer

Dated:

Place:

**Form – V**  
[see rule 24(3)]

**Format of annual report to be submitted by the State Pollution Control Board Or Pollution Control Committee to the Central Pollution Control Board**

**PART-A**

To,

The Chairman  
Central Pollution Control Board  
Parivesh Bhawan,  
East Arjun Nagar, Delhi- 110 0032

1.	Name of the State/Union territory	:	
2.	Name & address of the State Pollution Control	:	
3.	Number of local bodies responsible for management of solid waste in the State/Union territory under these rules	:	
4.	No. of authorisation application Received	:	
5.	A Summary Statement on progress made by local body in respect of solid waste management	:	Please attach as Annexure-I
6.	A Summary Statement on progress made by local bodies in respect of waste collection, segregation, transportation and disposal	:	Please attach as Annexure-II
7.	A summary statement on progress made by local bodies in respect of implementation of Schedule II	:	Please attach as Annexure-III
Date: ..... Place: .....			Chairman or the Member Secretary State Pollution Control Board/ Pollution Control Committee

**PART B**

**Towns/cities**

Total number of towns/cities

Total number of ULBs

Number of class I & class II cities/towns

**Authorisation status (names/number)**

Number of applications received

Number of authorisations granted

Authorisations under scrutiny

**SOLID WASTE Generation status**

Solid waste generation in the state (TPD)

collected

treated

landfilled

**Compliance to Schedule I of SW Rules (Number/names of towns/capacity)**

Good practices in cities/towns

House-to-house collection

Segregation

Storage

Covered transportation

**Processing of SW (Number/names of towns/capacity)**

Solid Waste processing facilities setup:

Sl. No.	Composting	Vermi-composting	Biogas	RDF/Pelletization

**Processing facility operational:**

Sl. No.	Composting	Vermi-composting	Biogas	RDF/Pelletization

**Processing facility under installation/planned:**

Sl. No.	Composting	Vermi-composting	Biogas	RDF/Pelletisation

**Waste-to-Energy Plants: (Number/names of towns/capacity)**

Sl. No.	Plant Location	Status of Operation	Power generation (MW)	Remarks

**Disposal of solid waste (number/names of towns/capacity):**

Landfill sites identified

Landfill constructed

Landfill under construction

Landfill in operation

Landfill exhausted

Landfilled capped

**Solid Waste Dumpsites (number/names of towns/capacity):**

Total number of existing dumpsites

Dumpsites reclaimed/capped

Dumpsites converted to sanitary landfill

**Monitoring at Waste processing/Landfills sites**

Sl. No.	Name of facilities	Ambient air	Groundwater	Leachate quality	Compost quality	VOCs
1.						
2.						
3.						

**Status of Action Plan prepared by Municipalities**

Total number of municipalities:

Number of Action Plan submitted:

**Form – VI**

[see rule 25]

**Accident Reporting**

1.	Date and time of accident	:	
2.	Sequence of events leading to accident	:	
3.	The waste involved in accident	:	
4.	Assessment of the effects of the accidents on human health and the environment	:	
5.	Emergency measures taken	:	
6.	Steps taken to alleviate the effects of accidents	:	
7.	Steps taken to prevent the recurrence of such an accident	:	
Date: .....		Signature:.....	
Place: .....		Designation: .....	

[F. No. 18-3/2004-HSMD]  
BISHWANATH SINHA, Jt. Secy.