

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 **Kudgi Super Thermal power Station Stage-1(2400 MW)** for the period **from 01.04.2024 to 31.03.2029**.

INDEX

Sl. No.	Description	Page No.
1	Summary of Petition	2
2	Petition for Approval of Tariff of Kudgi STPS Stage-1 (2400 MW) for the period from 01.04.2024 to 31.03.2029	3
3	Affidavit	16
4	Appendix-I(Tariff Forms)	18
5	Annexure-01	108
6	Annexure-02	109
7	Annexure-03	110
8	Annexure-04	116
9	Annexure-05	119
10	Annexure-06	190
11	Annexure-07	276
12	Annexure-08	338
13	Annexure-09	339
14	Form-15/15A	340

Summary of Issues: Kudgi STPS Stage-1 (2400 MW)

(In compliance with CERC notice dated 07.06.2024)

The major highlights of the Kudgi STPS Stage-1 (2400 MW) Tariff petition for 2024-29 are as follows:-

The present petition is being filed under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-III of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 and Chapter-3, Regulation-13 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 for revision of tariff of Kudgi STPS Stage-I (2400 MW) (hereinafter referred to as **Kudgi STPS Stage-I**) for the period from 01.04.2024 to 31.03.2029 based on actual expenditures as on 31.03.2024 and projections from 01.04.2024 to 31.03.2029.

Kudgi STPS Stage-I is located in Bijapur District of Karnataka State and comprises of three units of 800 MW (Stage-I) with their respective COD's as 31.07.2017, 31.12.2017, 15.09.2018. The power generated from Kudgi Stage-1 is being supplied to the respondents herein mentioned above as per MoP allocation and respective PPAs.

The Trued up tariff of Kudgi Stage-1 for the tariff period 2019-24 after the truing up exercise based on actual expenditures as on 31.03.2024 is filed by petitioner through a separate petition which is yet to be decided by Hon'ble CERC.

Additional Capital Expenditure: The projected Additional Capital Expenditure for the FY 2024-25, 2025-26, 2026-27, 2027-28 and 2028-29 are Rs 23.30 cr, Rs 38.67 cr, Rs15.50 cr, Rs 4.02 cr and Rs 4.42 cr respectively amounting to total of Rs 85.91 crores during the 2024-29 period. The same has been depicted year wise in Form 9A of the Appendix-I along with applicable regulations and justification for the claims. It is humbly requested to approve the actual Additional Capital expenditure during the period of 2024-29.

O&M Expenses: Hon'ble Commission may please allow the projected claims of Water charges, security expenses and Ash transportation expenses for the instant station as projected by the Petitioner in Form 3A of Appendix-I.

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 **Kudgi Super Thermal power Station Stage-1(2400 MW)** for the period **from 01.04.2024 to 31.03.2029**

AND

IN THE MATTER OF

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

Respondents

1. AP Eastern Power Distribution Company Limited,
Corporate Office, P&T Colony, Seethammadhara,
Visakhapatnam-530013
2. AP Southern Power Distribution Company Limited,
Corporate Office, Back Side, Srinivasa Kalyana
Mandapam,
Tiruchhanur Road, Kesavayana Gunta,
Tirupathi – 517 503 (AP)

3. AP Central Power Distribution Corporation Ltd,
Corporate Office, Beside Polytechnic College ITI
Road,
Vijayawada - 520 008
4. Telangana State Northern Power Distribution Company
Limited,
H.No. 2-5-31/2, Vidyut Bhavan, Nakkalagutta,
Hanamkonda,
Warangal – 506 001 (AP)
5. Telangana State Southern Power Distribution Company
Limited,
Mint Compound, Corporate Office,
Hyderabad-500063
6. Tamil Nadu Generation & Distribution Corporation
Limited,
144, Anna Salai, Chennai- 600002
7. Bangalore Electricity Supply Company Limited,
Corporate Office, K. R. Circle,
Bangalore-560 001, Karnataka.
8. Mangalore Electricity Supply Company Limited
Corporate Office,
MESCOM Bhavan, First floor, Kavour Cross Road,
Bijai, Mangalore- 575004
9. Chamundeshwari Electricity Supply Company Limited,
Corporate Office No. 29, Vijayanagar 2nd Stage,
Hinkal, Mysore- 570017
10. Gulbarga Electricity Supply Company Limited,
Station Main Road, Gulbarga- 585102

11. Hubli Electricity Supply Company Limited,
Corporate Office, Navanagar, PB Road,
Hubli- 580025

12. Kerala State Electricity Board Limited,
Vaidyuthi Bhavanam, Pattom
Thiruvananthapuram- 695004

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. Kudgi Super Thermal Power Station Stage-1 (2400 MW) (hereinafter referred to as **Kudgi Stage-1**) is one such station located in the State of Karnataka. The power generated from **Kudgi Stage-1** 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 referred to as '**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 Kudgi Stage-1 for the period from 01.04.2024 to 31.03.2029 as per the Tariff Regulations 2024.
- 6) The tariff of the Kudgi Stage-1 for the tariff period 1.4.2019 to 31.3.2024 was determined by the Hon'ble Commission vide its order dated 19.05.2024 in Petition No. 29/GT/2021 in accordance with the CERC (Terms & Conditions of Tariff) Regulations 2019. The petitioner vide affidavit dated 26/11/2024 had filed a separate true up petition for the period 01.04.2019 to 31.03.2024 for revision of tariff in line with the applicable provisions of Tariff Regulations 2019.
- 7) It is submitted that Hon'ble Commission vide order dated 19.05.2024 in Petition No. 29/GT/2021 has allowed a capital cost of Rs 14893.45 Cr as on 31.03.2024 based on the admitted projected capital expenditure for the 2019-24 period. However, the actual closing capital cost as on 31.03.2024 has been worked out in the foresaid true-up petition as Rs. 16861.01 Cr based on the actual expenditure after trueing up exercise for the period 2019-24. Accordingly, the

Petitioner has adjusted an amount of Rs. 1967.56 Cr of 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 16861.01 Cr in the instant petition. The Hon'ble Commission may be pleased to accordingly adopt this adjustment in the admitted capital cost as on 31.3.2024 and determine the tariff in the present petition for the period 2024-29.

- 8) The capital cost claimed in the instant petition is based on the opening capital cost as on 01.04.2024 considered as above and projected estimated capital expenditures claimed for the period 2024-29 under Regulation 19 and Regulation 24, 25 and 26 of the Tariff Regulations, 2024.
- 9) The Petitioner further respectfully submits that as per Regulation 36(1)(6) of the Tariff Regulations 2024, the water charges, security expenses, ash transportation expenses and capital spares consumed for thermal generating stations are to be allowed separately. The details in respect of water charges such as type of cooling water system, water consumption, rate of water charges as applicable for 2023-24 have been furnished below. Water charges claimed is estimated basis for 2024-29 period based on past expenses. 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	IDCT
Consumption of Water	1. Agreement (Annexure-03) was made on 27.09.2014 between M/s NTPC Ltd and M/s KBJNL for supply of water (5.2 TMC per year, subject to

	<p>conditions of agreement) from Almatti Dam, Vijayapura, Karnataka.</p> <p>2. Tentative consumption for Kudgi : 2.23 TMC / year</p>
Rate of Water charges	<p>Rs 30 Cr / TMC (for 2024-25)</p> <p><i>(Water Charges revised from 200000/MCFT to Rs. 300000 / MCFT w.e.f 21.02.2024 Karnataka Government Order No: WRD 309 KBN 2023 Dt:12.02.2024 for Amendment to the Karnataka Irrigation Rules, 1965 w.e.f 21.02.2024. Annexure(04)</i></p>
Total Water Charges	Yearly details as per Form-3A of Appendix-I

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 present petition is filed on the basis of norms specified in the Tariff Regulations 2024. It is submitted that the petitioner is in the process of installing the Emission Control Systems (ECS) in compliance of the Revised Emission Standards as notified by MOEF vide notification dated 07.12.2015 as amended. The FGD of Unit-2 of Kudgi has already been declared commercial operation wef 18/10/2024. 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 a separate petition in terms of the Regulation 29 of Tariff Regulations 2024.
- 15) It is submitted that Hon'ble Commission has prescribed boiler efficiency and turbine heat rate separately for deriving the unit heat rate where the Unit Heat Rate is not guaranteed by the suppliers. It is submitted that the instant station was envisaged during the period 2009-14 and equipments including SG and

TG specifications for tendering / award was stipulated considering the boiler efficiency and the turbine heat rate prescribed by the Hon'ble Commission in the Tariff Regulations at that time. Based on the same the equipments were ordered through competitive bidding. It was not possible for the petitioner to specify the efficiency parameters at the time of finalizing the contracts on the instant station as per the efficiency parameters specified in Tariff Regulations 2024-29 which are more stringent.

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

Quote

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

UNQUOTE

Further, Hon'ble Commission vide its order dated 21.04.2022 in petition no 362/GT/2020 while determining tariff of Kahalgaon STPS-II of NTPC Limited has relaxed the boiler efficiency for computing Gross Heat Rate of the station with appropriate operating margin. The same is quoted below:

Quote

"157. Accordingly, the Commission considered the SHR of 2425 kCal /kWh as approved for 2009-14 tariff period and in exercise of Power to Relax under Regulation 54 and Power to Remove Difficulty under Regulations 55 of Tariff Regulations, 2014 allowed boiler efficiency of the units of the generating station below 0.85 for the period 2014–19"

UNQUOTE

Further, if the Petitioner had stipulated more stringent unit heat rate this would have increased the capital cost commensurate to the efficiency parameters sought. The benefit of the lower capital cost due to lower efficiency parameters has already been passed onto the beneficiaries in terms of lower capital cost. If now the boiler efficiency for working out the normative heat rate is considered as 86% instead of the actual design efficiency of 84.82%, the unit heat rate would be worked out to be 2241.42 kcal/kwh and the operating margin available over the design heat rate would be __4% only which is much less than the operating margin of 4.5% allowed in the Tariff Regulations 2024. Moreover, it is submitted that boiler efficiency is largely a function of coal quality. In view of above submission, it is prayed that Gross Station Heat rate may be allowed based on guaranteed turbine cycle heat rate and actual boiler efficiency of 84.82% with an operating margin of 4.5 % from the guaranteed design value. The tariff computation attached at Appendix-I is based on considering Station Heat Rate as per design heat rate with applicable operating margin of 4.5%.

- 16) The petitioner has accordingly calculated the tariff for 2024-29 period based on the above and the same is enclosed as **Appendix-I** to this petition.
- 17) The Petitioner humbly submits that the pay/wage revision for the employees of the Petitioner will be due wef 01.01.2027. Further, the wage/pay revision of CISF and Kendriya Vidyalaya employees will also be due for revision during the tariff period 2024-29. Regulation-36(1)(8) of CERC (Terms & Conditions of Tariff) Regulations-2024 provides as below:

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

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

- 18)** 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.
1. 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.
 2. 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.

3. 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.
 4. 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.
 5. 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.
- 19) It is submitted the Petitioner has served the copy of the Petition on to the Respondents mentioned herein above and has posted the Petition on the company website i.e. www.ntpc.co.in
- 20) In accordance with the 'Conduct of Business Regulations 2023' of the Hon'ble Commission, the Petitioner shall publish a notice about such filing in at least two daily leading digital newspapers one in English language and another in any of the Indian languages, having wide circulation in each of the States and Union Territories where the beneficiaries are situated, as per Form 14 appended to these regulations. Subsequently, the Petitioner shall submit the proof of publications as soft copies of the publications under an affidavit through the e-filing portal of the Hon'ble Commission within one week from the date of publication. Further, the Petitioner shall also submit the detail of expenses

incurred for publication of the notice along with the prayer for recovery of Publication Expenses as per Regulation-94 of CERC Tariff Regulations 2024.

- 21) The filing fee for the instant Petition has been paid for FY 2024-25 vide Payment Reference No 37c586eba62158b7b321 on 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.
- 22) It is submitted that the petitioner is filing this tariff petition subject to the outcome of its various appeals/ petitions pending before different courts. Besides, the petitions filed by NTPC for determination of capital base as on 31.3.2019 through true-up exercise are pending before the Hon'ble Commission and would take some time. The Petitioner, therefore, reserves its right to amend the tariff petition as per the outcome in such appeals/ petitions, if required.

Prayers

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

- i) Approve tariff of Kudgi Stage-1 for the tariff period 01.04.2024 to 31.03.2029.
- ii) Allow the recovery of filing fees as & when paid to the Hon'ble Commission and publication expenses from the beneficiaries.
- iii) Allow reimbursement of Ash Transportation Charges directly from the beneficiaries on monthly basis, subject to true up.
- iv) Allow the recovery of pay/wage revision as additional O&M over and above the normative O&M.

- v) Consider station heat rate based on design heat rate with applicable operating margin
- vi) Pass any other order as it may deem fit in the circumstances mentioned above.

Petitioner

Noida

—

BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

PETITION NO.....

IN THE MATTER OF : Petition Under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-III of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 and Chapter-3, Regulation-9 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 for approval of tariff of **Kudgi Super Thermal Power Station, Stage-I (2400 MW) for the period from 01.04.2024 to 31.03.2029.**

AND
IN THE MATTER OF

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

1) Respondents: AP Eastern Power Distribution Company Limited & Ors





AFFIDAVIT

I, Umasankar Mohanty, son of B.K. Mohanty aged about 58 years, resident of D-109, Shaurya NTPC Township, Noida do solemnly affirm, and state as follows: -:

- 1) That the deponent is the Additional General Manager of Petitioner/Applicant/Respondent and is well conversant with the facts and the circumstances of the case and therefore competent to swear this affidavit.
- 2) That the accompanying Petition under Section 62 and 79(1)(a) of the Electricity Act, 2003, has been filed by my authorized representative/nominated counsel 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 as mentioned in the Petition are true and correct based on my personal knowledge, belief and records maintained in the office.
- 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.

(Deponent)

उमाशंकर मोहंती / Umasankar Mohanty
अपर महाप्रबन्धक (व्यापारिक)
Addl. General Manager (Commercial)
एन टी पी सी लिमिटेड / NTPC Limited

VERIFICATION

Verified at Noida on 27th day of November 2024, that the contents of my above noted affidavit are true and correct to my knowledge and no part of it is false and nothing material has been concealed therefrom.



ATTESTED

YOGENDRA SINGH
NOTARY NOIDA
G B NAGAR (U.P.) INDIA

17 NOV 2024

(Deponent)

उमाशंकर मोहंती / Umasankar Mohanty
अपर महाप्रबन्धक (व्यापारिक)
Addl. General Manager (Commercial)
एन टी पी सी लिमिटेड / NTPC Limited

TARIFF FILING FORMS (THERMAL)

FOR DETERMINATION OF TARIFF

FOR

KUDGI SUPER THERMAL POWER STATION STAGE-1

(From 01.04.2024 to 31.03.2029)

PART-I

ANNEXURE-I

Summary of Tariff

Name of the Petitioner:		NTPC Limited								
Name of the Generating Station:		KUDGI SUPER THERMAL POWER STATION STAGE-I								
Place (Region/District/State):		KARNATAKA								
		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	84,588.44	84,719.33	84,874.90	85,010.90	85,059.91	85,081.10		
1.2	Interest on Loan	Rs Lakh	48,317.78	42,170.58	36,361.26	31,724.68	27,760.39	23,263.50		
1.3	Return on Equity	Rs Lakh	94,584.99	95,058.48	95,206.56	95,342.15	95,391.96	95,410.60		
1.4	Interest on Working Capital	Rs Lakh	35,462.81	34,682.38	34,733.05	34,911.55	35,058.16	35,183.08		
1.5	O&M Expenses	Rs Lakh	57,543.43	62828.28	65936.54	70487.57	74892.31	78540.24		
1.6	Special Allowance (If applicable)	Rs Lakh								
1.7	Compensation Allowance (If applicable – relevant for column 4 only)	Rs. Lakh								
	Total		320497.45	319459.06	317132.31	317476.85	318162.73	317478.33		
2.1	Landed Fuel Cost (coal/gas/RLNG/ liquid) as per FSA	Rs Lakh	7283.73	7312.84	7312.84	7312.84	7312.84	7312.84		
	(%) of Fuel Quantity	(%)								
2.2	Landed Fuel Cost Imported Coal									
	(%) of Fuel Quantity									
2.3	Landed Fuel Cost (coal/gas /RLNG/liquid) other than FSA	Rs/Ton								
	(%) of Fuel Quantity	(%)								
2.4	Landed Fuel Cost Imported Coal other than FSA.									
	(%) of Fuel Quantity									
2.5	Secondary fuel oil cost	Rs/Unit	0.048	0.09	0.09	0.09	0.09	0.09		
	Energy Charge Rate ex-bus (Paise/kWh) 2A, 2B, 2C, 2D	Rs/Unit	5.494	5.334	5.334	5.334	5.334	5.334		

(Petitioner)

**PART-I
FORM- 1(I)**

Name of the Petitioner: NTPC Limited
Name of the Generating Station: KUDGI SUPER THERMAL POWER STATION STAGE-1

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	16,86,101.38	16,88,431.35	16,92,298.05	16,93,848.44	16,94,250.36
2	Add: Addition during the year/period	2,329.97	3,866.71	1,550.38	401.92	442.11
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	16,88,431.35	16,92,298.05	16,93,848.44	16,94,250.36	16,94,692.47
7	Average Capital Cost	16,87,266.36	16,90,364.70	16,93,073.24	16,94,049.40	16,94,471.41

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	1686101.38	1686423.38	1687944.38	1689044.38	1689044.38
2	Add: Addition during the year / period	322.00	1521.00	1100.00	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	1686423.38	1687944.38	1689044.38	1689044.38	1689044.38
7	Average Capital Cost	1686262.38	1687183.88	1688494.38	1689044.38	1689044.38

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	2007.97	4353.67	4804.06	5205.98
2	Add: Addition during the year / period	2007.97	2345.71	450.38	401.92	442.11
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	2007.97	4353.67	4804.06	5205.98	5648.09
7	Average Capital Cost	1003.98	3180.82	4578.86	5005.02	5427.03

(Petitioner)

Name of the Petitioner:	NTPC Limited						
Name of the Generating Station:	KUDGI SUPER THERMAL POWER STATION STAGE-I						

Statement showing Return on Equity at Normal Rate

S. No.	Particulars	Amount in Rs. Lakhs						
		2024-25	2025-26	2026-27	2027-28	2028-29		
1	2	3	4	5	6	7		
	Return on Equity							
1	Gross Opening Equity (Normal)	5,05,830.41	5,05,927.01	5,06,383.31	5,06,713.31	5,06,713.31	506713.3101	
2	Less: Adjustment in Opening Equity	-						
3	Adjustment during the year		-					
4	Net Opening Equity (Normal)	5,05,830.41	5,05,927.01	5,06,383.31	5,06,713.31	5,06,713.31	5,06,713.31	
5	Add: Increase in equity due to addition during the year / period	96.60	456.30	330.00	0.00	0.00	0.00	
7	Less: Decrease due to De-capitalisation during the year / period	0.00	0.00	0.00	0.00	0.00	0.00	
8	Less: Decrease due to reversal during the year / period	0.00	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	0.00	
10	Net closing Equity (Normal)	5,05,927.01	5,06,383.31	5,06,713.31	5,06,713.31	5,06,713.31	5,06,713.31	
11	Average Equity (Normal)	5,05,878.71	5,06,155.16	5,06,548.31	5,06,713.31	5,06,713.31	5,06,713.31	
12	Rate of ROE (%)	18.782	18.782	18.782	18.782	18.782	18.782	
13	Total ROE	95,014.14	95,066.06	95,139.90	95,170.89	95,170.89	95,170.89	

(Petitioner)

PART-I						
FORM- 1(IIB)						
Name of the Petitioner:		NTPC Limited				
Name of the Generating Station:		KUDGI SUPER THERMAL POWER STATION STAGE-1				
Statement showing Return on Equity linked to SBI MCLR+ 350 basis points						
Amount in Rs. Lakhs						
S. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7
Return on Equity (beyond the original scope of work including additional capitalization due to Change in Law, Force Majeure)						
1	Gross Opening Equity (Normal)	0.00	602.39	1306.10	1441.22	1561.79
2	Less: Adjustment in Opening Equity	0.00	0.00	0.00	0.00	0.00
3	Adjustment during the year	0.00	0.00	0.00	0.00	0.00
4	Net Opening Equity (Normal)	0.00	602.39	1306.10	1441.22	1561.79
5	Add: Increase in equity due to addition during the year / period	602.39	703.71	135.11	120.58	132.63
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)	602.39	1306.10	1441.22	1561.79	1694.43
11	Average Equity (Normal)	301.20	954.25	1373.66	1501.50	1628.11
12	Rate of ROE- Post Tax . i.e SBI MCLR plus 350 BP (%)	12.15	12.15	12.15	12.15	12.15
13	Rate of ROE-Pre tax (%)	14.723	14.723	14.723	14.723	14.723
14	Total ROE	44.34	140.49	202.24	221.07	239.71
(Petitioner)						

Plant Characteristics

Name of the Petitioner	NTPC Ltd.		
Name of the Generating Station :	KUDGI SUPER THERMAL POWER STATION STAGE-1		
Unit(s)/Block(s)/Parameters	Unit-I	Unit-II	Unit-III
Installed Capacity (MW)	800	800	800
Schedule COD as per Investment Approval	May'2016	Nov'2016	May'2017
Actual COD /Date of Taken Over (as applicable)	31st July'2017	31st Dec'2017	15th Sep'18
Pit Head or Non Pit Head or Integrated Mine	Non Pit Head		
Distance from Integrated mine (kms), If applicable			
Name of the Boiler Manufacture	M/s Doosan Chennai works Pvt. Ltd.		
Name of Turbine Generator Manufacture	M/s Toshiba JSW Turbine and generator Pvt. Ltd.		
Main Steams Pressure at Turbine inlet (kg/Cm²) abs¹	247		
Main Steam Temperature at Turbine inlet (°C) ¹	565		
Reheat Steam Pressure at Turbine inlet (kg/Cm²) ¹	45.9		
Reheat Steam Temperature at Turbine inlet (°C) ¹	593		
Main Steam flow at Turbine inlet under MCR condition (tons /hr)²	2278		
Main Steam flow at Turbine inlet under VWO condition (tons /hr)²	2440		
Unit Gross electrical output under MCR /Ratedcondition (MW)²	800		
Unit Gross electrical output under VWOcondition (MW)²	840 (with OLV)		
Guaranteed Design Gross Turbine Cycle Heat Rate (kCal/kWh)²	1819.3		
Conditions on which design turbine cycle heat rate guaranteed			
% MCR	100		
% Makeup Water Consumption	0		
Design Capacity of Make up Water System	4x3110 m3/hr - for all three units		
Design Capacity of Inlet Cooling System	78600 Cu.m/hr		
Design Cooling Water Temperature (°C)	33		
Back Pressure	77 mm hg		
Steam flow at super heater outlet under BMCRcondition (tons/hr)	2550		
Steam Pressure at super heater outlet underBMCR condition) (kg/Cm ²)	258		
Steam Temperature at super heater outlet underBMCR condition (°C)	568		
Steam Temperature at Reheater outlet at BMCRcondition (°C)	596		
Design / Guaranteed Boiler Efficiency (%) ⁴	84.82 %- at BMCR		
Design Fuel with and without Blending of domestic/imported coal	Coal GCV at design - 3200 Kcal/kg		
Type of Cooling Tower	IDCT		
Type of cooling system⁵	Induced Draft cooling		
Type of Boiler Feed Pump⁶	2X50% TDBFP	2X30% MDBFP	
Type of Coal Mill	BOWL MILL		
Fuel Details⁷			
- Primary Fuel	Coal		
- Secondary Fuel	LDO & HFO		

Plant Characteristics

Name of the Petitioner	NTPC Ltd.		
Name of the Generating Station :	KUDGI SUPER THERMAL POWER STATION STAGE-1		
Unit(s)/Block(s)/Parameters	Unit-I	Unit-II	Unit-III
Installed Capacity (MW)	800	800	800
- Alternate Fuels			
Types of SOX control system	WFGD (UNIT#2 OPERATIONAL)		
Types of NOX control system	LOW NOX BURNERS, OVER FIRE DAMPERS		
Details of SPM control system	ESP		
Special Features/Site Specific Features⁸	FRONT & REAR FIRED Boiler		
Special Technological Features⁹	Make up water Intake from Almatti Reservoir Back Waters		
Environmental Regulation related features¹⁰	Super critical technology FGD/De-Nox under implementation		
Any other special features	ESP, 275 mtr chimney, CMB		
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, Front/Rear/Sides fired Boiler, Vicinity to sea, Intake /makeup water systems etc. scrubbers etc. Specify all such features-FRONT & REAR FIRED Boiler			
9: Any Special Technological feature like Advanced class FA technology in Gas Turbines, etc.			
10: Environmental Regulation related features like FGD, ESP etc.,			
Note 1: In case of deviation from specified conditions in Regulation, correction curve of manufacturer may also be submitted.			
Note 2: Heat Balance Diagram has to be submitted along with above information in case of new stations.			
Note 3: The Terms – MCR, BMCR, HHV, Performance coal, are as defined in CEA Technical Standards for Construction of Electric Plants and Electric Lines Regulations – 2010 notified by the Central Electricity Authority.			

(Petitioner)

Normative parameters considered for tariff computations

Name of the Petitioner:	NTPC Limited
Name of the Generating Station:	KUDGI SUPER THERMAL POWER STATION STAGE-1

(Year Ending March)

Particulars	Unit	Existing 2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
1	2	3	4	5	6	7	8
Base Rate of Return on Equity	%	15.50	15.50	15.50	15.50	15.50	15.50
Base Rate of Return on Equity on Add. Capitalization	%	6.5733	12.150	12.150	12.150	12.150	12.150
Effective Tax Rate	%	17.4720	17.4720	17.4720	17.4720	17.4720	17.4720
Target Availability	%						
Peak Hours	%	85	85	85.00	85.00	85.00	85.00
Off-Peak Hours	%	85	85	85.00	85.00	85.00	85.00
β- Average Monthly Frequency Response Performance ⁵	0-1	Will be provided at the time of truing up					
Auxiliary Energy Consumption*		6.25	6.75	6.75	6.75	6.75	6.75
Gross Station Heat Rate	kCal/kWh	2221.24	2241.42	2241.42	2241.42	2241.42	2241.42
Specific Fuel Oil Consumption	ml/kWh	0.50	1.00	1.00	1.00	1.00	1.00
Cost of Coal/Lignite for WC	in Days	50	50	50	50	50	50
Cost of Main Secondary Fuel Oil for WC	in Months	2	2	2	2	2	2
Fuel Cost for WC2	in Months						
Liquid Fuel Stock for WC	in Months						
O&M Expenses	Rs lakh/MW	20.93	23.20	24.42	25.70	27.05	28.47
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	750000					
SBI 1 Year MCLR plus 325 basis point	%	12.00	11.90	11.90	11.90	11.90	11.90
Blending ratio of domestic coal/imported coal							
Norms for consumption of reagent		Details will be provided in seprate petition while filling petiton for FGD.					
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							

- Note: 1). For Coal based/lignite based generating stations
2). For Gas Turbine/Combined Cycle generating stations duly taking into account the mode of operation on gas fuel and liquid fuel.
3). Mention relevant date.
4). Effective tax rate is to be computed in accordance with Regulation 31 i.e. actual tax (or advance tax)/gross income, where gross income refers the profit before tax.
5). To be submitted at the time of truing up based on RPC certification.
* Kudgi Unit-2 FGD Commissioned on -18/10/2024

Petitioner

Part-I
FORM-3A
ADDITIONAL FORM

Calculation of O&M Expenses

Name of the Company :		NTPC Limited							
Name of the Power Station :		KUDGI SUPER THERMAL POWER STATION STAGE-I							
		Amount in Rs. Lakhs							
S.No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29			
1	2	3	4	5	7	8			
1	O&M expenses under Reg.36(1)								
1a	Normative	55680.00	58608.00	61680.00	64920.00	68328.00			
2	O&M expenses under Reg.36(6)								
2a	Water Charges	5345.68	5345.68	6626.42	7573.05	7573.05			
2b	Security expenses	1802.60	1982.86	2181.15	2399.27	2639.19			
2c	Capital Spares*	0.00	0.00	0.00	0.00	0.00			
3	O&M expenses-Ash Transportation**	0.00	0.00	0.00	0.00	0.00			
	Total O&M Expenses	62828.28	65936.54	70487.57	74892.31	78540.24			

Ash Transportation**-Details of Ash Transportation shall be provided at the time of truing up.

Capital Spares*-Details of capital spares consumption shall be provided at the time of truing up.

Petitioner

Abstract of Admitted Capital Cost for the existing Projects

Name of the Company : NTPC Ltd.

Name of the Power Station : Kudgi Super Thermal Power Station

Last date of order of Commission for the project

Date (DD-MM-YYYY)

19-05-2024

Reference of petition no. in which the above order was

Petition no.

29/GT/2021

Following details as admitted on 31.03.24 in the above order by the Commission:

Capital cost	14,89,345.28
Amount of un-discharged liabilities included in above	6,041.15
Amount of un-discharged liabilities corresponding to	1042541.70
Gross Normative Debt	379506.55
Cumulative Repayment	6,63,035.15
Net Normative Debt	4,46,803.58
Normative Equity	9,05,681.63
Cumulative Depreciation	33,253.53
Freehold land	

(Rs. in lakh)

(Petitioner)

Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

BP NO 50500001041

T00001

D00001

Unsecured Loan From Bank Of India-IV

Source of Loan :	Bank Of India-IV		
Currency :	INR		
Amount of Loan :	22000000000		
Total Drawn amount :	16,00,00,00,000		
Date of Drawal :	07.12.2020		
Interest Type :	Floating		
Fixed Interest Rate :			
Base Rate, If Floating Interest	6.00%		
Margin, If Floating Interest :	NIL		
Are there any Caps/ Floor :	Y/N		
Frequency of Intl. Payment	Monthly		
If Above is yes, specify Caps/ Floor :			
Moratorium Period :	3 Years		
Moratorium effective from :	07.12.2020		
Repayment Period (Inc Moratorium) :	15 Years		
Repayment Frequency :	Yearly		
Repayment Type :	AVG		
First Repayment Date :	07.12.2024		
Base Exchange Rate :	RUPEE		
Date of Base Exchange Rate :			
Project Code	Project Name	Amount	
	UNCHAHAR SOLAR PV	16,00,00,000	07.12.2020
	VINDHYACHAL-V	60,00,00,000	07.12.2020
	TALCHER SOLAR PV	20,00,00,000	07.12.2020
	BARH I	20,00,00,000	07.12.2020
	BARH-II	88,00,00,000	07.12.2020
	KOLDAM	80,00,00,000	07.12.2020
	PAKRI BARWADIH CMB	2,00,00,00,000	07.12.2020
	SOLAPUR	1,72,00,00,000	07.12.2020
	KUDGI	2,72,00,00,000	07.12.2020
	LARA	1,36,00,00,000	07.12.2020
	GADARWARA	1,46,00,00,000	07.12.2020
	RAJGARH SOLAR PV	64,00,00,000	07.12.2020
	LATA TAPOVAN	36,00,00,000	07.12.2020
	DARLIPALLI	1,60,00,00,000	07.12.2020
	BILHAUR SOLAR 140MW	60,00,00,000	07.12.2020
	BILHAUR SOLAR 86MW	16,00,00,000	07.12.2020
	SAMBHU KI BHURJ-II-TOKALA	54,00,00,000	07.12.2020
Total Allocated Amount		16,00,00,00,000	

Form 8

TRANCHE NO

BP NO 5050000331

T00001

D00007

Unsecured Loan From Corporation Bank-III

Source of Loan :	Corporation Bank-III		
Currency :	INR		
Amount of Loan :	3,35,00,00,000		
Total Drawn amount :	50,00,00,000		
Date of Drawal:	26.03.2014		

Unsecured Loan From HDFC Bank Ltd.-III		
Source of Loan :	HDFC Bank Ltd.-III	
Currency :	INR	
Amount of Loan :	15,00,00,00,000	
Total Drawn amount :	2,00,00,00,000	
Date of Drawal:	11.07.2016	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	D00005-9.10%	
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 :	11.07.2016	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	9 Yearly Instalment	
Repayment Type :	AVG	
First Repayment Date :	04.12.2021	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	TAPOVAN VISHNUGAD	9,00,00,000
	SOLAPUR	9,00,00,000
	GADARWARA	36,00,00,000
	UNCHAHAAR STPP IV	15,00,00,000
	NORTH KARANPURA	4,00,00,000
	DARLIPALLI	48,00,00,000
	TANDA-II	9,00,00,000
	ANANTPUR SOLAR	9,00,00,000
	MOUDA-II	20,00,00,000
	KUDGI	31,00,00,000
	PAKRI BARWADIH	10,00,00,000
	Total Allocated Amount	2,00,00,00,000

11.07.2016
11.07.2016
11.07.2016
11.07.2016
11.07.2016
11.07.2016
11.07.2016
11.07.2016
11.07.2016
11.07.2016
11.07.2016
11.07.2016
11.07.2016

Form 8

TRANCHE NO

BP NO 5050000521

T00001

D00002

Unsecured Loan From HDFC Bank Ltd.-IV		
Source of Loan :	HDFC Bank Ltd.-IV	
Currency :	INR	
Amount of Loan :	20,00,00,00,000	
Total Drawn amount :	1,00,00,00,000	
Date of Drawal:	03.07.2017	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	7.90%	
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	MONTHLY	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	3 Years	
Moratorium effective from :	03.07.2017	
Repayment Period (Inc Moratorium) :	12 Years	
Repayment Frequency :	9 Yearly Instalment	
Repayment Type :	AVG	

First Repayment Date :	17.04.2021	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	TAPOVAN VISHNUGARH	32,00,00,000
	KUDGI	68,00,00,000
Total Allocated Amount		1,00,00,00,000

03.07.2017

03.07.2017

Form 8

TRANCHE NO

BP NO 5050000561

T00001

D00001

Unsecured Loan From HDFC Bank Ltd. V

Source of Loan :	HDFC Bank Ltd. V	
Currency :	INR	
Amount of Loan ::	25,00,00,00,000	
Total Drawn amount :	5,00,00,00,000	
Date of drawl	25.09.2017	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	7.90%	
Margin, If Floating Interest :	NIL	
Are there any Caps/ Floor :	Y/N	
Frequency of Intl. Payment	MONTHLY	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	6 Years	
Moratorium effective from :	25.09.2017	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	9 Yearly Instalment	
Repayment Type :	AVG	
First Repayment Date :	25.09.2024	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	TANDA-II	13,85,00,000
	RAMMAM	3,00,00,000
	KHARGONE	89,68,00,000
	TELANGANA	16,00,00,000
	MANDSAUR SOLAR PV	11,00,00,000
	ROJMAL WIND	21,00,00,000
	MOUDA-II	39,84,00,000
	KUDGI	2,76,97,00,000
	CHATTI BARIATU CMB	19,13,00,000
	DULANGA COAL MINE	6,00,00,000
	MOUDA-I	3,53,00,000
Total Allocated Amount		5,00,00,00,000

25.09.2017

25.09.2017

25.09.2017

25.09.2017

25.09.2017

25.09.2017

25.09.2017

25.09.2017

25.09.2017

25.09.2017

25.09.2017

Form 8

TRANCHE NO

BP NO 5050000551

T00001

D00004

Unsecured Loan From SBI-X

Source of Loan :	SBI-X	
Currency :	INR	
Amount of Loan ::	40,00,00,00,000	
Total Drawn amount :	1,00,00,00,000	

Date of Drawal:	21.12.2017	
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 Intl. Payment	Monthly	
If Above Is yes, specify Caps/ Floor :		
Moratorium Period :	6 Years	
Moratorium effective from :	21.12.2017	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	9 Yearly Installments	
Repayment Type :	AVG	
First Repayment Date :	01.10.2024	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	TELANGANA	5,00,00,000
	KUDGI	75,00,00,000
	BARH - II	5,00,00,000
	VINDHYACHAL-V	15,00,00,000
	Total Allocated Amount	1,00,00,00,000.00

21.12.2017
21.12.2017
21.12.2017
21.12.2017

Form 8

TRANCHE NO

BP NO 5050000551

T00001

D00005

Unsecured Loan From SBI-X

Source of Loan :	SBI-X	
Currency :	INR	
Amount of Loan :	40,00,00,00,000	
Total Drawn amount :	2,00,00,00,000	
Date of Drawal:	01.01.2018	
Interest Type :	Floating	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	7.85%	
Margin, If Floating Interest :	0.00%	
Are there any Caps/ Floor :	Y/N	
Frequency of Intl. Payment	Monthly	
If Above Is yes, specify Caps/ Floor :		
Moratorium Period :	6 Years	
Moratorium effective from :	01.01.2018	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	9 Yearly Installments	
Repayment Type :	AVG	
First Repayment Date :	01.10.2024	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	LARA 1	80,00,00,000
	KUDGI	1,20,00,00,000
	Total Allocated Amount	2,00,00,00,000.00

01.01.2018
01.01.2018

Form 8

TRANCHE NO

BP NO 5050000551

T00001

D00008

Unsecured Loan From SBI-X		
Source of Loan :	SBI-X	
Currency :	INR	
Amount of Loan :	40,00,00,00,000	
Total Drawn amount :	6,00,00,00,000	
Date of Drawal:	31.03.2018	
Interest Type :	Floating	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	7.85%	
Margin, If Floating Interest :	0.00%	
Are there any Caps/ Floor :	Y/N	
Frequency of Intl. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	6 Years	
Moratorium effective from :	31.03.2018	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	9 Yearly Installments	
Repayment Type :	AVG	
First Repayment Date :	01.10.2024	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	BARHI	1,63,00,00,000
	TAPOVAN VISHNUGARH	47,00,00,000
	BONGAIGAON	39,00,00,000
	KUDGI	2,05,00,00,000
	LARA	5,00,00,000
	SOLAPUR	1,23,00,00,000
	PAKRI BARWADIH CMB	18,00,00,000
	Total Allocated Amount	6,00,00,00,000.00

Form 8

TRANCHE NO

BP NO 5050000571

T00001

D00001

Unsecured Loan From Punjab National Bank-III		
Source of Loan :	Punjab National Bank-III	
Currency :	INR	
Amount of Loan :	20,00,00,00,000	
Total Drawn amount :	3,00,00,00,000	
Date of Drawal	01.02.2018	
Interest Type :	Floating	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	7.80%	
Margin, If Floating Interest :	0.00%	
Are there any Caps/ Floor :	Y/N	
Frequency of Intl. Payment	MONTHLY	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	3 Years	
Moratorium effective from :	01.02.2018	
Repayment Period (Inc Moratorium) :	12 Years	
Repayment Frequency :	9 Yearly Instalment	
Repayment Type :	AVG	

First Repayment Date :	01.02.2022	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	BONGAIGAON	25,00,00,000.00
	SOLAPUR	35,00,00,000.00
	NORTH KARANPURA	1,00,00,00,000.00
	DARLIPALLI	40,00,00,000.00
	KUDGI	1,00,00,00,000.00
	Total Allocated Amount	3,00,00,00,000.00

Form 8

TRANCHE NO

BP NO 5050000571

T00001

D00005

Unsecured Loan From Punjab National Bank-III		
Source of Loan :	Punjab National Bank-III	
Currency :	INR	
Amount of Loan ::	20,00,00,00,000	
Total Drawn amount :	5,00,00,00,000	
Date of Drawl	26.09.2018	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	8.05%	
Margin, If Floating Interest :	0.00%	
Are there any Caps/ Floor :	Y/N	
Frequency of Intl. Payment	MONTHLY	
If Above Is yes, specify Caps/ Floor :		
Moratorium Period :	3 Years	
Moratorium effective from :	26.09.2018	
Repayment Period (Inc Moratorium) ::	12 Years	
Repayment Frequency :	9 Yearly Instalment	
Repayment Type :	AVG	
First Repayment Date :	01.02.2022	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	BARH-I	1,10,00,00,000.00
	BONGAIGAON	1,00,00,00,000.00
	KUDGI-I	35,00,00,000.00
	LARA-I	15,00,00,000.00
	PAKRI BARWADIH	35,00,00,000.00
	SOLAPUR	40,00,00,000.00
	TAPOVAN VISHNUGARH	40,00,00,000.00
	TANDA II	1,25,00,00,000.00
	Total Allocated Amount	5,00,00,00,000.00

Form 8

TRANCHE NO

BP NO 5050000511

T00001

D00001

Unsecured Loan From Bank of Karnataka Bank		

Source of Loan :	Jammu & Kashmir Bank-IV	
Currency :	INR	
Amount of Loan :	7,00,00,00,000	
Total Drawn amount :	5,00,00,00,000	
Date of Drawl:	31.03.2017	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	7.85%	
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intl. Payment	MONTHLY	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	Nil	
Moratorium effective from :	31.03.2017	
Repayment Period (Inc Moratorium) :	12 Years	
Repayment Frequency :	9 Yearly Instalment	
Repayment Type :	AVG	
First Repayment Date :	31.03.2021	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	BARH-I	2,10,00,00,000.00
	BONGAIGAON	62,00,00,000.00
	KUDGI	35,00,00,000.00
	MOUDA-II	36,00,00,000.00
	SOLAPUR	40,00,00,000.00
	TAPOVAN VISHNUGAD	46,00,00,000.00
	SIMHADRI-II	52,00,00,000.00
	PAKRI BARWADIH COAL MINE	19,00,00,000.00
	Total Allocated Amount	5,00,00,00,000.00

31.03.2017
31.03.2017
31.03.2017
31.03.2017
31.03.2017
31.03.2017
31.03.2017
31.03.2017
31.03.2017

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

TRANCHE NO

BP NO 5050000511

T00001

D00002

Unsecured Loan From Bank of Karnataka Bank		
Source of Loan :	Jammu & Kashmir Bank-IV	
Currency :	INR	
Amount of Loan :	7,00,00,00,000	
Total Drawn amount :	2,00,00,00,000	
Date of Drawl:	17.04.2017	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	7.85%	
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intl. Payment	MONTHLY	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	Nil	
Moratorium effective from :	17.04.2017	

Repayment Period (Inc Moratorium) :	12 Years	
Repayment Frequency :	9 Yearly Instalment	
Repayment Type :	AVG	
First Repayment Date :	31.03.2021	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	KUDGI	10,00,00,000.00
	MOUDA-II	95,00,00,000.00
	BARH - II	30,00,00,000.00
	VINDHYACHAL-V	22,00,00,000.00
	KOLDAM	38,00,00,000.00
	RIHAND-III	5,00,00,000.00
	Total Allocated Amount	2,00,00,00,000.00

Form 8

TRANCHE NO

BP NO 5050000442

T00001

D0004

Unsecured Loan From SBI-VIII		
Source of Loan :	SBI-VIII	
Currency :	INR	
Amount of Loan :	1,00,00,00,00,000	
Total Drawn amount :	10,00,00,00,000	
Interest Type :	Floating	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	D0004-9.70%	
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 :	6 Years	
Moratorium effective from :	04.08.2015	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	9 Yearly Installments	
Repayment Type :	AVG	
First Repayment Date :	31.01.2022	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	BARH-II	23,00,00,000
	BARH-I	45,00,00,000
	BONGAIGAON	61,00,00,000
	DARLIPALLI	68,00,00,000
	GADARWARA	1,25,00,00,000
	KOLDAM	29,00,00,000
	KUDGH	1,13,00,00,000
	LARA-I	1,65,00,00,000
	MOUDA-II	84,00,00,000
	NORTH KARANPURA	24,00,00,000
	RAMMAM	9,00,00,000
	SOLAPUR	1,11,00,00,000
	TANDA-II	7,00,00,000

	TAPOVAN VISHNUGARH	38,00,00,000	04.08.2015
	UNCHAHAHAR-IV	41,00,00,000	04.08.2015
	VINDHYACHAL-V	57,00,00,000	04.08.2015
Total Allocated Amount		10,00,00,00,000.00	

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

BP NO 5050000442		TRANCHE NO T00001	D0005
Unsecured Loan From SBI-VIII			
Source of Loan :	SBI-VIII		
Currency :	INR		
Amount of Loan :	1,00,00,00,00,000		
Total Drawn amount :	5,00,00,00,000		
Interest Type :	Floating		
Fixed Interest Rate :	-----		
Base Rate, If Floating Interest	D0005-9.70%		
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 :	6 Years		
Moratorium effective from :	23.09.2015		
Repayment Period (Inc Moratorium) :	15 Years		
Repayment Frequency :	9 Yearly Installments		
Repayment Type :	AVG		
First Repayment Date :	31.01.2022		
Base Exchange Rate :	RUPEE		
Date of Base Exchange Rate :	N.A.		
Project Code	Project Name	Amount	
	BARH-I	20,00,00,000	23.09.2015
	BONGAIGAON	10,00,00,000	23.09.2015
	DARLIPALLI	55,00,00,000	23.09.2015
	GADARWARA	1,55,00,00,000	23.09.2015
	KUDGI	1,30,00,00,000	23.09.2015
	LARA	45,00,00,000	23.09.2015
	MOUDA-II	35,00,00,000	23.09.2015
	SOLAPUR	30,00,00,000	23.09.2015
	UNCHAHAHAR-IV	20,00,00,000	23.09.2015
Total Allocated Amount		5,00,00,00,000.00	

Form 8

BP NO 5050000442		TRANCHE NO T00001	D0007
Unsecured Loan From SBI-VIII			
Source of Loan :	SBI-VIII		
Currency :	INR		
Amount of Loan :	1,00,00,00,00,000		
Total Drawn amount :	3,50,00,00,000		
Interest Type :	Floating		
Fixed Interest Rate :	-----		
Base Rate, If Floating Interest	D0007-9.30%		
Margin, If Floating Interest :	0.00%		
Are there any Caps/ Floor :	Y/N		

Frequency of Intl. Payment	Monthly		
If Above is yes, specify Caps/ Floor :			
Moratorium Period :	6 Years		
Moratorium effective from :	15.10.2015		
Repayment Period (Inc Moratorium) :	15 Years		
Repayment Frequency :	9 Yearly Installments		
Repayment Type :	AVG		
First Repayment Date :	31.01.2022		
Base Exchange Rate :	RUPEE		
Date of Base Exchange Rate :	N.A.		
Project Code	Project Name	Amount	
	BARHI	12,00,00,000	15.10.2015 9.35%
	TAPOVAN VISHNUGAD	59,00,00,000	15.10.2015 9.35%
	BONGAIGAON	11,00,00,000	15.10.2015 9.35%
	SOLAPUR	43,00,00,000	15.10.2015 9.35%
	LARA	90,00,00,000	15.10.2015 9.35%
	GADARWARA	29,00,00,000	15.10.2015 9.35%
	NORTH KARANPURA	5,00,00,000	15.10.2015 9.35%
	DARLIPALLI	27,00,00,000	15.10.2015 9.35%
	KUDGI-I	19,00,00,000	15.10.2015 9.35%
	KOLDAM	10,00,00,000	15.10.2015 9.35%
	VINDHYACHAL-V	45,00,00,000	15.10.2015 9.35%
Total Allocated Amount		3,50,00,00,000.00	

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

TRANCHE NO

BP NO 5050000442

T00001

D0008

Unsecured Loan From SBI-VIII			
Source of Loan :	SBI-VIII		
Currency :	INR		
Amount of Loan :	1,00,00,00,00,000		
Total Drawn amount :	5,00,00,00,00,000		
Interest Type :	Floating		
Fixed Interest Rate :	-----		
Base Rate, If Floating Interest :	D0008-9.30%		
Margin, If Floating Interest :	0.00%		
Are there any Caps/ Floor :	Y/N		
Frequency of Intl. Payment	Monthly		
If Above is yes, specify Caps/ Floor :			
Moratorium Period :	6 Years		
Moratorium effective from :	21.10.2015		
Repayment Period (Inc Moratorium) :	15 Years		
Repayment Frequency :	9 Yearly Installments		
Repayment Type :	AVG		
First Repayment Date :	31.01.2022		
Base Exchange Rate :	RUPEE		
Date of Base Exchange Rate :	N.A.		
Project Code	Project Name	Amount	
	BARHI	54,00,00,000	21.10.2015
	TAPOVAN VISHNUGAD	13,00,00,000	21.10.2015
	BONGAIGAON	23,00,00,000	21.10.2015

	BARHI	22,00,00,000	21.10.2015
	KUDGI	81,00,00,000	21.10.2015
	MOUDA-II	25,00,00,000	21.10.2015
	SOLAPUR	35,00,00,000	21.10.2015
	VINDHYACHAL-V	13,00,00,000	21.10.2015
	LARA-I	85,00,00,000	21.10.2015
	GADARWARA	49,00,00,000	21.10.2015
	UNCHAHAR-IV	10,00,00,000	21.10.2015
	NORTH KARANPURA	8,00,00,000	21.10.2015
	DARLIPALLI	34,00,00,000	21.10.2015
	TANDA-II	26,00,00,000	21.10.2015
	PAKRI BARWADIH	12,00,00,000	21.10.2015
	RIHAND-III	10,00,00,000	21.10.2015
	Total Allocated Amount	5,00,00,00,000	

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

TRANCHE NO

BP NO 5050000442

T00001

D0009

Unsecured Loan From SBI-VIII		
Source of Loan :	SBI-VIII	
Currency :	INR	
Amount of Loan :	1,00,00,00,00,000	
Total Drawn amount :	1,00,00,00,00,000	
Date of Drawl	28.10.2015	
Interest Type :	Floating	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	D0009-9.30%	
Margin, If Floating Interest :	0.00%	
Are there any Caps/ Floor :	Y/N	
Frequency of Intl. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	6 Years	
Moratorium effective from :	28.10.2015	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	9 Yearly Installments	
Repayment Type :	AVG	
First Repayment Date :	31.01.2022	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	KUDGI	1,00,00,00,000
		28.10.2015
		9.30%
Total Allocated Amount		1,00,00,00,000.00

Form 8

TRANCHE NO

BP NO 5050000442

T00001

D00012

Unsecured Loan From SBI-VIII	
Source of Loan :	SBI-VIII
Currency :	INR
Amount of Loan :	1,00,00,00,00,000
Total Drawn amount :	4,00,00,00,00,000
Interest Type :	Floating
Fixed Interest Rate :	-----
Base Rate, If Floating Interest	D00012-9.30%

Margin, If Floating Interest :	0.00%			
Are there any Caps/ Floor :	Y/N			
Frequency of Intl. Payment	Monthly			
If Above is yes, specify Caps/ Floor :				
Moratorium Period :	6 Years			
Moratorium effective from :	12.11.2015			
Repayment Period (Inc Moratorium) :	15 Years			
Repayment Frequency :	9 Yearly Installments			
Repayment Type :	AVG			
First Repayment Date :	31.01.2022			
Base Exchange Rate :	RUPEE			
Date of Base Exchange Rate :	N.A.			
Project Code	Project Name	Amount		
	BARH-I	25,00,00,000	12.11.2015	9.30%
	BONGAIGAON	32,00,00,000	12.11.2015	9.30%
	DARLIPALLI	22,00,00,000	12.11.2015	9.30%
	GADARWARA	56,00,00,000	12.11.2015	9.30%
	KUDGI	30,00,00,000	12.11.2015	9.30%
	LARA	23,00,00,000	12.11.2015	9.30%
	MOUDA-II	44,00,00,000	12.11.2015	9.30%
	NORTH KARANPURA	17,00,00,000	12.11.2015	9.30%
	PAKRI BARWADIH	11,00,00,000	12.11.2015	9.30%
	SOLAPUR	62,00,00,000	12.11.2015	9.30%
	TANDA-II	15,00,00,000	12.11.2015	9.30%
	TAPOVAN VISHNUGAD	18,00,00,000	12.11.2015	9.30%
	UNCHAHAHAR-IV	12,00,00,000	12.11.2015	9.30%
	VINDHYACHAL-V	13,00,00,000	12.11.2015	9.30%
	MOUDA-I	20,00,00,000	12.11.2015	9.30%
	Total Allocated Amount	4,00,00,00,000		

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

TRANCHE NO

BP NO 5050000442

T00001

D00013

Unsecured Loan From SBI-VIII

Source of Loan :	SBI-VIII
Currency :	INR
Amount of Loan :	1,00,00,00,00,000
Total Drawn amount :	4,00,00,00,000
Interest Type :	Floating
Fixed Interest Rate :	-----
Base Rate, If Floating Interest	D00013-9.30%
Margin, If Floating Interest :	0.00%
Are there any Caps/ Floor :	Y/N
Frequency of Intl. Payment	Monthly
If Above is yes, specify Caps/ Floor :	
Moratorium Period :	6 Years
Moratorium effective from :	01.12.2015
Repayment Period (Inc Moratorium) :	15 Years
Repayment Frequency :	9 Yearly Installments
Repayment Type :	AVG
First Repayment Date :	31.01.2022
Base Exchange Rate :	RUPEE
Date of Base Exchange Rate :	N.A.

Project Code	Project Name	Amount		
	BARH-I	18,00,00,000	01.12.2015	9.30%
	BONGAIGOAN	14,00,00,000	01.12.2015	
	DARLIPALLI	45,00,00,000	01.12.2015	
	GADARWARA	50,00,00,000	01.12.2015	
	KUDGI	45,00,00,000	01.12.2015	
	LARA	72,00,00,000	01.12.2015	
	MOUDA-II	32,00,00,000	01.12.2015	
	SOLAPUR	45,00,00,000	01.12.2015	
	UNCHAHAR-IV	21,00,00,000	01.12.2015	
	RAMMAM	15,00,00,000	01.12.2015	
	BARH-II	18,00,00,000	01.12.2015	
	VINDHYACHAL-IV	13,00,00,000	01.12.2015	
	MOUDA-I	12,00,00,000	01.12.2015	
Total Allocated Amount		4,00,00,00,000		

TRANCHE NO

BP NO 5050000442

T00001

D00014

Unsecured Loan From SBI-VIII

Source of Loan :	SBI-VIII
Currency :	INR
Amount of Loan :	1,00,00,00,000
Total Drawn amount :	3,00,00,00,000
Date of Drawl	01.01.2016
Interest Type :	Floating
Fixed Interest Rate :	-----
Base Rate, If Floating Interest	D00014-9.30%
Margin, If Floating Interest :	0.00%
Are there any Caps/ Floor :	Y/N
Frequency of Intt. Payment	Monthly
If Above is yes, specify Caps/ Floor :	
Moratorium Period :	6 Years
Moratorium effective from :	01.01.2016
Repayment Period (Inc Moratorium) :	15 Years
Repayment Frequency :	9 Yearly Installments
Repayment Type :	AVG
First Repayment Date :	31.01.2022
Base Exchange Rate :	RUPEE
Date of Base Exchange Rate :	N.A.

Project Code	Project Name	Amount		
	BARH-I	9,00,00,000	01.01.2016	9.30%
	BONGAIGOAN	22,00,00,000	01.01.2016	9.30%
	DARLIPALLI	35,00,00,000	01.01.2016	9.30%
	KUDGH-I	67,00,00,000	01.01.2016	9.30%
	LARA-I	77,00,00,000	01.01.2016	9.30%
	PAKRI BARWADIH	16,00,00,000	01.01.2016	9.30%
	TANDA-II	25,00,00,000	01.01.2016	9.30%
	TAPOVAN VISHNUGARH	12,00,00,000	01.01.2016	9.30%
	UNCHAHAR STPP IV	10,00,00,000	01.01.2016	9.30%
	KHARGONE	17,00,00,000	01.01.2016	9.30%
	VINDHYACHAL-V	10,00,00,000	01.01.2016	9.30%

Total Allocated Amount	3,00,00,00,000.00
-------------------------------	--------------------------

Form 8

TRANCHE NO

BP NO 5050000442

T00001

D00016

Unsecured Loan From SBI-VIII		
Source of Loan :	SBI-VIII	
Currency :	INR	
Amount of Loan :	1,00,00,00,00,000	
Total Drawn amount :	5,00,00,00,000	
Interest Type :	Floating	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	D00016-9.30%	
Margin, If Floating Interest :	0.00%	
Are there any Caps/ Floor :	Y/N	
Frequency of Intl. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	6 Years	
Moratorium effective from :	31.03.2016	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	9 Yearly Installments	
Repayment Type :	AVG	
First Repayment Date :	31.01.2022	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	BARH-I	2,24,00,00,000
	BONGAIGAON	60,00,00,000
	MOUDA-II	29,00,00,000
	TAPOVAN VISHNUGARH	51,00,00,000
	SOLAPUR	36,00,00,000
	KUDGH-I	30,00,00,000
	ANANTPUR SOLAR	70,00,00,000
Total Allocated Amount		5,00,00,00,000

31.03.2016
31.03.2016
31.03.2016
31.03.2016
31.03.2016
31.03.2016
31.03.2016
31.03.2016

Form 8

TRANCHE NO

BP NO 5050000442

T00001

D00021

Unsecured Loan From SBI-VIII		
Source of Loan :	SBI-VIII	
Currency :	INR	
Amount of Loan :	1,00,00,00,00,000	
Total Drawn amount :	2,50,00,00,000	
Date of Drawl	21.09.2016	
Interest Type :	Floating	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	D00021-9.10%	
Margin, If Floating Interest :	0.00%	
Are there any Caps/ Floor :	Y/N	
Frequency of Intl. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	6 Years	
Moratorium effective from :	21.09.2016	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	9 Yearly Installments	

Repayment Type :	AVG	
First Repayment Date :	31.01.2022	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	BONGAIGAON	40,00,00,000
	MOUDA-II	15,00,00,000
	KUDGI	84,00,00,000
	BARH-II	8,00,00,000
	KOLDAM	18,00,00,000
	RIHAND-III	57,00,00,000
	VINDHYACHAL-IV	21,00,00,000
	MOUDA-I	7,00,00,000
Total Allocated Amount		2,50,00,00,000

21.09.2016
21.09.2016
21.09.2016
21.09.2016
21.09.2016
21.09.2016
21.09.2016

Form 8

TRANCHE NO

BP NO 5050000442

T00001

D00023

Unsecured Loan From SBI-VIII		
Source of Loan :	SBI-VIII	
Currency :	INR	
Amount of Loan :	1,00,00,00,00,000	
Total Drawn amount :	2,00,00,00,00,000	
Date of Drawl	10.10.2016	
Interest Type :	Floating	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	D00023-9.10%	
Margin, If Floating Interest :	0.00%	
Are there any Caps/ Floor :	Y/N	
Frequency of Intl. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	6 Years	
Moratorium effective from :	10.10.2016	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	9 Yearly Installments	
Repayment Type :	AVG	
First Repayment Date :	31.01.2022	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	KUDGI	75,00,00,000
	BARH-I	50,00,00,000
	DARLIPALLI	75,00,00,000
Total Allocated Amount		2,00,00,00,000

10.10.2016
10.10.2016
10.10.2016

Form 8

TRANCHE NO

BP NO 5050000442

T00001

D00024

Unsecured Loan From SBI-VIII		
Source of Loan :	SBI-VIII	
Currency :	INR	
Amount of Loan :	1,00,00,00,00,000	
Total Drawn amount :	11,50,00,00,000	

Date of Draw	14.02.2017	
Interest Type :	Floating	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	D00024-8.0%	
Margin, If Floating Interest :	0.00%	
Are there any Caps/ Floor :	Y/N	
Frequency of Intl. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	6 Years	
Moratorium effective from :	14.02.2017	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	9 Yearly Installments	
Repayment Type :	AVG	
First Repayment Date :	31.01.2022	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	BARH-I	3,00,00,00,000
	BONGAIGAON	34,28,57,142
	FARAKKA III	14,28,57,141
	GADARWARA	2,50,00,00,000
	KOLDAM	92,85,71,427
	KORBA-III	2,85,71,428
	KUDGI	1,00,00,00,000
	MOUDA-I	40,71,42,856
	NCTPP-II	15,71,42,855
	NORTH KARANPURA	1,00,00,00,000
	RIHAND-III	32,14,28,570
	SIMHADRI-II	53,28,57,141
	SIPAT-I	21,42,85,711
	SIPAT-II	5,71,42,856
	TAPOVAN VISHNUGAD	50,00,00,000
	VINDHYACHAL IV	32,42,85,714
	PAKRI BARWADIH	4,28,57,159
	Total Allocated Amount	11,50,00,00,000

Form 8

TRANCHE NO

BP NO 5050000531

T00001

D0001

Unsecured Loan From SBI-IX		
Source of Loan :	SBI-IX	
Currency :	INR	
Amount of Loan :	30,00,00,00,000	
Total Drawn amount :	3,00,00,00,000	
Date of Drawal:	17.04.2017	
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 Intl. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	3 Years	
Moratorium effective from :	17.04.2017	
Repayment Period (Inc Moratorium) :	12 Years	
Repayment Frequency :	9 Yearly Installments	

Repayment Type :	AVG	
First Repayment Date :	31.03.2021	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	BARH-I	40,00,00,000
	TAPOVAN VISHNUGARH	27,00,00,000
	BONGAIGAON	36,00,00,000
	SINGRAULI 8 MW SMALL HYDRO	6,00,00,000
	GADARWARA	58,00,00,000
	DARLIPALLI	73,00,00,000
	RAMMAM	13,00,00,000
	KUDGI	47,00,00,000
	Total Allocated Amount	3,00,00,00,000.00

Form 8

TRANCHE NO

BP NO 5050000531

T00001

D0004

Unsecured Loan From SBI-VIII		
Source of Loan :	SBI-IX	
Currency :	INR	
Amount of Loan :	30,00,00,00,000	
Total Drawn amount :	2,00,00,00,000	
Date of Drawal:	01.09.2017	
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 :	01.09.2017	
Repayment Period (Inc Moratorium) :	12 Years	
Repayment Frequency :	9 Yearly Installments	
Repayment Type :	AVG	
First Repayment Date :	31.03.2021	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	UNCHAHR STPP IV	25,00,00,000
	ROJMAL V/IND	55,00,00,000
	BARH - II	5,00,00,000
	KUDGI	1,15,00,00,000
	Total Allocated Amount	2,00,00,00,000.00

Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

BP NO 5050000531

T00001

D0005

Unsecured Loan From SBI-IX		
Source of Loan :	SBI-IX	
Currency :	INR	
Amount of Loan :	30,00,00,00,000	
Total Drawn amount :	2,15,00,00,000	
Date of Drawal:	13.11.2017	
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 Intl. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	3 Years	
Moratorium effective from :	13.11.2017	
Repayment Period (Inc Moratorium) :	12 Years	
Repayment Frequency :	9 Yearly Installments	
Repayment Type :	AVG	
First Repayment Date :	31.03.2021	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	KUDGI	1,00,00,00,000
	LARA	20,00,00,000
	MOUDA-II	33,00,00,000
	TAPOVAN VISHNUGAD	57,00,00,000
	KOLDAM	5,00,00,000
Total Allocated Amount		2,15,00,00,000.00

Form 8

TRANCHE NO

BP NO 5050000981

T00001

D00004

Unsecured Loan From HDFC Bank Ltd. IX		
Source of Loan :	HDFC Bank Ltd. IX	
Currency :	INR	
Amount of Loan :	50,00,00,00,000	
Total Drawn amount :	16,10,00,00,000	
Date of drawl	24.08.2020	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	6.30%	
Margin, If Floating Interest :	NIL	
Are there any Caps/ Floor :	Y/N	
Frequency of Intl. Payment	MONTHLY	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	3 Years	
Moratorium effective from :	24.08.2020	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	12 Yearly Instalment	
Repayment Type :	AVG	
First Repayment Date :	30.06.2024	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	

Project Code	Project Name	Amount	
	BARH-II	2,54,31,67,061	24.08.2020
	BONGAIGAON	2,06,81,00,000	24.08.2020
	CHATTI BARIATU CMP	13,60,00,000	24.08.2020
	JETSAR SOLAR	20,00,00,000	24.08.2020
	KAHALGAON-II	11,43,64,133	24.08.2020
	KHARGONE	1,20,00,00,000	24.08.2020
	KOLDAM	4,54,00,000	24.08.2020
	KORBA-III	2,14,43,267	24.08.2020
	KUDGI	46,00,00,000	24.08.2020
	LARA-I	7,85,71,430	24.08.2020
	MOUDA-I	69,46,38,787	24.08.2020
	MOUDA-II	1,60,00,00,000	24.08.2020
	NORTH KARANPURA	50,00,00,000	24.08.2020
	PAKRI BARWADIH CMB	1,07,21,55,097	24.08.2020
	RAMMAM	50,00,00,000	24.08.2020
	RIHAND-III	20,43,00,000	24.08.2020
	SIMHADRI-II	22,70,00,000	24.08.2020
	SIPAT-I	18,57,38,787	24.08.2020
	SOLAPUR	53,79,74,298	24.08.2020
	TANDA-II	1,20,00,00,000	24.08.2020
	UNCHAHAH STPP IV	18,00,00,000	24.08.2020
	VINDHYACHAL-IV	85,83,00,000	24.08.2020
	VINDHYACHAL-V	1,48,28,57,140	24.08.2020
Total Allocated Amount		16,10,00,00,000	

Form 8

TRANCHE NO

BP NO 5050000711

T00001

D00001

Unsecured Loan From Punjab National Bank-IV		
Source of Loan :	Punjab National Bank-IV	
Currency :	INR	
Amount of Loan :	20,00,00,00,000	
Total Drawn amount :	20,00,00,00,000	
Date of Drawl	01.01.2019	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	8.60%	
Margin, If Floating Interest :	0.00%	
Are there any Caps/ Floor :	Y/N	
Frequency of Intl. Payment	MONTHLY	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	3 Years	
Moratorium effective from :	01.01.2019	
Repayment Period (Inc Moratorium) :	12 Years	
Repayment Frequency :	9 Yearly Instalment	
Repayment Type :	AVG	
First Repayment Date :	14.02.2023	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	UNCHAHAH STPP IV	65,00,00,000.00
	TANDA-II	85,00,00,000.00
		01.01.2019
		01.01.2019

	NCTPP-II	36,43,00,000.00	01.01.2019
	DADRI GAS R&M	56,00,00,000.00	01.01.2019
	KORBA-III	15,00,00,000.00	01.01.2019
	SIPAT-II	17,14,00,000.00	01.01.2019
	FARAKKA-III	8,57,00,000.00	01.01.2019
	KAHALGAON-II	17,14,00,000.00	01.01.2019
	BARH-I	1,08,57,00,000.00	01.01.2019
	BARH-II	8,00,00,000.00	01.01.2019
	NORTH KARANPURA	1,09,00,00,000.00	01.01.2019
	KOLDAM	6,43,00,000.00	01.01.2019
	TAPOVAN VISHNUGAD	28,57,00,000.00	01.01.2019
	PAKRI BARWADIH	1,42,00,00,000.00	01.01.2019
	CHATTI BARIATU	10,00,00,000.00	01.01.2019
	BONGAIGAON	36,43,00,000.00	01.01.2019
	KUDGI	60,00,00,000.00	01.01.2019
	LARA	1,23,00,00,000.00	01.01.2019
	GADARWARA	2,27,72,00,000.00	01.01.2019
	DARLIPALLI	2,73,00,00,000.00	01.01.2019
	KHARGONE	50,00,00,000.00	01.01.2019
	ANANTPUR SOLAR	17,00,00,000.00	01.01.2019
	TALAI PALI COAL MINE	5,00,00,00,000.00	01.01.2019
	Total Allocated Amount	20,00,00,00,000.00	

Form 8

TRANCHE NO

BP NO 5050000741

T00001

D00002

Unsecured Loan From SBI-XII

Source of Loan :	SBI-XII		
Currency :	INR		
Amount of Loan :	50,00,00,00,000		
Total Drawn amount :	26,35,00,00,000		
Date of Drawal:	18.02.2019		
Interest Type :	Floating		
Fixed Interest Rate :	-----		
Base Rate, If Floating Interest	6.35%		
Margin, If Floating Interest :	NIL		
Are there any Caps/ Floor :	Y/N		
Frequency of Intl. Payment	Monthly		
If Above Is yes, specify Caps/ Floor :			
Moratorium Period :	6 Years		
Moratorium effective from :	18.02.2019		
Repayment Period (Inc Moratorium) :	15 Years		
Repayment Frequency :	9 Yearly Installments		
Repayment Type :	AVG		
First Repayment Date :	31.03.2026		
Base Exchange Rate :	RUPEE		
Date of Base Exchange Rate :	N.A.		
Project Code	Project Name	Amount	
	BARH-I	90,00,00,000.00	18.02.2019
	FARAKKA-III	24,50,00,000.00	18.02.2019
	GADARWARA	90,00,00,000.00	18.02.2019
	KORBA-III	25,00,00,000.00	18.02.2019
	KUDGI	2,00,00,00,000.00	18.02.2019
	LARA	1,00,00,00,000.00	18.02.2019
	MOUDA-I	21,00,00,000.00	18.02.2019
	MOUDA-II	2,25,00,00,000.00	18.02.2019
	NCTPP-II	63,50,00,000.00	18.02.2019

	NORTH KARANPURA	10,40,00,00,000.00	18.02.2019
	PAKRI BARWADIH CMB	1,20,00,00,000.00	18.02.2019
	SIMHADRI-II	21,00,00,000.00	18.02.2019
	SOLAPUR	2,40,00,00,000.00	18.02.2019
	TELANGANA	75,00,00,000.00	18.02.2019
	BARH-I	50,00,00,000	18.02.2019
	NORTH KARANPURA	80,00,00,000	18.02.2019
	TAPOVAN VISHNUGARH	20,00,00,000	18.02.2019
	TELANGANA	1,50,00,00,000	18.02.2019
Total Allocated Amount		26,35,00,00,000.00	

Form 8

TRANCHE NO

BP NO 5050000721

T00001

D00001

Unsecured Loan From Corporation Bank-IV			
Source of Loan :	Corporation Bank-IV		
Currency :	INR		
Amount of Loan :	20,00,00,00,000		
Total Drawn amount :	20,00,00,00,000		
Date of Drawal:	11.01.2019		
Interest Type :	Floating		
Fixed Interest Rate :	8.20%		
Base Rate, If Floating Interest	-		
Margin, If Floating Interest :	-		
Are there any Caps/ Floor :	Y/N		
Frequency of Intl. Payment	MONTHLY		
If Above is yes, specify Caps/ Floor :			
Moratorium Period :	3 Years		
Moratorium effective from :	11.01.2019		
Repayment Period (Inc Moratorium) :	12 Years		
Repayment Frequency :	9 Yearly Instalments		
Repayment Type :	AVG		
First Repayment Date :	11-Jan-23		
Base Exchange Rate :	RUPEE		
Date of Base Exchange Rate :	N.A.		
Project Code	Project Name	Amount	
	SINGRAULI 8MW HYDRO	8,75,00,000	11.01.2019
	FARIDABAD SOLAR PV	8,75,00,000	11.01.2019
	SINGRAULI SOLAR	8,75,00,000	11.01.2019
	FARAKKA III	11,42,85,716	11.01.2019
	RAJGARH SOLAR	13,12,50,000	11.01.2019
	NCTPP-II	14,28,57,139	11.01.2019
	GANDHAR R&M	16,60,71,436	11.01.2019
	SIMHADRI-II	23,21,42,855	11.01.2019
	SIPAT-I	23,43,75,000	11.01.2019
	MOUDA-II	50,00,00,000	11.01.2019
	VINDHYACHAL-V	1,00,00,00,000	11.01.2019
	SIPAT-II	1,01,07,14,287	11.01.2019
	MOUDA-I	1,05,44,64,284	11.01.2019
	RIHAND-III	1,22,85,71,426	11.01.2019
	VINDHYACHAL-IV	2,45,00,00,000	11.01.2019
	KOLDAM	2,71,51,78,577	11.01.2019
	BARH-II	6,75,75,89,280	11.01.2019
	KUDGI	2,00,00,00,000	11.01.2019
Total Allocated Amount		20,00,00,00,000	

Particulars	SLYA 2.25%	L2A	L3A	L2B	L3B	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17
	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Source of Loan - Bonds Series	50,000.00	24,644.59	31,027.79	9,139.28	39,928.81	1,000,000.00	10,306,883.05	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00
Amount of Loan Sold/Secured (in Lakh)																				
Amount of Gross Loan drawn under COO (in Lakh)																				
Period Interest Rate (in %)	8.35%	8.48%	8.00%	8.38%	8.81%	8.17%	8.45%	8.17%	8.17%	8.17%	8.17%	8.17%	8.17%	8.17%	8.17%	8.17%	8.17%	8.17%	8.17%	8.35%
Basic Rate of Floating Interest	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Margin of Floating Interest	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Any Other Particulars	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Repayment Period (in Year)	11 yrs	15 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs
Non-station effective from	04.05.13	18.12.2013	18.12.2013	18.12.2013	18.12.2013	22.09.2014	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015
Repayment Period	5 yrs	5 yrs	5 yrs	5 yrs	5 yrs	5 yrs	5 yrs	5 yrs	5 yrs	5 yrs	5 yrs	5 yrs	5 yrs	5 yrs	5 yrs	5 yrs	5 yrs	5 yrs	5 yrs	5 yrs
Repayment effective from	04.05.2013	18.12.2013	18.12.2013	18.12.2013	18.12.2013	22.09.2014	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015	26.03.2015
Repayment Frequency	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly
Repayment Interest (in Lakh)	10,000.00	3,48,94,99,000.00	3,12,82,70,000.00	91,39,28,000.00	3,99,89,41,000.00	1,00,000.00	2,00,000.00	1,00,000.00	1,00,000.00	1,00,000.00	1,00,000.00	1,00,000.00	1,00,000.00	1,00,000.00	1,00,000.00	1,00,000.00	1,00,000.00	1,00,000.00	1,00,000.00	1,00,000.00
Basic Exchange Rate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Order to Book Month (in Year)	15/12	15/12	20/12	15/12	25/12	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Name of the Products	KLCC 5YSP	KLCC 5YSP	KLCC 5YSP	KLCC 5YSP	KLCC 5YSP	KLCC 5YSP	KLCC 5YSP	KLCC 5YSP	KLCC 5YSP	KLCC 5YSP	KLCC 5YSP	KLCC 5YSP	KLCC 5YSP	KLCC 5YSP	KLCC 5YSP	KLCC 5YSP	KLCC 5YSP	KLCC 5YSP	KLCC 5YSP	KLCC 5YSP
Code	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

- Banks of loan receive the agency fees when the loan has been taken such as MB, AOB, WMB, PWB, BB, IOC, IFC, PFC etc.
- Currency refers to currency of loan such as US\$, D\$, Yen, Indian Rupee etc.
- Details are to be submitted as on 31.03.2009 for existing assets and as on COO for the ongoing assets.
- Flow of loan proceeds between various banks (in % form) to be given for the loan period. However, the details of the original loan to be given separately in the same form.
- Interest rate to be submitted in % form (in % form) to be given separately for all flow in the same form.
- Interest rate means the base rate as per M, LIBOR etc. over which the margin is to be added. Applicable base rate, in different dates from the date of drawal may also be enclosed.
- Margin means the points over and above the floating rate.
- At times capital/accrue part of which the floating rate are higher. In such a condition which, specify the limit.
- Maximum period refers to the period during which loan is being repaid.
- Repayment period means the period of loan such as 7 years, 10 years, 25 years etc.
- Repayment frequency means the interval at which the debt servicing is to be done such as monthly, quarterly, half yearly, annual, etc.
- Other terms in more than one currency/repayment for a loan, the date & amount of each drawal/repayment and its allocation may, also be given separately.
- NA - Not Applicable.
- NA - Not Applicable.
- NA - Not Applicable.
- NA - Not Applicable.

Particulars	69
Source of Loan - Bonds Series	INR
Currency	4,30,000
Amount of Loan sanctioned (In Lakh)	4,30,000
Amount of Gross Loan drawn upto COD (In L	Fixed
Interest Type	7.32%
Fixed Interest Rate, if applicable	N/A
Base Rate, if Floating Interest	N/A
Margin, if Floating Interest	No
Are there any Caps/Floor	N/A
If above is yes, specify caps/floor	10
Moratorium Period (In Years)	17-07-2019
Moratorium effective from*	Bullet Repayment
Repayment Period	
Repayment effective from	17-07-2029
Repayment Frequency	Bullet Repayment
Repayment Instalment (In Lakh)	4,30,000
Base Exchange Rate	N/A
Door to Door Maturity (In Years)	10

Name of the Projects	69
KUDGI	21,500.00

*Moratorium period has been taken as the period from Deemed Date of Allotment till the date of first Redemption.

1. Source of loan means the agency from whom the loan has been taken such as WB, ADB, WMB, PNB, SBI, ICICI, IFC, PFC etc.
2. Currency refers to currency of loan such as US\$, DM, Yen, Indian Rupee etc.
3. Details are to be submitted as on 31.03.2004 for existing assets and as on COD for the remaining assets.
4. Where the loan has been refinanced, details in the Form is to be given for the loan refinanced. However, the details of the original loan is to be given separately in the same form.
5. If the Tariff in the petition is claimed separately for various units, details in the Form is to be given separately for all the units in the same form.
6. Interest type means whether the interest is fixed or floating.
7. Base rate means the base as PLR, LIBOR etc. over which the margin is to be added. Applicable base rate on different dates from the date of drawl may also be enclosed.
8. Margin means the points over and above the floating rate.
9. At times caps/floor are put at which the floating rates are frozen. If such a condition exists, specify the limits.
10. Moratorium period refers to the period during which loan servicing liability is not required.
11. Repayment period means the repayment of loan such as 7 years, 10 years, 25 years etc.
12. Repayment frequency means the interval at which the debt servicing is to be done such as monthly, quarterly, half yearly, annual, etc.

Particulars

13. Where there is more than one drawal/repayment for a loan, the date & amount of each drawal/repayment and its allocation may also be given seperately
14. If the repayment instalment amount and repayment date can not be worked out from the data furnished above, the repayment schedule to be furnished seperately.
15. In case of Foreign loan, date of each drawal & repayment alongwith exchange rate at that date may be given.
16. Base exchange rate means the exchange rate prevailing as on 31.03.2004 for existing assets and as on COD for the remaining assets.

Name of the Company Name of the Power Station Particulars	NTFC Limited Muzicha-II				3	4	5	6	7	8
	1	2	3	4						
Source of Loan	4.75% Fixed Rate Notes due 2022	SBI, NEW YORK	4.375% Fixed Rate Notes due 2024	Muzicha II A	Muzicha II B	4.25% Fixed Rate Notes due 2026**	2.75% Fixed Rate Notes due 2027	7.25% Fixed Rate Notes due 2022		
Drawal	USD	USD	USD	USD	USD	USD	USD	USD	EUR	EUR
Amount of loan sanctioned	50,00,00,000	250,000,000	30,00,00,000	5,00,00,000	20,00,00,000	50,00,00,000	50,00,00,000	50,00,00,000	50,00,00,000	50,00,00,000
Amount of Gross Loan drawn upto 17.09.2017 / COD	50,00,00,000	5,00,00,000	50,00,00,000	5,00,00,000	20,00,00,000	50,00,00,000	50,00,00,000	50,00,00,000	50,00,00,000	50,00,00,000
Interest Type	Fixed	Floating	Fixed	Floating	Floating	Fixed	Fixed	Fixed	Fixed	Fixed
Fixed Interest Rate, if applicable	4.75% *		4.375% *			4.25% *	2.75% *	7.25% *		
Loan Rate, if floating interest**		6 Month LIBOR **								
Margin, if floating interest rate		1.5%								
Are there any Caps / Floor if above is 'Yes, specify Caps / Floor	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Maturity Period	10 Years	6 Years	10 Years	5yrs 6 mths	5yrs 6 mths	10 Years	10 Years	5 Years		
Maturity date	05-Oct-2012	25-Jan-2013	26-Nov-2014	24-Oct-2014	18-Mar-2015	26-Feb-2018	31-Jan-2017	03-May-2017		
Repayment period	Bullet payment	1 Year	Bullet payment	1 year 6 mths	1 year 6 mths	Bullet payments	Bullet payments	Bullet payment		
Repayment effective from	03-Oct-2012	29-Jul-2011	26-Nov-2014	26-Mar-2010	26-Mar-2010	28-Feb-2018	01-Feb-2017	03-May-2012		
Repayment frequency	One time	Semi Annual	One time	Four time	Four time	One time	One time	One time		
Repayment instalment	50,00,00,000	2 Half Yearly instalments	50,00,00,000	1,21,00,000	5,00,00,000	50,00,00,000	50,00,00,000	20,00,00,000		
Term Loan/Equity Ratio (17.09.2017)	64.56	64.56	64.56	64.56	64.56	64.56	64.56	77.26		
Are foreign currency loan (regd)	NO	NO	NO	NO	NO	NO	NO	NO		
If above is 'Yes, specify details										

Name of the Projects	NTFC Limited Muzicha-II											
	1	2	3	4	5	6	7	8	9	10	11	
Koldam	6.4273%		3.4810000%									
Sigat 1	1.0900%		1.9550000%		0.584800%							
Bonggaon	4.8526%		1.0880000%		0.8113500%							
Takoon (Muzichal)	5.1659%		1.4570000%									
Takoon-II	6.5633%											
Bah-I	2.7817%		6.01017%									
Vindhyaachal IV	10.0311%		23.80681%									
Simhadri-9	3.9048%		9.40550%									
Muzichal	8.4844%		6.33152%									
Bah-1	11.2989%		27.09847%									
Kudjer-I	5.0430%		0.1520%									
Muzichal-II	15.2668%		28.30866%									
Changur	3.0033%		14.39637%									
E-2004	8.2004%		10.07540%									
Vindhyaachal-V			19.75072%									
Changurwa			8.56141%									
Kandwa	4.4580%		100.00000%									
Changur R&M	0.2480%		24.16102%									
Changur H&M	2.2351%		33.10633%									
Arsha R&M												
Arsha H&M	1.1175%											
North Karnataka												
Dhule												
Tarapur-I												
Unjantur-II												
Kharjane												
Ranmum												
Vengal												
Aravali Sclar												
Muzichal												
Baifa Sclar												
Rajmud Wind												
Unallocated												

Form-7

Name of the Company	NTPC Limited	NTPC Limited
Name of the Power Station	Kudgi-I	Kudgi-I
Particulars		
Source of Loan	JBIC Kudgi	JBIC Kudgi
Currency	USD	USD
Amount of loan sanctioned	210,000,000.00	140,000,000.00
Amount of loan sanctioned (Revised)	193,147,752.60	128,766,168.40
Amount of Gross Loan drawn upto		
31.07.2017 / COD U1	175,479,690.88	117,653,127.25
Amount of Gross Loan drawn upto		
31.12.2017 / COD U2	176,479,690.88	117,653,127.25
Amount of Gross Loan drawn upto		
15.09.2018 / COD U3	183,470,924.60	122,313,949.74
Interest Type	Fixed	Floating
Fixed Interest Rate, if applicable	4.13%	-
Base Rate, if floating interest	-	6 Months LIBOR
Margin, if floating interest rate	-	0.85%
Are there any Caps / Floor	-	-
If above is Yes, specify Caps / Floor	-	-
Moratorium Period	3 Year 1 Month	3 Year 1 Month
Moratorium effective from	25-Jan-2014	25-Jan-2014
Repayment period	12 Years	12 Years
Repayment effective from	17-Feb-2017	17-Feb-2017
Repayment frequency	Half Yearly	Half Yearly
Repayment installment	8,198,073	5,465,383
Repayment installment (revised wef Feb.18)	8,034,167	5,356,111
Base Exchange Rate (30.07.2017)	84.74	84.74
Base Exchange Rate (29.12.2017)	84.83	84.83
Base Exchange Rate (14.09.2018)	72.29	72.29
Name of the Projects	Kudgi-I	Kudgi-I

183470924.6 122313949.7 305784874.3 25482072.86
22105188566

8034167 5356111 13390278
580789932.4 387193264.2 967983196.6

JPY Equ. 750M Draw (N-V)	01-04-2022	27-04-2022	0.80000%	5.46000%	0.00000%	Act365	2022-23	0.80000%	75%	0	0
JPY Equ. 750M Draw (N-V)	28-04-2022	27-07-2022	0.80000%	5.46000%	0.00000%	Act365	2022-23	0.80000%	75%	0	0
JPY Equ. 750M Draw (N-V)	28-07-2022	27-10-2022	0.80000%	5.49000%	0.00000%	Act365	2023-23	0.80000%	75%	0	0
JPY Equ. 750M Draw (N-V)	28-10-2022	29-01-2023	0.80000%	5.46000%	0.00000%	Act365	2022-23	0.80000%	75%	0	0
JPY Equ. 750M Draw (N-V)	30-01-2023	31-03-2023	0.80000%	5.46000%	0.00000%	Act365	2022-23	0.80000%	75%	0	0
JPY Equ. 750M Draw (N-V)	01-04-2023	27-04-2023	0.80000%	5.46000%	0.00000%	Act365	2023-24	0.80000%	75%	0	0
JPY Equ. 750M Draw (N-V)	28-04-2023	30-07-2023	0.80000%	5.49000%	0.00000%	Act365	2023-24	0.80000%	75%	0	0
JPY Equ. 750M Draw (N-V)	31-07-2023	29-10-2023	0.80000%	5.49000%	0.00000%	Act365	2023-24	0.80000%	75%	0	0
JPY Equ. 750M Draw (N-V)	30-10-2023	30-01-2024	0.80000%	5.46000%	0.00000%	Act365	2023-24	0.80000%	75%	0	0
JPY Equ. 750M Draw (N-V)	31-01-2024	31-03-2024	0.83190%	5.46000%	0.00000%	Act365	2023-24	0.83190%	75%	1	0.006256344
JPY Equ. 750M Draw (N-V)	27-11-2020	25-02-2021	1.02000%	5.49000%	0.00000%	Act360	2020-21	1.02000%	25%	0	0
JPY Equ. 750M Draw (N-V)	26-02-2021	31-03-2021	1.02000%	5.49000%	0.00000%	Act360	2020-21	1.02000%	25%	0	0
JPY Equ. 750M Draw (N-V)	01-04-2021	28-07-2021	1.02000%	5.46000%	0.00000%	Act360	2021-22	1.02000%	25%	0	0
JPY Equ. 750M Draw (N-V)	29-07-2021	31-08-2021	1.02000%	5.46000%	0.00000%	Act360	2021-22	1.02000%	25%	0	0
JPY Equ. 750M Draw (N-V)	01-09-2021	30-01-2022	1.02000%	5.49000%	0.00000%	Act360	2021-22	1.02000%	25%	0	0
JPY Equ. 750M Draw (N-V)	31-01-2022	31-03-2022	1.02000%	5.46000%	0.00000%	Act365	2021-22	1.02000%	25%	0	0
JPY Equ. 750M Draw (N-V)	01-04-2022	27-04-2022	1.02000%	5.46000%	0.00000%	Act365	2022-23	1.02000%	25%	0	0
JPY Equ. 750M Draw (N-V)	28-04-2022	27-07-2022	1.02000%	5.46000%	0.00000%	Act365	2022-23	1.02000%	25%	0	0
JPY Equ. 750M Draw (N-V)	28-07-2022	27-10-2022	1.02000%	5.49000%	0.00000%	Act365	2022-23	1.02000%	25%	0	0
JPY Equ. 750M Draw (N-V)	28-10-2022	29-01-2023	1.02000%	5.49000%	0.00000%	Act365	2022-23	1.02000%	25%	0	0
JPY Equ. 750M Draw (N-V)	30-01-2023	31-03-2023	1.02000%	5.46000%	0.00000%	Act365	2022-23	1.02000%	25%	0	0
JPY Equ. 750M Draw (N-V)	01-04-2023	27-04-2023	1.02000%	5.46000%	0.00000%	Act365	2023-24	1.02000%	25%	0	0
JPY Equ. 750M Draw (N-V)	28-04-2023	30-07-2023	1.02000%	5.49000%	0.00000%	Act365	2023-24	1.02000%	25%	0	0
JPY Equ. 750M Draw (N-V)	31-07-2023	29-10-2023	1.02000%	5.49000%	0.00000%	Act365	2023-24	1.02000%	25%	0	0
JPY Equ. 750M Draw (N-V)	30-10-2023	30-01-2024	1.02000%	5.46000%	0.00000%	Act365	2023-24	1.02000%	25%	0	0
JPY Equ. 750M Draw (N-V)	31-01-2024	31-03-2024	1.05190%	5.46000%	0.00000%	Act365	2023-24	1.05190%	25%	1	0.002636955
JPY Equ. 750M Draw (N-V) Weighted Average rate											0.63910%

Rates of Fixed IF Loans

2019-20 2020-21 2021-22 2022-23 2023-24

	2019-20	2020-21	2021-22	2022-23	2023-24
2021 Euro Bond -III	7.1968%	7.1968%	7.1968%		
2022 Euro Bond -IV	5.0243%	5.0243%	5.0243%	5.0243%	
K Exim	4.7928%	4.7928%	4.7928%	4.7928%	
2024 Euro Bond -V	4.6277%	4.6277%	4.6277%	4.6277%	4.6277%
2026 Euro Bond- 2026	4.4955%	4.4955%	4.4955%	4.4955%	4.4955%
2027 Euro Bond-2027	2.9088%	2.9088%	2.9088%	2.9088%	2.9088%
2028 Euro Bond-2028	4.7599%	4.7599%	4.7599%	4.7599%	4.7599%
3.75% Euro Bonds 2024 II		3.9666%	3.9666%	3.9666%	3.9666%

Kudgi

(Rs Lakhs)

Year wise Prepayment of Loans

Sr. No.	Bank	ROI on prepayment date	Date of Prepayment	Replaced with Bank	ROI of replaced Loan	Prepayment Amount	Benefit(%)	Benefit(%) Share
Prepayment of Loans during 2018-19								
1	ICICI Bank VI	8.60%	15-Jan-19	Bond 67	8.30%	1000.00	0.30%	0.10%

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner		NTPC Limited									
Name of the Generating Station		Ramagundam Super Thermal Power Station Stage-III									
COD		15-09-2018									
For Financial Year		2024-29 (Summary)									

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)					Regulations under which claimed	Justification	Admitted Cost by the Commission, if any
		2024-25	2025-26	2026-27	2027-28	2028-29			
1	2	3	4	5	6	7	8	9	
A. Works eligible for RoE at Normal Rate									
1	Upgradation of DCS & HMI	322.0	1,421.0	650.0			25(2)(C)	Please refer Form -9 of respective year	
2	Upgradation of Wagon Tippers PLC		100.0	150.0			25(2)(C)		
3	Upgradation of SCADA of MV/LT Svgrs			300.0			25(2)(C)		
	Sub Total (A)	322.0	1,521.0	1,100.0	-	-			
B. Works eligible for RoE other than normal Rate (linked with SBI MCLR)									
1	Construction of Police Station and Barracks	100.0	100.0				26(1)(D)	Please refer Form -9 of respective year	
2	CCTV system installation for Plant and township		950.0				26(1)(D)		
3	Construction of Workers Rest Room		38.5				26(1)(B)		
4	Construction of Safety Induction Centre outside Material Gate	50.0	150.0				26(1)(D)		
5	Supply of Vacuum Truck and erection and commissioning of Vacuum Piping networks at Crusher House and TP7		250.0				26(1)(D), 26(1)(B)		
6	Mill Counter pressure system	226.5	249.2	274.1	301.5	331.7	26(1)(i)		
7	Mill Bed Height sensor & Mill Vibration sensor	75.4	83.0	91.3	100.4	110.4	26(1)(i)		
8	Additional CPU - All 3 Units	656.0	106.0	85.0			26(1)(i)		
9	Side Stream Filtration - Stage Common	900.0	419.0				26(1)(i)		
	Sub Total (B)	2,008	2,345.7	450.4	401.9	442.1			
	Total Add Cap Claimed for Tariff	2,329.97	3,866.71	1,550.38	401.92	442.11			

Year wise Statement of Additional Capitalisation

Name of the Petitioner: NTPC Limited
 Name of the Generating Station: Ramagundam-III Super thermal power station
 COD: 15-09-2018
 For Financial Year: 2024-25

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual)			Regulations under which claimed	Justification	Amount in Rs Lakhs	
		Accrual basis as per IGAAP	Un-discharged liability included in col. 3	Cash basis included in col. 3				IDC included in col. 3
1	2	3	4	5= (3-4)	6	7	8	9
A. Works eligible for RoE at Normal Rate								
63	1 Upgradation of DCS & HMI	322		322.00		25(2)(C)	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. However, existing HMI software and hardware were not directly compatible with Windows 10. Therefore, the project scope encompassed a complete Replacement and Modernization (R&M) of the HMI system. Communication from the HMI OEM, Yokogawa, regarding this incompatibility is attached as Annexure-08. Hon'ble Commission has allowed the similar additional capital expenditure incurred on HMI upgradation in Arma gas power station and Meija 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. The present DCS System became obsolete. Due to obsolescence of technology and non availability of technical support and for higher level of security Upgradation of DCS system (TOSMAP, Siemens, Yokogawa) is required. 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 25(2)(c) of Tariff Regulations 2024 on account of obsolescence of Technology.	9
Total (A)		322.00	-	322.00	-			

B. Works eligible for RoE other than normal Rate (linked with SBI MCLR)

1	Construction of Police Station and Barracks	100		100.00		26(1)(D)	<p>Karnataka state government recommended to construct police station and Barracks for better safety and security .As per recommendation of karnataka government it is proposed to construct police station with barracks .Letter from Kamataka Police Department is attached as Annexure- 01 .as letter is in kannada its english conversion is also attached in Annexure-02.it is humbly requested that Hon'ble Commission may please to allow the same.</p>
2	Construction of Safety Induction Centre outside Material Gate	50		50.00		26(1)(D)	<p>For spreading safety awariness in workers and other employees it is proposed to construct a safety induction center outside material gate, so that workers can aware about safety importance and adopt safety measures like personal safety /electrical safety in their day to day works .This will avoid any unwanted accident and improve safety .it is humbly requested that Hon'ble Commission may please to allow the same.</p>
64	Mill Counter pressure system	226.54		226.54		26(1)(i)	<p>Due to heavy vibration in mills especially at lower feed rates Coal pipe coupling leakages, mill internals (Mill armour plates, Pressure seal rings, liners) are getting damaged resulting in coal accumulation in rocker arm area leading to mill Outages. Counter pressure system will reduce vibrations at less load. Initially the counter pressure system was installed in U1 mill-C and performance is satisfactory.For reliable operation of mills the same is being proposed in other mills in a phased manner.This will avoid mill outage/partial loss thus improve efficiency. it is humbly requested that Hon'ble Commission may please to allow the same.</p>
	Mill Bed Height sensor & Mill Vibraton sensor	75.43		75.43		26(1)(i)	<p>Mill bed height sensor & mill vibraton sensor will give feedback to operator in control room .so that needful action can be taken to reduce mill vibration by adjusting mill parameters like feedrate. This will improve reliability of mill operation. And reduce proppibility of mill outage /partial load loss.To improve mill reliable operation mill bed height sensor and mill vibration sensor are required to install.it is humbly requested that Hon'ble Commission may please to allow the same.</p>
	Additional CPU - All 3 Units	656		656.00		26(1)(i)	<p>it becomes very difficult to maintain condensate at full load due to non availability of standby CPU Vessel . A standby CPU is required for doing changeovers of condensate, while unit on full load. To improve the efficiency and avoid partial generation loss additional CPU is required .it is humbly requested that Hon'ble Commission may please to allow the same.</p>

	Side Stream Filtration - Stage Common	900		900.00	26(1)(i)	CW water of plant is of high TDS. Due to high TDS of CW Basin water, a side stream filtration system is required to mitigate high TDS of CW water. This will improve the efficiency and avoid partial generation losses. It is humbly requested that Hon'ble Commission may please allow the same.	
Total (B)	2,007.97	-	2,007.97				
Total Add. Cap. Claimed (A+B)	2,329.97	-	2,329.97				
(Petitioner)							

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner: NTPC Limited
 Name of the Generating Station: Ramagundam-III Super thermal power station
 COD: 15-09-2018
 For Financial Year: 2025-26

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual)				Regulations under which claimed	Justification	Amount in Rs Lakhs
		Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3			
1	2	3	4	5= (3-4)	6	7	8	9
A. Works eligible for RoE at Normal Rate								
1	Upgradation of DCS & HMI	1421		1,421.00		25(2)(C)	Please refer justification provided for this item in Form-9 for FY 2024-25	
2	Upgradation of Wagon Tiplers PLC	100		100.00		25(2)(C)	To comply CEA (cyber security in Power sector) regulation 2024, existing PLC system to be upgraded to incorporate cyber security features.CEA (cyber security in Power sector) Regulation 2024 is attached as Annexure-05.The present PLC System became obsolete ,Upgradation of PLC system is required due to obsolescence of technology and non availability of technical support in maintenance.It is humbly requested that Hon'ble Commission may please to allow the same.	
Total (A)		1,521.00	-	1,521.00	-			
B. Works eligible for RoE other than normal Rate (linked with SBI MCLR)								
1	Construction of Police Station and Barracks	100		100.00		26(1)(D)	Please refer justification provided for this item in Form-9 for FY 2024-25	

2	CCTV system installation for Plant and township	950		950.00	26(1)(D)	<p>Office Memorandum dated 26.04.2024 issued by Ministry of Home Affairs, Government of India, along with appropriate Gazette wherein in para 2 states Quote : "2. All Government agencies are advised that henceforth they may procure their CCTVs and allied solutions and hardware on the basis of the Public Procurement Order -2017 and ensure the security of CCTV systems as mentioned in the above said notifications (attached as Annexure-07) CISF (under Ministry of Home Affairs, Government of India) is responsible for monitoring and ensuring security of the Plant and township area. As per recommendation of CISF CCTV system along with comprehensive coverage of various plant locations to enhance plant Safety and surveillance is required .Higher Security and Safety Requirements of the plant shall be achieved with installation of CCTV systems in areas which are not covered. It is humbly requested that Hon'ble Commission may please to allow the same.</p>
37	Construction of Workers Rest Room	38.54		38.54	26(1)(B)	<p>As per GOI notification Ministry of Law and Justice, Occupational safety health and working conditions code -2020 (attached as Annexure-06) suitable and separate shelters or restrooms are required for male, female and transgender employees and lunch-room in every factory, and mine where in more than fifty workers are ordinarily employed. For compliance of OHSAS (Occupational Health and Safety Assessment Series) construction of worker rest room is required. It is humbly requested that Hon'ble Commission may please to allow the same.</p>
4	Construction of Safety Induction Centre outside Material Gate	150		150.00	26(1)(D)	<p>Please refer justification provided for this item in Form-9 for FY 2024-25</p>

5	Supply of Vacuum Truck and erection and commissioning of Vacuum Piping networks at Crusher House and TP7	250	250.00	26(1)(D) 26(1)(B)	As per GOI notification Ministry of Law and Justice ,Occupational safety health and working conditions code -2020 (attached as Annexure-06) working environment should free from dust, noxious gas, fumes and other impurities.In Crusher house and TP7 there is a lot of coal dust accumulation, due to this visibility becomes very poor ,it may lead to human injury . To mitigate evacuation of Coal Dust accumulation,Vacuum Truck along with Vacuum Piping networks is required .This will improve safety and avoid human injury .;it is humbly requested that Hon'ble Commission may please to allow the same.
	Mill Counter pressure system	249.19	249.19	26(1)(i)	Please refer justification provided for this item in Form-9 for FY 2024-25
	Mill Bed Height sensor & Mill Vibraton sensor	82.98	82.98	26(1)(i)	Please refer justification provided for this item in Form-9 for F/ 2024-25
∞	Additional CPU - All 3 Units	106.00	106.00	26(1)(i)	Please refer justification provided for this item in Form-9 for F/ 2024-25
	Side Stream Filtration - Stage Common	419.00	419.00	26(1)(i)	Please refer justification provided for this item in Form-9 for F/ 2024-25
	Total (B)	2,345.71	2,345.71		
	Total Add. Cap. Claimed (A+B)	3,866.71	3,866.71		
					(Petitioner)

Year Wise Statement of Additional Capitalisation after COD

MTPC Limited
Ramagundam Super Thermal Power Station Stage-III
15-09-2018
COD
For Financial Year 2016-27

Name of the Petitioner
Name of the Generating Station
COD
For Financial Year

Sl. No.	Head of Work/Equipment	Accrual basis as per IGAAP	ACE Claimed (Actual)			Regulations under which claimed	Justification	Amount in Rs Lakhs
			Un-discharged Liability included in col. 3	Cash basis included in col. 3	IDC included in col. 3			
1	2	3	4	5= (3-4)	6	7	8	9
A. Works eligible for RoE at Normal Rate								
1	Upgradation of DCS & HMI	650	-	650.00		25(2)(C)	Please refer justification provided for this item in Form-9 for FY 2024-25	
3	Upgradation of Wagon Tipplers PLC	150		150.00		25(2)(C)	Please refer justification provided for this item in Form-9 for FY 2025-26	
	Upgradation of SCADA of MV/LT Swgrs	300		300.00		25(2)(C)	To comply CEA (cyber security in Power sector) regulation 2024, existing SCADA system of MV and LV switchgear to be upgraded to incorporate cyber security features.CEA (cyber security in Power sector) Regulation 2024 is attached as Annexure-03. The present SCADA System became obsolete and it is very difficult to maintain it, due to non availability of technical support. Upgradation of SCADA system is required to overcome obsolescence of technology, better security features, integration of Energy management system & seamless integration with DCS. It is humbly requested that Hon'ble Commission may please to allow the same.	
	Total (A)	1,100.00	-	1,100.00	-			
B. Works eligible for RoE other than normal Rate (linked with SBI MCLR)								
1	Mill Counter pressure system	274.11		274.11		26(1)(i)	Please refer justification provided for this item in Form-9 for FY 2024-25	
2	Mill Bed Height sensor & Mill Vibration sensor	91.27		91.27		26(1)(i)	Please refer justification provided for this item in Form-9 for FY 2024-25	
3	Additional CPU - All 3 Units	85		85.00		26(1)(i)	Please refer justification provided for this item in Form-9 for FY 2024-25	
	Total (B)	450.38	-	450.38				
	Total Add. Cap. Claimed (A+B)	1,550.38	-	1,550.38				

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner
Name of the Generating Station
COD
For Financial Year

NTPC Limited
KUDGI SUPER THERMAL POWER STATION STAGE-1
15-09-2018
2027-28

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual)			Regulations under which claimed	Justification	Amount in Rs Lakhs
		Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis included in col. 3			
1	2	3	4	5= (3-4)	7	8	9
A. Works eligible for RoE at Normal Rate							
1		-	-	-			
Total (A)							
B. Works eligible for RoE other than normal Rate (linked with SBI MCLR)							
1	Mill Counter pressure system	301.52		301.52	26(1)(i)	Please refer justification provided for this item in Form-9 for FY 2024-25	
70 ²	Mill Bed Height sensor & Mill Vibration sensor	100.40		100.40	26(1)(i)	Please refer justification provided for this item in Form-9 for FY 2024-25	
Total (B)		401.92	-	401.92			
Total Add. Cap. Claimed (A+B)		401.92	-	401.92			

(Petitioner)

Year wise Statement of Additional Capitalisation after COD

NTPC Limited

KUDGI SUPER THERMAL POWER STATION STAGE-1

15-09-2018

2028-29

Name of the Petitioner
Name of the Generating StationCOD
For Financial Year

Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed (Actual)		Regulations under which claimed	Justification	Amount in Rs Lakhs 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)	7	8	9
A. Works eligible for RoE at Normal Rate							
1							
2							
	Total (A)	-	-	-			
B. Works eligible for RoE other than normal Rate (linked with SBI MCLR)							
1	Mill Counter pressure system	331.7		331.7	26(1)(i)	Please refer justification provided for this item in Form-9 for FY 2024-25	
	Mill Bed Height sensor & Mill Vibraton sensor	110.4		110.4	26(1)(ii)	Please refer justification provided for this item in Form-9 for FY 2024-25	
	Total (B)	442.1		442.1			
	Total Add. Cap. Claimed (A+B)	442.1	0.0	442.1			

Name of the Petitioner	NTPC Limited										
Name of the Generating Station	KUDGI SUPER THERMAL POWER STATION STAGE-1										
Date of Commercial Operation	15-09-2018										

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		3	4	5	6	7	8	9	10	11

Amount capitalised in Work/ Equipment

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

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

(Petitioner)

Statement of Depreciation

Name of the Company :		NTPC Limited							
Name of the Power Station :		KUDGI SUPER THERMAL POWER STATION STAGE-1							
		(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	16,71,190.79	16,86,101.38	16,86,431.35	16,92,298.05	16,93,848.44	16,94,250.36		
2	Closing Capital Cost	16,86,101.38	16,88,431.35	16,92,298.05	16,93,848.44	16,94,250.36	16,94,692.47		
3	Average Capital Cost	16,78,646.08	16,87,266.36	16,90,364.70	16,93,073.24	16,94,049.40	16,94,471.41		
1a	*Cost of IT Equipments & Software included in (1) above	654.11	686.88	686.88	686.88	686.88	686.88		
2a	*Cost of IT Equipments & Software included in (2) above	1340.99	1,373.76	1,373.76	1,373.76	1,373.76	1,373.76		
3a	*Average Cost of IT Equipments & Software	997.55	1,030.32	1,030.32	1,030.32	1,030.32	1,030.32		
4	Freehold land	33,635.08	33,635.08	33,635.08	33,635.08	33,635.08	33,635.08		
5	Rate of depreciation	5.0391	5.021100	5.021	5.021	5.021	5.021		
6	Depreciable value	14,80,609.66	14,88,371.19	14,91,159.69	14,93,597.38	14,94,475.92	14,94,855.73		
7	Balance useful life at the beginning of the period	20.46	19.46	18.46	17.46	16.46	15.46		
8	Remaining depreciable value	10,82,673.97	10,07,596.43	9,25,665.60	8,43,228.39	7,59,096.03	6,74,415.93		
9	Depreciation (for the period)	84,588.44	84,719.33	84,874.90	85,010.90	85,059.91	85,081.10		
10	Depreciation (annualised)	84,588.44	84,719.33	84,874.90	85,010.90	85,059.91	85,081.10		
11	Cumulative depreciation at the end of the period	4,81,177.19	5,65,494.09	6,50,368.99	7,35,379.89	8,20,439.80	9,05,520.91		
12	Less: Cumulative depreciation adjustment on account of un-discharged liabilities deducted as on 01.04.2009	-	-	-	-	-	-		
14	Less: Cumulative depreciation adjustment on account of de-capitalisation	412.41	-	-	-	-	-		
15	Net Cumulative depreciation at the end of the period after adjustments	4,80,774.76	5,65,494.09	6,50,368.99	7,35,379.89	8,20,439.80	9,05,520.91		

* Cost of IT Equipments & Software will be provided at the time of truing up

(Petitioner)

Calculation of Interest on Actual Loans						
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29	
2 JBIC Kudgi repayment from 17.02.2017- 12 years semiannually						
Gross loan - Opening	217673.98	217673.98	217673.98	217673.98	217673.98	
Cumulative repayments of Loans upto previous period	135756.09	153831.39	171906.69	189981.99	208057.29	
Cumulative FERV of repayments of Loans upto previous period						
Net loan - Opening	81917.89	63842.59	45767.29	27691.99	9616.69	
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00	
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00	
Total	81917.89	63842.59	45767.29	27691.99	9616.69	
Repayments of Loans during the period	18075.30	18075.30	18075.30	18075.30	9616.69	
Net loan - Closing	63842.59	45767.29	27691.99	9616.69	0.00	
Average Net Loan	72880.24	54804.94	36729.64	18654.34	4808.35	
Rate of Interest on Loan	5.5609%	5.5609%	5.5609%	5.5609%	5.5609%	
Interest on Loan Annualised	4052.82	3047.67	2042.51	1037.36	267.39	
4 4.375% Eurobonds 2024						
Gross loan - Opening	60325.64	60325.64	60325.64	60325.64	60325.64	
Cumulative repayments of Loans upto previous period	0.00	60325.64	60325.64	60325.64	60325.64	
Net loan - Opening	60325.64	0.00	0.00	0.00	0.00	
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00	
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00	
Total	60325.64	0.00	0.00	0.00	0.00	
Repayments of Loans during the period	60325.64	0.00	0.00	0.00	0.00	
Net loan - Closing	0.00	0.00	0.00	0.00	0.00	
Average Net Loan	30162.82	0.00	0.00	0.00	0.00	
Rate of Interest on Loan	4.6277%	0.0000%	0.0000%	0.0000%	0.0000%	
Interest on Loan Annualised	1395.84	0.00	0.00	0.00	0.00	

Calculation of Interest on Actual Loans					
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
7 4.25% Eurobonds 2026					
Gross loan - Opening	26411.70	26411.70	26411.70	26411.70	26411.70
Cumulative repayments of Loans upto previous period	0.00	0.00	26411.70	26411.70	26411.70
Net loan - Opening	26411.70	26411.70	0.00	0.00	0.00
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	26411.70	26411.70	0.00	0.00	0.00
Repayments of Loans during the period	0.00	26411.70	0.00	0.00	0.00
Net loan - Closing	26411.70	0.00	0.00	0.00	0.00
Average Net Loan	26411.70	13205.85	0.00	0.00	0.00
Rate of Interest on Loan	4.4955%	4.4955%	4.4955%	4.4955%	4.4955%
Interest on Loan Annualised	1187.34	593.67	0.00	0.00	0.00
8 2.75% Eurobonds 2027					
Gross loan - Opening	43024.49	43024.49	43024.49	43024.49	43024.49
Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	43024.49	43024.49
Net loan - Opening	43024.49	43024.49	43024.49	0.00	0.00
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	43024.49	43024.49	43024.49	0.00	0.00
Repayments of Loans during the period	0.00	0.00	43024.49	0.00	0.00
Net loan - Closing	43024.49	43024.49	0.00	0.00	0.00
Average Net Loan	43024.49	43024.49	21512.25	0.00	0.00
Rate of Interest on Loan	2.9088%	2.9088%	2.9088%	2.9088%	2.9088%
Interest on Loan Annualised	1251.50	1251.50	625.75	0.00	0.00
10 JPY Equ. 350 Million A					
Gross loan - Opening	18574.66	18574.66	18574.66	18574.66	18574.66
Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	6191.55	12383.11
Net loan - Opening	18574.66	18574.66	18574.66	12383.11	6191.55
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	18574.66	18574.66	18574.66	12383.11	6191.55
Repayments of Loans during the period	0.00	0.00	6191.55	6191.55	6191.55
Net loan - Closing	18574.66	18574.66	12383.11	6191.55	0.00
Average Net Loan	18574.66	18574.66	15478.89	9287.33	3095.78
Rate of Interest on Loan	1.0219%	1.0219%	1.0219%	1.0219%	1.0219%
Interest on Loan Annualised	189.81	189.81	158.18	94.91	31.64
11 JPY Equ 350 Million B					
Gross loan - Opening	8367.28	8367.28	8367.28	8367.28	8367.28
Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	2789.09	5578.18
Net loan - Opening	8367.28	8367.28	8367.28	5578.18	2789.09
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	8367.28	8367.28	8367.28	5578.18	2789.09
Repayments of Loans during the period	0.00	0.00	2789.09	2789.09	2789.09
Net loan - Closing	8367.28	8367.28	5578.18	2789.09	0.00
Average Net Loan	8367.28	8367.28	6972.73	4183.64	1394.55
Rate of Interest on Loan	1.0219%	1.0219%	1.0219%	1.0219%	1.0219%
Interest on Loan Annualised	85.51	85.51	71.25	42.75	14.25

Calculation of Interest on Actual Loans					
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
12 4.50 Fixed Rate Notes due 2028					
Gross loan - Opening	13105.92	13105.92	13105.92	13105.92	13105.92
Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	0.00	13105.92
Net loan - Opening	13105.92	13105.92	13105.92	13105.92	0.00
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	13105.92	13105.92	13105.92	13105.92	0.00
Repayments of Loans during the period	0.00	0.00	0.00	13105.92	0.00
Net loan - Closing	13105.92	13105.92	13105.92	0.00	0.00
Average Net Loan	13105.92	13105.92	13105.92	6552.96	0.00
Rate of Interest on Loan	4.7599%	4.7599%	4.7599%	4.7599%	4.7599%
Interest on Loan Annualised	623.83	623.83	623.83	311.91	0.00
13 JPY Equ. 300Million A					
Gross loan - Opening	10014.34	10014.34	10014.34	10014.34	10014.34
Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	0.00	3338.11
Net loan - Opening	10014.34	10014.34	10014.34	10014.34	6676.23
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	10014.34	10014.34	10014.34	10014.34	6676.23
Repayments of Loans during the period	0.00	0.00	0.00	3338.11	3338.11
Net loan - Closing	10014.34	10014.34	10014.34	6676.23	3338.11
Average Net Loan	10014.34	10014.34	10014.34	8345.29	5007.17
Rate of Interest on Loan	1.0995%	1.0995%	1.0995%	1.0995%	1.0995%
Interest on Loan Annualised	110.11	110.11	110.11	91.76	55.05
14 JPY Equ. 300Million B					
Gross loan - Opening	4231.24	4231.24	4231.24	4231.24	4231.24
Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	0.00	1410.41
Net loan - Opening	4231.24	4231.24	4231.24	4231.24	2820.82
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	4231.24	4231.24	4231.24	4231.24	2820.82
Repayments of Loans during the period	0.00	0.00	0.00	1410.41	1410.41
Net loan - Closing	4231.24	4231.24	4231.24	2820.82	1410.41
Average Net Loan	4231.24	4231.24	4231.24	3526.03	2115.62
Rate of Interest on Loan	1.0995%	1.0995%	1.0995%	1.0995%	1.0995%
Interest on Loan Annualised	46.52	46.52	46.52	38.77	23.26
15 JPY Equ. 750Million Drawl I (Repayment from 15-05-2026)					
Gross loan - Opening	9385.06	9385.06	9385.06	9385.06	9385.06
Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	2346.26	4692.53
Net loan - Opening	9385.06	9385.06	9385.06	7038.79	4692.53
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	9385.06	9385.06	9385.06	7038.79	4692.53
Repayments of Loans during the period	0.00	0.00	2346.26	2346.26	2346.26
Net loan - Closing	9385.06	9385.06	7038.79	4692.53	2346.26
Average Net Loan	9385.06	9385.06	8211.93	5865.66	3519.40
Rate of Interest on Loan	0.9185%	0.9185%	0.9185%	0.9185%	0.9185%
Interest on Loan Annualised	86.20	86.20	75.43	53.88	32.33
16 JPY Equ. 750Million Drawl II (Repayment from 15-05-2026)					
Gross loan - Opening	1488.79	1488.79	1488.79	1488.79	1488.79
Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	372.20	744.39

Calculation of Interest on Actual Loans					
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Net loan - Opening	1488.79	1488.79	1488.79	1116.59	744.39
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	1488.79	1488.79	1488.79	1116.59	744.39
Repayments of Loans during the period	0.00	0.00	372.20	372.20	372.20
Net loan - Closing	1488.79	1488.79	1116.59	744.39	372.20
Average Net Loan	1488.79	1488.79	1302.69	930.49	558.30
Rate of Interest on Loan	0.9185%	0.9185%	0.9185%	0.9185%	0.9185%
Interest on Loan Annualised	13.67	13.67	11.97	8.55	5.13
17 JPY Equ. 750Million Drawl III (Repayment from 15-05-2026)					
Gross loan - Opening	3425.73	3425.73	3425.73	3425.73	3425.73
Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	856.43	1712.87
Net loan - Opening	3425.73	3425.73	3425.73	2569.30	1712.87
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	3425.73	3425.73	3425.73	2569.30	1712.87
Repayments of Loans during the period	0.00	0.00	856.43	856.43	856.43
Net loan - Closing	3425.73	3425.73	2569.30	1712.87	856.43
Average Net Loan	3425.73	3425.73	2997.51	2141.08	1284.65
Rate of Interest on Loan	0.9185%	0.9185%	0.9185%	0.9185%	0.9185%
Interest on Loan Annualised	31.47	31.47	27.53	19.67	11.80
18 JPY Equ. 750Million Drawl IV (Repayment from 15-05-2026)					
Gross loan - Opening	1171.63	1171.63	1171.63	1171.63	1171.63
Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	292.91	585.82
Net loan - Opening	1171.63	1171.63	1171.63	878.72	585.82
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	1171.63	1171.63	1171.63	878.72	585.82
Repayments of Loans during the period	0.00	0.00	292.91	292.91	292.91
Net loan - Closing	1171.63	1171.63	878.72	585.82	292.91
Average Net Loan	1171.63	1171.63	1025.18	732.27	439.36
Rate of Interest on Loan	0.9185%	0.9185%	0.9185%	0.9185%	0.9185%
Interest on Loan Annualised	10.76	10.76	9.42	6.73	4.04
19 JPY Equ. 750Million Drawl V (Repayment from 15-05-2026)					
Gross loan - Opening	744.07	744.07	744.07	744.07	744.07
Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	186.02	372.03
Net loan - Opening	744.07	744.07	744.07	558.05	372.03
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	744.07	744.07	744.07	558.05	372.03
Repayments of Loans during the period	0.00	0.00	186.02	186.02	186.02
Net loan - Closing	744.07	744.07	558.05	372.03	186.02
Average Net Loan	744.07	744.07	651.06	465.04	279.03
Rate of Interest on Loan	0.8893%	0.8893%	0.8893%	0.8893%	0.8893%
Interest on Loan Annualised	6.62	6.62	5.79	4.14	2.48
20 3.75% Eurobonds 2024 II					
Gross loan - Opening	6935.94	6935.94	6935.94	6935.94	6935.94
Cumulative repayments of Loans upto previous period	0.00	6935.94	6935.94	6935.94	6935.94
Net loan - Opening	6935.94	0.00	0.00	0.00	0.00
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00

Calculation of Interest on Actual Loans					
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Total	6935.94	0.00	0.00	0.00	0.00
Repayments of Loans during the period	6935.94	0.00	0.00	0.00	0.00
Net loan - Closing	0.00	0.00	0.00	0.00	0.00
Average Net Loan	3467.97	0.00	0.00	0.00	0.00
Rate of Interest on Loan	3.96660%	3.96660%	3.96660%	3.96660%	3.96660%
Interest on Loan Annualised	137.56	0.00	0.00	0.00	0.00

Calculation of Interest on Actual Loans						
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29	
22 CORPORATION BANK-III repayment from 28.03.2018 20HY						
Gross loan - Opening	5000.00	5000.00	5000.00	5000.00	5000.00	
Cumulative repayments of Loans upto previous period	3000.00	3500.00	4000.00	4500.00	5000.00	
Net loan - Opening	2000.00	1500.00	1000.00	500.00	0.00	
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00	
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00	
Total	2000.00	1500.00	1000.00	500.00	0.00	
Repayments of Loans during the period	500.00	500.00	500.00	500.00	0.00	
Net loan - Closing	1500.00	1000.00	500.00	0.00	0.00	
Average Net Loan	1750.00	1250.00	750.00	250.00	0.00	
Rate of Interest on Loan	8.10000%	8.10000%	8.10000%	8.10000%	8.10000%	
Interest on Loan Annualised	141.75	101.25	60.75	20.25	0.00	
23 HDFC BANK-III repayment from 04.12.2021 9Y						
Gross loan - Opening	8100.00	8100.00	8100.00	8100.00	8100.00	
Cumulative repayments of Loans upto previous period	2700.00	3600.00	4500.00	5400.00	6300.00	
Net loan - Opening	5400.00	4500.00	3600.00	2700.00	1800.00	
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00	
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00	
Total	5400.00	4500.00	3600.00	2700.00	1800.00	
Repayments of Loans during the period	900.00	900.00	900.00	900.00	900.00	
Net loan - Closing	4500.00	3600.00	2700.00	1800.00	900.00	
Average Net Loan	4950.00	4050.00	3150.00	2250.00	1350.00	
Rate of Interest on Loan	7.95000%	7.95000%	7.95000%	7.95000%	7.95000%	
Interest on Loan Annualised	393.53	321.98	250.43	178.88	107.33	
24 HDFC BANK-IV repayment from 17.04.2021 9Y						
Gross loan - Opening	6800.00	6800.00	6800.00	6800.00	6800.00	
Cumulative repayments of Loans upto previous period	2266.67	3022.22	3777.78	4533.33	5288.89	
Net loan - Opening	4533.33	3777.78	3022.22	2266.67	1511.11	
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00	
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00	
Total	4533.33	3777.78	3022.22	2266.67	1511.11	
Repayments of Loans during the period	755.56	755.56	755.56	755.56	755.56	
Net loan - Closing	3777.78	3022.22	2266.67	1511.11	755.56	
Average Net Loan	4155.56	3400.00	2644.44	1888.89	1133.33	
Rate of Interest on Loan	7.95000%	7.95000%	7.95000%	7.95000%	7.95000%	
Interest on Loan Annualised	330.37	270.30	210.23	150.17	90.10	
25 HDFC BANK-V repayment from 25.09.2024 9Y						
Gross loan - Opening	27697.00	27697.00	27697.00	27697.00	27697.00	
Cumulative repayments of Loans upto previous period	0.00	3077.44	6154.89	9232.33	12309.78	
Net loan - Opening	27697.00	24619.56	21542.11	18464.67	15387.22	
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00	
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00	
Total	27697.00	24619.56	21542.11	18464.67	15387.22	
Repayments of Loans during the period	3077.44	3077.44	3077.44	3077.44	3077.44	
Net loan - Closing	24619.56	21542.11	18464.67	15387.22	12309.78	
Average Net Loan	26158.28	23080.83	20003.39	16925.94	13848.50	
Rate of Interest on Loan	7.95000%	7.95000%	7.95000%	7.95000%	7.95000%	
Interest on Loan Annualised	2079.58	1834.93	1590.27	1345.61	1100.96	
26 SBI-X Repayment from 01.10.2024 9Y						
Gross loan - Opening	40000.00	40000.00	40000.00	40000.00	40000.00	
Cumulative repayments of Loans upto previous period	0.00	4444.44	8888.89	13333.33	17777.78	
Net loan - Opening	40000.00	35555.56	31111.11	26666.67	22222.22	

Calculation of Interest on Actual Loans					
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	40000.00	35555.56	31111.11	26666.67	22222.22
Repayments of Loans during the period	4444.44	4444.44	4444.44	4444.44	4444.44
Net loan - Closing	35555.56	31111.11	26666.67	22222.22	17777.78
Average Net Loan	37777.78	33333.33	28888.89	24444.44	20000.00
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	3097.78	2733.33	2368.89	2004.44	1640.00
27 Punjab National Bank-III Total					
Gross loan - Opening	13500.00	13500.00	13500.00	13500.00	13500.00
Cumulative repayments of Loans upto previous period	4500.00	6000.00	7500.00	9000.00	10500.00
Net loan - Opening	9000.00	7500.00	6000.00	4500.00	3000.00
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	9000.00	7500.00	6000.00	4500.00	3000.00
Repayments of Loans during the period	1500.00	1500.00	1500.00	1500.00	1500.00
Net loan - Closing	7500.00	6000.00	4500.00	3000.00	1500.00
Average Net Loan	8250.00	6750.00	5250.00	3750.00	2250.00
Rate of Interest on Loan	7.9000%	7.9000%	7.9000%	7.9000%	7.9000%
Interest on Loan Annualised	651.75	533.25	414.75	296.25	177.75
28 Jammu and Kashmir Bank-IV repayment from 31.03.2021 -9Y					
Gross loan - Opening	4500.00	4500.00	4500.00	4500.00	4500.00
Cumulative repayments of Loans upto previous period	1500.00	2500.00	3000.00	3500.00	4000.00
Net loan - Opening	3000.00	2000.00	1500.00	1000.00	500.00
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	3000.00	2000.00	1500.00	1000.00	500.00
Repayments of Loans during the period	1000.00	500.00	500.00	500.00	500.00
Net loan - Closing	2000.00	1500.00	1000.00	500.00	0.00
Average Net Loan	2500.00	1750.00	1250.00	750.00	250.00
Rate of Interest on Loan	7.9800%	7.9800%	7.9800%	7.9800%	7.9800%
Interest on Loan Annualised	199.50	139.65	99.75	59.85	19.95
30 SBI VIII Total repayment from 31.01.2022 -9Y					
Gross loan - Opening	87400.00	87400.00	87400.00	87400.00	87400.00
Cumulative repayments of Loans upto previous period	29133.33	38844.44	48555.56	58266.67	67977.78
Net loan - Opening	58266.67	48555.56	38844.44	29133.33	19422.22
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	58266.67	48555.56	38844.44	29133.33	19422.22
Repayments of Loans during the period	9711.11	9711.11	9711.11	9711.11	9711.11
Net loan - Closing	48555.56	38844.44	29133.33	19422.22	9711.11
Average Net Loan	53411.11	43700.00	33988.89	24277.78	14566.67
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	4379.71	3583.40	2787.09	1990.78	1194.47

Calculation of Interest on Actual Loans						
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29	
31 SBI-IX Repayment from 31.03.2021 9Y						
Gross loan - Opening	26200.00	26200.00	26200.00	26200.00	26200.00	
Cumulative repayments of Loans upto previous period	8733.33	14555.56	17466.67	20377.78	23288.89	
Net loan - Opening	17466.67	11644.44	8733.33	5822.22	2911.11	
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00	
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00	
Total	17466.67	11644.44	8733.33	5822.22	2911.11	
Repayments of Loans during the period	5822.22	2911.11	2911.11	2911.11	2911.11	
Net loan - Closing	11644.44	8733.33	5822.22	2911.11	0.00	
Average Net Loan	14555.56	10188.89	7277.78	4366.67	1455.56	
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%	
Interest on Loan Annualised	1193.56	835.49	596.78	358.07	119.36	
32 Union Bank of India - II Repayment from 01.02.2017 20HY						
Gross loan - Opening	10000.00	10000.00	10000.00	10000.00	10000.00	
Cumulative repayments of Loans upto previous period	7500.00	8500.00	9500.00	10000.00	10000.00	
Net loan - Opening	2500.00	1500.00	500.00	0.00	0.00	
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00	
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00	
Total	2500.00	1500.00	500.00	0.00	0.00	
Repayments of Loans during the period	1000.00	1000.00	500.00	0.00	0.00	
Net loan - Closing	1500.00	500.00	0.00	0.00	0.00	
Average Net Loan	2000.00	1000.00	250.00	0.00	0.00	
Rate of Interest on Loan	8.1000%	8.1000%	8.1000%	8.1000%	8.1000%	
Interest on Loan Annualised	162.00	81.00	20.25	0.00	0.00	
34 HDFC Bank-IX (Refinancing Vijaya Bank-VI)						
Gross loan - Opening	4500.00	4500.00	4500.00	4500.00	4500.00	
Cumulative repayments of Loans upto previous period	0.00	375.00	750.00	1125.00	1500.00	
Net loan - Opening	4500.00	4125.00	3750.00	3375.00	3000.00	
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00	
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00	
Total	4500.00	4125.00	3750.00	3375.00	3000.00	
Repayments of Loans during the period	375.00	375.00	375.00	375.00	375.00	
Net loan - Closing	4125.00	3750.00	3375.00	3000.00	2625.00	
Average Net Loan	4312.50	3937.50	3562.50	3187.50	2812.50	
Rate of Interest on Loan	8.3750%	8.3750%	8.3750%	8.3750%	8.3750%	
Interest on Loan Annualised	361.17	329.77	298.36	266.95	235.55	
35 Punjab National Bank IV D1 dtd 01.01.2019 repayment start from 01.02.2022						
Gross loan - Opening	6000.00	6000.00	6000.00	6000.00	6000.00	
Cumulative repayments of Loans upto previous period	1333.33	2000.00	2666.67	3333.33	4000.00	
Net loan - Opening	4666.67	4000.00	3333.33	2666.67	2000.00	
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00	
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00	
Total	4666.67	4000.00	3333.33	2666.67	2000.00	
Repayments of Loans during the period	666.67	666.67	666.67	666.67	666.67	
Net loan - Closing	4000.00	3333.33	2666.67	2000.00	1333.33	
Average Net Loan	4333.33	3666.67	3000.00	2333.33	1666.67	
Rate of Interest on Loan	7.9000%	7.9000%	7.9000%	7.9000%	7.9000%	
Interest on Loan Annualised	342.33	289.67	237.00	184.33	131.67	
36 SBI XII D2 repayment start from 31.03.2026						
Gross loan - Opening	20000.00	20000.00	20000.00	20000.00	20000.00	
Cumulative repayments of Loans upto previous period	0.00	0.00	2222.22	4444.44	6666.67	
Net loan - Opening	20000.00	20000.00	17777.78	15555.56	13333.33	

Calculation of Interest on Actual Loans					
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	20000.00	20000.00	17777.78	15555.56	13333.33
Repayments of Loans during the period	0.00	2222.22	2222.22	2222.22	2222.22
Net loan - Closing	20000.00	17777.78	15555.56	13333.33	11111.11
Average Net Loan	20000.00	18888.89	16666.67	14444.44	12222.22
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	1640.00	1548.89	1366.67	1184.44	1002.22
37 Corporation Bank IV D1 dtd 11.01.2019 repayment start from 11.01.2023					
Gross loan - Opening	20000.00	20000.00	20000.00	20000.00	20000.00
Cumulative repayments of Loans upto previous period	4444.44	6666.67	8888.89	11111.11	13333.33
Net loan - Opening	15555.56	13333.33	11111.11	8888.89	6666.67
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	15555.56	13333.33	11111.11	8888.89	6666.67
Repayments of Loans during the period	2222.22	2222.22	2222.22	2222.22	2222.22
Net loan - Closing	13333.33	11111.11	8888.89	6666.67	4444.44
Average Net Loan	14444.44	12222.22	10000.00	7777.78	5555.56
Rate of Interest on Loan	8.1000%	8.1000%	8.1000%	8.1000%	8.1000%
Interest on Loan Annualised	1170.00	990.00	810.00	630.00	450.00
38 Bank Of India-IV dtd 07.12.2020 payment start from 07.12.2024. 12 yearly installment					
Gross loan - Opening	27200.00	27200.00	27200.00	27200.00	27200.00
Cumulative repayments of Loans upto previous period	0.00	2266.67	4533.33	6800.00	9066.67
Net loan - Opening	27200.00	24933.33	22666.67	20400.00	18133.33
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	27200.00	24933.33	22666.67	20400.00	18133.33
Repayments of Loans during the period	2266.67	2266.67	2266.67	2266.67	2266.67
Net loan - Closing	24933.33	22666.67	20400.00	18133.33	15866.67
Average Net Loan	26066.67	23800.00	21533.33	19266.67	17000.00
Rate of Interest on Loan	8.3500%	8.3500%	8.3500%	8.3500%	8.3500%
Interest on Loan Annualised	2176.57	1987.30	1798.03	1608.77	1419.50
39 Bonds-44-repayment from 04.05.2023 - 5Y					
Gross loan - Opening	26000.00	26000.00	26000.00	26000.00	26000.00
Cumulative repayments of Loans upto previous period	5200.00	10400.00	15600.00	20800.00	26000.00
Net loan - Opening	20800.00	15600.00	10400.00	5200.00	0.00
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	20800.00	15600.00	10400.00	5200.00	0.00
Repayments of Loans during the period	5200.00	5200.00	5200.00	5200.00	0.00
Net loan - Closing	15600.00	10400.00	5200.00	0.00	0.00
Average Net Loan	18200.00	13000.00	7800.00	2600.00	0.00
Rate of Interest on Loan	9.280%	9.280%	9.280%	9.280%	9.280%
Interest on Loan Annualised	1688.96	1206.40	723.84	241.28	0.00

Calculation of Interest on Actual Loans						
	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
41	Bonds- L 2A -repayment on 16.12.2028 Bullet Repayment					
	Gross loan - Opening	1999.57	1999.57	1999.57	1999.57	1999.57
	Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	0.00	0.00
	Net loan - Opening	1999.57	1999.57	1999.57	1999.57	1999.57
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	1999.57	1999.57	1999.57	1999.57	1999.57
	Repayments of Loans during the period	0.00	0.00	0.00	0.00	1999.57
	Net loan - Closing	1999.57	1999.57	1999.57	1999.57	0.00
	Average Net Loan	1999.57	1999.57	1999.57	1999.57	999.78
	Rate of Interest on Loan	8.510%	8.510%	8.510%	8.510%	8.510%
	Interest on Loan Annualised	170.16	170.16	170.16	170.16	85.08
42	Bonds- L 3A -repayment on 16.12.2033 Bullet Repayment					
	Gross loan - Opening	2496.22	2496.22	2496.22	2496.22	2496.22
	Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	0.00	0.00
	Net loan - Opening	2496.22	2496.22	2496.22	2496.22	2496.22
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	2496.22	2496.22	2496.22	2496.22	2496.22
	Repayments of Loans during the period	0.00	0.00	0.00	0.00	0.00
	Net loan - Closing	2496.22	2496.22	2496.22	2496.22	2496.22
	Average Net Loan	2496.22	2496.22	2496.22	2496.22	2496.22
	Rate of Interest on Loan	8.690%	8.690%	8.690%	8.690%	8.690%
	Interest on Loan Annualised	216.92	216.92	216.92	216.92	216.92
44	Bonds- L 2B-repayment on 16.12.2028 Bullet Repayment					
	Gross loan - Opening	731.14	731.14	731.14	731.14	731.14
	Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	0.00	0.00
	Net loan - Opening	731.14	731.14	731.14	731.14	731.14
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	731.14	731.14	731.14	731.14	731.14
	Repayments of Loans during the period	0.00	0.00	0.00	0.00	731.14
	Net loan - Closing	731.14	731.14	731.14	731.14	0.00
	Average Net Loan	731.14	731.14	731.14	731.14	365.57
	Rate of Interest on Loan	8.760%	8.760%	8.760%	8.760%	8.760%
	Interest on Loan Annualised	64.05	64.05	64.05	64.05	32.02
45	Bonds- L 3B- repayment on 16.12.2033 Bullet Repayment					
	Gross loan - Opening	3199.74	3199.74	3199.74	3199.74	3199.74
	Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	0.00	0.00
	Net loan - Opening	3199.74	3199.74	3199.74	3199.74	3199.74
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	3199.74	3199.74	3199.74	3199.74	3199.74
	Repayments of Loans during the period	0.00	0.00	0.00	0.00	0.00
	Net loan - Closing	3199.74	3199.74	3199.74	3199.74	3199.74
	Average Net Loan	3199.74	3199.74	3199.74	3199.74	3199.74
	Rate of Interest on Loan	8.940%	8.940%	8.940%	8.940%	8.940%
	Interest on Loan Annualised	286.06	286.06	286.06	286.06	286.06

Calculation of Interest on Actual Loans						
	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
47	Bond 53 Repayment on 22.09.2024 Bullet Repayment					
	Gross loan - Opening	16500.00	16500.00	16500.00	16500.00	16500.00
	Cumulative repayments of Loans upto previous period	0.00	16500.00	16500.00	16500.00	16500.00
	Net loan - Opening	16500.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	16500.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the period	16500.00	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	8250.00	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	9.200%	9.200%	9.200%	9.200%	9.200%
	Interest on Loan Annualised	759.00	0.00	0.00	0.00	0.00
48	Bond 54 Repayment on 25.03.2023					
	Gross loan - Opening	123300.00	123300.00	123300.00	123300.00	123300.00
	Cumulative repayments of Loans upto previous period	73980.00	123300.00	123300.00	123300.00	123300.00
	Net loan - Opening	49320.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	49320.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the period	49320.00	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	24660.00	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	8.520%	8.520%	8.520%	8.520%	8.520%
	Interest on Loan Annualised	2101.03	0.00	0.00	0.00	0.00
50	Bond 60 Repayment on 05.05.2026 Bullet Repayment					
	Gross loan - Opening	3800.00	3800.00	3800.00	3800.00	3800.00
	Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	3800.00	3800.00
	Net loan - Opening	3800.00	3800.00	3800.00	0.00	0.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	3800.00	3800.00	3800.00	0.00	0.00
	Repayments of Loans during the period	0.00	0.00	3800.00	0.00	0.00
	Net loan - Closing	3800.00	3800.00	0.00	0.00	0.00
	Average Net Loan	3800.00	3800.00	1900.00	0.00	0.00
	Rate of Interest on Loan	8.080%	8.080%	8.080%	8.080%	8.080%
	Interest on Loan Annualised	307.04	307.04	153.52	0.00	0.00

Calculation of Interest on Actual Loans						
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29	
51 Bond 61 Repayment on 27.05.2021 3 Inst after every 5 years						
Gross loan - Opening	10000.00	10000.00	10000.00	10000.00	10000.00	
Cumulative repayments of Loans upto previous period	3333.33	3333.33	3333.33	6666.67	6666.67	
Net loan - Opening	6666.67	6666.67	6666.67	3333.33	3333.33	
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00	
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00	
Total	6666.67	6666.67	6666.67	3333.33	3333.33	
Repayments of Loans during the period	0.00	0.00	3333.33	0.00	0.00	
Net loan - Closing	6666.67	6666.67	3333.33	3333.33	3333.33	
Average Net Loan	6666.67	6666.67	5000.00	3333.33	3333.33	
Rate of Interest on Loan	8.130%	8.130%	8.130%	8.130%	8.130%	
Interest on Loan Annualised	542.00	542.00	406.50	271.00	271.00	
52 Bond 62 Repayment on 23.08.2026 Bullet Repayment						
Gross loan - Opening	13500.00	13500.00	13500.00	13500.00	13500.00	
Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	13500.00	13500.00	
Net loan - Opening	13500.00	13500.00	13500.00	0.00	0.00	
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00	
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00	
Total	13500.00	13500.00	13500.00	0.00	0.00	
Repayments of Loans during the period	0.00	0.00	13500.00	0.00	0.00	
Net loan - Closing	13500.00	13500.00	0.00	0.00	0.00	
Average Net Loan	13500.00	13500.00	6750.00	0.00	0.00	
Rate of Interest on Loan	7.610%	7.610%	7.610%	7.610%	7.610%	
Interest on Loan Annualised	1027.35	1027.35	513.68	0.00	0.00	
53 Bond 63 Repayment on 16.09.2026 Bullet Repayment						
Gross loan - Opening	14400.00	14400.00	14400.00	14400.00	14400.00	
Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	14400.00	14400.00	
Net loan - Opening	14400.00	14400.00	14400.00	0.00	0.00	
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00	
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00	
Total	14400.00	14400.00	14400.00	0.00	0.00	
Repayments of Loans during the period	0.00	0.00	14400.00	0.00	0.00	
Net loan - Closing	14400.00	14400.00	0.00	0.00	0.00	
Average Net Loan	14400.00	14400.00	7200.00	0.00	0.00	
Rate of Interest on Loan	7.500%	7.500%	7.500%	7.500%	7.500%	
Interest on Loan Annualised	1080.00	1080.00	540.00	0.00	0.00	
54 Bond 64 Repayment on 07.11.2031 Bullet Repayment						
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	0.00	0.00	
Net loan - Opening	5000.00	5000.00	5000.00	5000.00	5000.00	
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00	
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00	
Total	5000.00	5000.00	5000.00	5000.00	5000.00	
Repayments of Loans during the period	0.00	0.00	0.00	0.00	0.00	
Net loan - Closing	5000.00	5000.00	5000.00	5000.00	5000.00	
Average Net Loan	5000.00	5000.00	5000.00	5000.00	5000.00	
Rate of Interest on Loan	7.520%	7.520%	7.520%	7.520%	7.520%	
Interest on Loan Annualised	376.00	376.00	376.00	376.00	376.00	

Calculation of Interest on Actual Loans						
	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
56	Bond 66 Repayment on 14.12.2031 Bullet Repayment					
	Gross loan - Opening	30300.00	30300.00	30300.00	30300.00	30300.00
	Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	0.00	0.00
	Net loan - Opening	30300.00	30300.00	30300.00	30300.00	30300.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	30300.00	30300.00	30300.00	30300.00	30300.00
	Repayments of Loans during the period	0.00	0.00	0.00	0.00	0.00
	Net loan - Closing	30300.00	30300.00	30300.00	30300.00	30300.00
	Average Net Loan	30300.00	30300.00	30300.00	30300.00	30300.00
	Rate of Interest on Loan	7.400%	7.400%	7.400%	7.400%	7.400%
	Interest on Loan Annualised	2242.20	2242.20	2242.20	2242.20	2242.20
57	Bond 67 Repayment on 15.01.2029 Bullet Repayment					
	Gross loan - Opening	10000.00	10000.00	10000.00	10000.00	10000.00
	Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	0.00	0.00
	Net loan - Opening	10000.00	10000.00	10000.00	10000.00	10000.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	10000.00	10000.00	10000.00	10000.00	10000.00
	Repayments of Loans during the period	0.00	0.00	0.00	0.00	10000.00
	Net loan - Closing	10000.00	10000.00	10000.00	10000.00	0.00
	Average Net Loan	10000.00	10000.00	10000.00	10000.00	5000.00
	Rate of Interest on Loan	8.430%	8.430%	8.430%	8.430%	8.430%
	Interest on Loan Annualised	843.00	843.00	843.00	843.00	421.50
58	Bond 69 Repayment on 15.01.2029 Bullet Repayment					
	Gross loan - Opening	21500.00	21500.00	21500.00	21500.00	21500.00
	Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	0.00	0.00
	Net loan - Opening	21500.00	21500.00	21500.00	21500.00	21500.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	21500.00	21500.00	21500.00	21500.00	21500.00
	Repayments of Loans during the period	0.00	0.00	0.00	0.00	0.00
	Net loan - Closing	21500.00	21500.00	21500.00	21500.00	21500.00
	Average Net Loan	21500.00	21500.00	21500.00	21500.00	21500.00
	Rate of Interest on Loan	7.350%	7.350%	7.350%	7.350%	7.350%
	Interest on Loan Annualised	1580.25	1580.25	1580.25	1580.25	1580.25
	TOTAL LOAN					
	Gross loan - Opening	1014504.15	1014504.15	1014504.15	1014504.15	1014504.15
	Cumulative repayments of Loans upto previous period*	283380.54	473978.75	556718.19	703638.23	789854.89
	Cumulative FERV of repayments of Loans upto previous period	0.00	0.00	0.00	0.00	0.00
	Net loan - Opening	731123.62	540525.40	457785.96	310865.92	224649.26
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	731123.62	540525.40	457785.96	310865.92	224649.26
	Repayments of Loans during the period	190598.21	82739.44	146920.04	86216.66	71682.84
	Net loan - Closing	540525.40	457785.96	310865.92	224649.26	152966.42
	Average Net Loan	635824.51	499155.68	384325.94	267757.59	188807.84
	Rate of Interest on Loan	6.4221%	6.3345%	6.4616%	6.8271%	7.2281%
	Interest on Loan Annualised	40833.17	31618.95	24833.70	18280.12	13647.73

Calculation of Interest on Actual Loans						
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29	

Calculation of Interest on Actual Loans					
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
SBI VIII D-4 repayment from 31.01.2022 -9Y					
Gross loan - Opening	11300.00	11300.00	11300.00	11300.00	11300.00
Cumulative repayments of Loans upto previous period	3766.67	5022.22	6277.78	7533.33	8788.89
Net loan - Opening	7533.33	6277.78	5022.22	3766.67	2511.11
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	7533.33	6277.78	5022.22	3766.67	2511.11
Repayments of Loans during the period	1255.56	1255.56	1255.56	1255.56	1255.56
Net loan - Closing	6277.78	5022.22	3766.67	2511.11	1255.56
Average Net Loan	6905.56	5650.00	4394.44	3138.89	1883.33
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	566.26	463.30	360.34	257.39	154.43

Calculation of Interest on Actual Loans					
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
SBI VIII D-5 repayment from 31.01.2022 -9Y					
Gross loan - Opening	13000.00	13000.00	13000.00	13000.00	13000.00
Cumulative repayments of Loans upto previous period	4333.33	5777.78	7222.22	8666.67	10111.11
Net loan - Opening	8666.67	7222.22	5777.78	4333.33	2888.89
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	8666.67	7222.22	5777.78	4333.33	2888.89
Repayments of Loans during the period	1444.44	1444.44	1444.44	1444.44	1444.44
Net loan - Closing	7222.22	5777.78	4333.33	2888.89	1444.44
Average Net Loan	7944.44	6500.00	5055.56	3611.11	2166.67
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	651.44	533.00	414.56	296.11	177.67
SBI VIII D-7 repayment from 31.01.2022 -9Y					
Gross loan - Opening	1900.00	1900.00	1900.00	1900.00	1900.00
Cumulative repayments of Loans upto previous period	633.33	844.44	1055.56	1266.67	1477.78
Net loan - Opening	1266.67	1055.56	844.44	633.33	422.22
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	1266.67	1055.56	844.44	633.33	422.22
Repayments of Loans during the period	211.11	211.11	211.11	211.11	211.11
Net loan - Closing	1055.56	844.44	633.33	422.22	211.11
Average Net Loan	1161.11	950.00	738.89	527.78	316.67
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	95.21	77.90	60.59	43.28	25.97
SBI VIII D-8 repayment from 31.01.2022 -9Y					
Gross loan - Opening	8100.00	8100.00	8100.00	8100.00	8100.00
Cumulative repayments of Loans upto previous period	2700.00	3600.00	4500.00	5400.00	6300.00
Net loan - Opening	5400.00	4500.00	3600.00	2700.00	1800.00
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	5400.00	4500.00	3600.00	2700.00	1800.00
Repayments of Loans during the period	900.00	900.00	900.00	900.00	900.00
Net loan - Closing	4500.00	3600.00	2700.00	1800.00	900.00
Average Net Loan	4950.00	4050.00	3150.00	2250.00	1350.00
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	405.90	332.10	258.30	184.50	110.70
SBI VIII D-09 repayment from 31.01.2022 -9Y					
Gross loan - Opening	10000.00	10000.00	10000.00	10000.00	10000.00
Cumulative repayments of Loans upto previous period	3333.33	4444.44	5555.56	6666.67	7777.78
Net loan - Opening	6666.67	5555.56	4444.44	3333.33	2222.22
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	6666.67	5555.56	4444.44	3333.33	2222.22
Repayments of Loans during the period	1111.11	1111.11	1111.11	1111.11	1111.11
Net loan - Closing	5555.56	4444.44	3333.33	2222.22	1111.11
Average Net Loan	6111.11	5000.00	3888.89	2777.78	1666.67
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	501.11	410.00	318.89	227.78	136.67

Calculation of Interest on Actual Loans					
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
SBI VIII D-12 repayment from 31.01.2022 -9Y					
Gross loan - Opening	3000.00	3000.00	3000.00	3000.00	3000.00
Cumulative repayments of Loans upto previous period	1000.00	1333.33	1666.67	2000.00	2333.33
Net loan - Opening	2000.00	1666.67	1333.33	1000.00	666.67
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	2000.00	1666.67	1333.33	1000.00	666.67
Repayments of Loans during the period	333.33	333.33	333.33	333.33	333.33
Net loan - Closing	1666.67	1333.33	1000.00	666.67	333.33
Average Net Loan	1833.33	1500.00	1166.67	833.33	500.00
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	150.33	123.00	95.67	68.33	41.00
SBI VIII D-13 repayment from 31.01.2022 -9Y					
Gross loan - Opening	4500.00	4500.00	4500.00	4500.00	4500.00
Cumulative repayments of Loans upto previous period	1500.00	2000.00	2500.00	3000.00	3500.00
Net loan - Opening	3000.00	2500.00	2000.00	1500.00	1000.00
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	3000.00	2500.00	2000.00	1500.00	1000.00
Repayments of Loans during the period	500.00	500.00	500.00	500.00	500.00
Net loan - Closing	2500.00	2000.00	1500.00	1000.00	500.00
Average Net Loan	2750.00	2250.00	1750.00	1250.00	750.00
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	225.50	184.50	143.50	102.50	61.50
SBI VIII D-14 repayment from 31.01.2022 -9Y					
Gross loan - Opening	6700.00	6700.00	6700.00	6700.00	6700.00
Cumulative repayments of Loans upto previous period	2233.33	2977.78	3722.22	4466.67	5211.11
Net loan - Opening	4466.67	3722.22	2977.78	2233.33	1488.89
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	4466.67	3722.22	2977.78	2233.33	1488.89
Repayments of Loans during the period	744.44	744.44	744.44	744.44	744.44
Net loan - Closing	3722.22	2977.78	2233.33	1488.89	744.44
Average Net Loan	4094.44	3350.00	2605.56	1861.11	1116.67
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	335.74	274.70	213.66	152.61	91.57
SBI VIII D-16 repayment from 31.01.2022 -9Y					
Gross loan - Opening	3000.00	3000.00	3000.00	3000.00	3000.00
Cumulative repayments of Loans upto previous period	1000.00	1333.33	1666.67	2000.00	2333.33
Net loan - Opening	2000.00	1666.67	1333.33	1000.00	666.67
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	2000.00	1666.67	1333.33	1000.00	666.67
Repayments of Loans during the period	333.33	333.33	333.33	333.33	333.33
Net loan - Closing	1666.67	1333.33	1000.00	666.67	333.33
Average Net Loan	1833.33	1500.00	1166.67	833.33	500.00
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	150.33	123.00	95.67	68.33	41.00
SBI VIII D-21 repayment from 31.01.2022 -9Y					
Gross loan - Opening	8400.00	8400.00	8400.00	8400.00	8400.00
Cumulative repayments of Loans upto previous period	2800.00	3733.33	4666.67	5600.00	6533.33
Net loan - Opening	5600.00	4666.67	3733.33	2800.00	1866.67
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	5600.00	4666.67	3733.33	2800.00	1866.67
Repayments of Loans during the period	933.33	933.33	933.33	933.33	933.33

Calculation of Interest on Actual Loans					
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Net loan - Closing	4666.67	3733.33	2800.00	1866.67	933.33
Average Net Loan	5133.33	4200.00	3266.67	2333.33	1400.00
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	420.93	344.40	267.87	191.33	114.80
SBI VIII D-23 repayment from 31.01.2022 -9Y					
Gross loan - Opening	7500.00	7500.00	7500.00	7500.00	7500.00
Cumulative repayments of Loans upto previous period	2500.00	3333.33	4166.67	5000.00	5833.33
Net loan - Opening	5000.00	4166.67	3333.33	2500.00	1666.67
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	5000.00	4166.67	3333.33	2500.00	1666.67
Repayments of Loans during the period	833.33	833.33	833.33	833.33	833.33
Net loan - Closing	4166.67	3333.33	2500.00	1666.67	833.33
Average Net Loan	4583.33	3750.00	2916.67	2083.33	1250.00
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	375.83	307.50	239.17	170.83	102.50
SBI VIII D-24 repayment from 31.01.2022 -9Y					
Gross loan - Opening	10000.00	10000.00	10000.00	10000.00	10000.00
Cumulative repayments of Loans upto previous period	3333.33	4444.44	5555.56	6666.67	7777.78
Net loan - Opening	6666.67	5555.56	4444.44	3333.33	2222.22
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	6666.67	5555.56	4444.44	3333.33	2222.22
Repayments of Loans during the period	1111.11	1111.11	1111.11	1111.11	1111.11
Net loan - Closing	5555.56	4444.44	3333.33	2222.22	1111.11
Average Net Loan	6111.11	5000.00	3888.89	2777.78	1666.67
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	501.11	410.00	318.89	227.78	136.67
SBI VIII Total					
Gross loan - Opening	87400.00	87400.00	87400.00	87400.00	87400.00
Cumulative repayments of Loans upto previous period	29133.33	38844.44	48555.56	58266.67	67977.78
Net loan - Opening	58266.67	48555.56	38844.44	29133.33	19422.22
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	58266.67	48555.56	38844.44	29133.33	19422.22
Repayments of Loans during the period	9711.11	9711.11	9711.11	9711.11	9711.11
Net loan - Closing	48555.56	38844.44	29133.33	19422.22	9711.11
Average Net Loan	53411.11	43700.00	33988.89	24277.78	14566.67
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	4379.71	3583.40	2787.09	1990.78	1194.47
HDFC III D-03 repayment from 04.12.2021 -9Y					
Gross loan - Opening	5000.00	5000.00	5000.00	5000.00	5000.00
Cumulative repayments of Loans upto previous period	1666.67	2222.22	2777.78	3333.33	3888.89
Net loan - Opening	3333.33	2777.78	2222.22	1666.67	1111.11
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	3333.33	2777.78	2222.22	1666.67	1111.11
Repayments of Loans during the period	555.56	555.56	555.56	555.56	555.56
Net loan - Closing	2777.78	2222.22	1666.67	1111.11	555.56
Average Net Loan	3055.56	2500.00	1944.44	1388.89	833.33
Rate of Interest on Loan	7.9500%	7.9500%	7.9500%	7.9500%	7.9500%
Interest on Loan Annualised	242.92	198.75	154.58	110.42	66.25
HDFC III D-05 repayment from 04.12.2021 -9Y					
Gross loan - Opening	3100.00	3100.00	3100.00	3100.00	3100.00

Calculation of Interest on Actual Loans					
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Cumulative repayments of Loans upto previous period	1033.33	1377.78	1722.22	2066.67	2411.11
Net loan - Opening	2066.67	1722.22	1377.78	1033.33	688.89
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	2066.67	1722.22	1377.78	1033.33	688.89
Repayments of Loans during the period	344.44	344.44	344.44	344.44	344.44
Net loan - Closing	1722.22	1377.78	1033.33	688.89	344.44
Average Net Loan	1894.44	1550.00	1205.56	861.11	516.67
Rate of Interest on Loan	7.9500%	7.9500%	7.9500%	7.9500%	7.9500%
Interest on Loan Annualised	150.61	123.23	95.84	68.46	41.08
HDFC Bank III Total					
Gross loan - Opening	8100.00	8100.00	8100.00	8100.00	8100.00
Cumulative repayments of Loans upto previous period	2700.00	3600.00	4500.00	5400.00	6300.00
Net loan - Opening	5400.00	4500.00	3600.00	2700.00	1800.00
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	5400.00	4500.00	3600.00	2700.00	1800.00
Repayments of Loans during the period	900.00	900.00	900.00	900.00	900.00
Net loan - Closing	4500.00	3600.00	2700.00	1800.00	900.00
Average Net Loan	4950.00	4050.00	3150.00	2250.00	1350.00
Rate of Interest on Loan	7.9500%	7.9500%	7.9500%	7.9500%	7.9500%
Interest on Loan Annualised	393.53	321.98	250.43	178.88	107.33
SBI-X D4 Repayment on 01.10.2024 D4 9Y					
Gross loan - Opening	7500.00	7500.00	7500.00	7500.00	7500.00
Cumulative repayments of Loans upto previous period	0.00	833.33	1666.67	2500.00	3333.33
Net loan - Opening	7500.00	6666.67	5833.33	5000.00	4166.67
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	7500.00	6666.67	5833.33	5000.00	4166.67
Repayments of Loans during the period	833.33	833.33	833.33	833.33	833.33
Net loan - Closing	6666.67	5833.33	5000.00	4166.67	3333.33
Average Net Loan	7083.33	6250.00	5416.67	4583.33	3750.00
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	580.83	512.50	444.17	375.83	307.50
SBI-X D5 Repayment on 01.10.2024 D5 9Y					
Gross loan - Opening	12000.00	12000.00	12000.00	12000.00	12000.00
Cumulative repayments of Loans upto previous period	0.00	1333.33	2666.67	4000.00	5333.33
Net loan - Opening	12000.00	10666.67	9333.33	8000.00	6666.67
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	12000.00	10666.67	9333.33	8000.00	6666.67
Repayments of Loans during the period	1333.33	1333.33	1333.33	1333.33	1333.33
Net loan - Closing	10666.67	9333.33	8000.00	6666.67	5333.33
Average Net Loan	11333.33	10000.00	8666.67	7333.33	6000.00
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	929.33	820.00	710.67	601.33	492.00
SBI-X D8 Repayment on 01.10.2024 D8 9Y					
Gross loan - Opening	20500.00	20500.00	20500.00	20500.00	20500.00
Cumulative repayments of Loans upto previous period	0.00	2277.78	4555.56	6833.33	9111.11
Net loan - Opening	20500.00	18222.22	15944.44	13666.67	11388.89
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	20500.00	18222.22	15944.44	13666.67	11388.89
Repayments of Loans during the period	2277.78	2277.78	2277.78	2277.78	2277.78
Net loan - Closing	18222.22	15944.44	13666.67	11388.89	9111.11
Average Net Loan	19361.11	17083.33	14805.56	12527.78	10250.00

Calculation of Interest on Actual Loans					
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	1587.61	1400.83	1214.06	1027.28	840.50
SBI-X Total					
Gross loan - Opening	40000.00	40000.00	40000.00	40000.00	40000.00
Cumulative repayments of Loans upto previous period	0.00	4444.44	8888.89	13333.33	17777.78
Net loan - Opening	40000.00	35555.56	31111.11	26666.67	22222.22
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	40000.00	35555.56	31111.11	26666.67	22222.22
Repayments of Loans during the period	4444.44	4444.44	4444.44	4444.44	4444.44
Net loan - Closing	35555.56	31111.11	26666.67	22222.22	17777.78
Average Net Loan	37777.78	33333.33	28888.89	24444.44	20000.00
Rate of Interest on Loan	8.20%	8.20%	8.20%	8.20%	8.20%
Interest on Loan Annualised	3097.78	2733.33	2368.89	2004.44	1640.00
Jammu and Kashmir Bank-IV D1 repayment from 31.03.2021 9Y					
Gross loan - Opening	3500.00	3500.00	3500.00	3500.00	3500.00
Cumulative repayments of Loans upto previous period	1166.67	1944.44	2333.33	2722.22	3111.11
Net loan - Opening	2333.33	1555.56	1166.67	777.78	388.89
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	2333.33	1555.56	1166.67	777.78	388.89
Repayments of Loans during the period	777.78	388.89	388.89	388.89	388.89
Net loan - Closing	1555.56	1166.67	777.78	388.89	0.00
Average Net Loan	1944.44	1361.11	972.22	583.33	194.44
Rate of Interest on Loan	7.9800%	7.9800%	7.9800%	7.9800%	7.9800%
Interest on Loan Annualised	155.17	108.62	77.58	46.55	15.52
Jammu and Kashmir Bank-IV D2 repayment from 31.03.2021 9Y					
Gross loan - Opening	1000.00	1000.00	1000.00	1000.00	1000.00
Cumulative repayments of Loans upto previous period	333.33	555.56	666.67	777.78	888.89
Net loan - Opening	666.67	444.44	333.33	222.22	111.11
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	666.67	444.44	333.33	222.22	111.11
Repayments of Loans during the period	222.22	111.11	111.11	111.11	111.11
Net loan - Closing	444.44	333.33	222.22	111.11	0.00
Average Net Loan	555.56	388.89	277.78	166.67	55.56
Rate of Interest on Loan	7.9800%	7.9800%	7.9800%	7.9800%	7.9800%
Interest on Loan Annualised	44.33	31.03	22.17	13.30	4.43
Jammu and Kashmir Bank-IV Total					
Gross loan - Opening	4500.00	4500.00	4500.00	4500.00	4500.00
Cumulative repayments of Loans upto previous period	1500.00	2500.00	3000.00	3500.00	4000.00
Net loan - Opening	3000.00	2000.00	1500.00	1000.00	500.00
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	3000.00	2000.00	1500.00	1000.00	500.00
Repayments of Loans during the period	1000.00	500.00	500.00	500.00	500.00
Net loan - Closing	2000.00	1500.00	1000.00	500.00	0.00
Average Net Loan	2500.00	1750.00	1250.00	750.00	250.00
Rate of Interest on Loan	7.98%	7.98%	7.98%	7.98%	7.98%
Interest on Loan Annualised	199.50	139.65	99.75	59.85	19.95
SBI-IX D1 Repayment from 31.03.2021 9Y					
Gross loan - Opening	4700.00	4700.00	4700.00	4700.00	4700.00
Cumulative repayments of Loans upto previous period	1566.67	2611.11	3133.33	3655.56	4177.78
Net loan - Opening	3133.33	2088.89	1566.67	1044.44	522.22
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00

Calculation of Interest on Actual Loans					
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Total	3133.33	2088.89	1566.67	1044.44	522.22
Repayments of Loans during the period	1044.44	522.22	522.22	522.22	522.22
Net loan - Closing	2088.89	1566.67	1044.44	522.22	0.00
Average Net Loan	2611.11	1827.78	1305.56	783.33	261.11
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	214.11	149.88	107.06	64.23	21.41
SBI-IX D4 Repayment from 31.03.2021 9Y					
Gross loan - Opening	11500.00	11500.00	11500.00	11500.00	11500.00
Cumulative repayments of Loans upto previous period	3833.33	6388.89	7666.67	8944.44	10222.22
Net loan - Opening	7666.67	5111.11	3833.33	2555.56	1277.78
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	7666.67	5111.11	3833.33	2555.56	1277.78
Repayments of Loans during the period	2555.56	1277.78	1277.78	1277.78	1277.78
Net loan - Closing	5111.11	3833.33	2555.56	1277.78	0.00
Average Net Loan	6388.89	4472.22	3194.44	1916.67	638.89
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	523.89	366.72	261.94	157.17	52.39
SBI-IX D5 Repayment from 31.03.2021 9Y					
Gross loan - Opening	10000.00	10000.00	10000.00	10000.00	10000.00
Cumulative repayments of Loans upto previous period	3333.33	5555.56	6666.67	7777.78	8888.89
Net loan - Opening	6666.67	4444.44	3333.33	2222.22	1111.11
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	6666.67	4444.44	3333.33	2222.22	1111.11
Repayments of Loans during the period	2222.22	1111.11	1111.11	1111.11	1111.11
Net loan - Closing	4444.44	3333.33	2222.22	1111.11	0.00
Average Net Loan	5555.56	3888.89	2777.78	1666.67	555.56
Rate of Interest on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
Interest on Loan Annualised	455.56	318.89	227.78	136.67	45.56
SBI-IX Total					
Gross loan - Opening	26200.00	26200.00	26200.00	26200.00	26200.00
Cumulative repayments of Loans upto previous period	8733.33	14555.56	17466.67	20377.78	23288.89
Net loan - Opening	17466.67	11644.44	8733.33	5822.22	2911.11
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
Total	17466.67	11644.44	8733.33	5822.22	2911.11
Repayments of Loans during the period	5822.22	2911.11	2911.11	2911.11	2911.11
Net loan - Closing	11644.44	8733.33	5822.22	2911.11	0.00
Average Net Loan	14555.56	10188.89	7277.78	4366.67	1455.56
Rate of Interest on Loan	8.20%	8.20%	8.20%	8.20%	8.20%
Interest on Loan Annualised	1193.56	835.49	596.78	358.07	119.36
Punjab National Bank-III D1 repayment from 01.02.2022 9Y					
Gross loan - Opening	10000.00	10000.00	10000.00	10000.00	10000.00
Cumulative repayments of Loans upto previous period	3333.33	4444.44	5555.56	6666.67	7777.78
Net loan - Opening	6666.67	5555.56	4444.44	3333.33	2222.22
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawal during the period	0.00	0.00	0.00	0.00	0.00
Total	6666.67	5555.56	4444.44	3333.33	2222.22
Repayments of Loans during the period	1111.11	1111.11	1111.11	1111.11	1111.11
Net loan - Closing	5555.56	4444.44	3333.33	2222.22	1111.11
Average Net Loan	6111.11	5000.00	3888.89	2777.78	1666.67
Rate of Interest on Loan	7.9000%	7.9000%	7.9000%	7.9000%	7.9000%
Interest on Loan Annualised	482.78	395.00	307.22	219.44	131.67
PNB III D5 dtd 26.09.2018 payment start from 01.02.2022. 9 yearly installment					

Calculation of Interest on Actual Loans					
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Gross loan - Opening	3500.00	3500.00	3500.00	3500.00	3500.00
Cumulative repayments of Loans upto previous period	1166.67	1555.56	1944.44	2333.33	2722.22
Net loan - Opening	2333.33	1944.44	1555.56	1166.67	777.78
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	2333.33	1944.44	1555.56	1166.67	777.78
Repayments of Loans during the period	388.89	388.89	388.89	388.89	388.89
Net loan - Closing	1944.44	1555.56	1166.67	777.78	388.89
Average Net Loan	2138.89	1750.00	1361.11	972.22	583.33
Rate of Interest on Loan	7.9000%	7.9000%	7.9000%	7.9000%	7.9000%
Interest on Loan Annualised	168.97	138.25	107.53	76.81	46.08
PNB III Total					
Gross loan - Opening	13500.00	13500.00	13500.00	13500.00	13500.00
Cumulative repayments of Loans upto previous period	4500.00	6000.00	7500.00	9000.00	10500.00
Net loan - Opening	9000.00	7500.00	6000.00	4500.00	3000.00
Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
Total	9000.00	7500.00	6000.00	4500.00	3000.00
Repayments of Loans during the period	1500.00	1500.00	1500.00	1500.00	1500.00
Net loan - Closing	7500.00	6000.00	4500.00	3000.00	1500.00
Average Net Loan	8250.00	6750.00	5250.00	3750.00	2250.00
Rate of Interest on Loan	7.9000%	7.9000%	7.9000%	7.9000%	7.9000%
Interest on Loan Annualised	651.75	533.25	414.75	296.25	177.75

Sr. No.	Bank	ROI on prepayment date	Date of Prepayment	Replaced with Bank	ROI of replaced Loan	Prepayment Amount	Benefit(%)	Benefit(%) retained with NTPC
Prepayment of Loans in 2020-21								
1	Vijaya Bank-VI	7.15%	24-Aug-20	HDFC-IX	6.30%	450000000	0.85%	0.43%
4	Bank of India-II	6.70%	7-Dec-20	Bank of India-IV	6.00%	2720000000	0.70%	0.35%
						3170000000		

INTEREST RATE MOVEMENT FY 2019-24							
S.NO	BANK	RATE OF INTEREST	From	To	Number of Days	Product	Weighted Average Rate of Interest
	Corporation Bank-III	8.10%	11-Jan-24	31-Mar-24	81.00	6.56	
	HDFC Bank Limited-III	7.95%	01-Jun-23	31-Mar-24	305.00	24.25	
	HDFC Bank Limited-IV	7.95%	01-Jun-23	31-Mar-24	305.00	24.25	
	HDFC Bank Limited-V	7.95%	01-Jun-23	31-Mar-24	305.00	24.25	
	State Bank of India - X	8.20%	25-Dec-23	31-Mar-24	98.00	8.04	
	Punjab National Bank III	7.90%	01-Apr-23	31-Mar-24	366.00	28.91	
	Jammu & Kashmir Bank-IV	7.98%	01-Apr-23	31-Mar-24	366.00	29.21	
	State Bank of India - VIII	8.20%	14-Feb-24	31-Mar-24	47.00	3.85	
	State Bank of India - IX	8.20%	14-Feb-24	31-Mar-24	47.00	3.85	
	Union Bank-II	8.10%	11-Jan-24	31-Mar-24	81.00	6.56	
	HDFC-IX	7.95%	01-Jun-23	31-Mar-24	305.00	24.25	
	PNB-IV	7.90%	01-Apr-23	31-Mar-24	366.00	28.91	
	State Bank of India - XII	8.20%	11-Jan-24	31-Mar-24	81.00	6.64	
	Corporation Bank-IV	8.10%	11-Jan-24	31-Mar-24	81.00	6.56	
	Bank Of India-IV	8.00%	01-Apr-23	31-Mar-24	366.00	29.28	

JBIC Kudgi Floating Rate

2019-20							
	01-04-2019	3.6038%	98	3.5317			
	08-07-2019	3.0506%	14	0.4271			
	22-07-2019	3.0243%	28	0.8468			
	19-08-2019	2.8640%	183	5.2411			
	18-02-2020	2.5600%	43	1.1008			
	01-04-2020			0.0000			
			366	11.1475	3.2217%	0.4	0.013
					4.3685%	0.6	0.026
							3.9750%
2020-21							
	01-04-2020	2.5600%	138	3.5328			
	17-08-2020	1.1884%	184	2.186619			
	17-02-2021	1.0549%	43	0.453598			
	01-04-2021						
			365	6	1.7889%	0.4	0.007
					4.3685%	0.6	0.026
							3.3830%
2021-22							
	01-04-2021	1.0549%	138	1.455734			
	17-08-2021	1.0066%	184	1.852139			
	17-02-2022	1.6427%	43	0.706365			
	01-04-2022						
			365	4.014299	1.1633%	0.4	0.005
					4.3685%	0.6	0.026
							3.1293%
2022-23							
	01-04-2022	1.6427%	138	2.26694			
	17-08-2022	4.3830%	184	8.06472			
	17-02-2023	6.0303%	43	2.593025			
	01-04-2023						
			365	12.92468	3.7455%	0.4	0.015
					4.3685%	0.6	0.026
							4.1765%
2023-24							
	01-04-2023	6.0303%	138	8.32			
	17-08-2023	6.6678%	187	12.47			
	20-07-2024	6.7328%	41	2.76			

01-04-2024			0					
	366	23.55	6.8063%			0.4	0.027	
			4.3685%			0.6	0.026	
								5.4327%
2024-25								
20-02-2024	6.7328%	41	2.76					
01-04-2024			0					
		41	2.76	7.1216%		0.4	0.028	
				4.3685%		0.6	0.026	
								5.5609%

會計科目	108 年		107 年		106 年		105 年		104 年		103 年		102 年		101 年		100 年	
	借方	貸方	借方	貸方	借方	貸方	借方	貸方	借方	貸方	借方	貸方	借方	貸方	借方	貸方	借方	貸方
101 現金	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
102 銀行存款	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
103 應收帳款	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
104 其他應收帳款	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
105 存貨	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
106 不動產	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
107 其他資產	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
108 負債	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
109 資本	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
110 盈餘	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
111 其他	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
112 合計	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00

Statement showing reconciliation of ACE claimed with the capital additions as per books

Name of Generating Station COD Date	Kudgi Super Thermal Power Station 15.09.2018				
SI No	Particulars	2024-25	2025-26	2026-27	2027-28 2028-29
1	Closing Gross Block as per IND-AS				
2	Adjustments (11+8+7-6-5-4+3)				
3	Add: Vendor discounting out of assets in the year				
4	Less: Unwinding expenses Capitalised				
5	Less: IND AS Adj of Decapitalisation out of ROW 6 (Mitigating the impact of IGAAP)				
6	Less: Total addition in capital OH asset class (including adjustments)				
7	Add: Decapitalisation of capital Overhauling during the year				
8	Add: IND AS Adj of Capitalisation out of ROW 5 (Mitigating the impact of IGAAP) Contractor FERV charged to P&L				
9	Closing Gross Block as per IGAAP (row 9+2)				
10	Opening Gross Block as per IGAAP (row 12+11)				
11	Adjustments				
12	Opening Gross Block as per IND-AS				
13	Addition as per IGAAP (row 1 - 10)				
14	Addition as per IGAAP corresponding to Kudgi solar				
15	Net Additions pertaining to Kudgi				
16	Less: Exclusions (items not allowable /not claimed)				
17	Net Additional Capital Expenditure Claimed (accrual basis) (General Ledger)				
18	Less: Undischarged liabilities				
19	Add: Discharge of Liabilities of allowed asset				
20	Net Additional Capital Expenditure Claimed (Cash basis) (General Ledger)				
	Total Add Cap Claim				

Shall be provided at the time of Truing up

**PART 1
FORM- L**

Name of the Petitioner
Name of the Generating Station

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

S. No.	Particulars	2024-25		
		Accrual Basis	Un-discharged Liabilities	Cash Basis
A	a) Opening Gross Block Amount as per books	1689352.18	27434.71	1661917.47
	b) Amount of IDC in A(a) above	205490.34	0.00	205490.34
	c) Amount of FC in A(a) above			
	d) Amount of FERV in A(a) above	83351.93	0.00	83351.93
	e) Amount of Hedging Cost in A(a) above			
	f) Amount of IEDC in A(a) above	92243.15	0.00	92243.15
B	a) Addition in Gross Block Amount during the period (Direct Purchase)			
	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 - CC Loans			
	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			

Name of the Petitioner:

Rs. in Lakh

Name of the Generating Station:

Statement of Capital Woks in Progress

(To be given for relevant dates and year wise)

S. No.	Particulars	2024-25		
		Accrual Basis	Un-discharged Liabilities	Cash Basis
A	a) Opening CWIP as per books	126426.98	25812.37	100614.61
	b) Amount of IDC in A(a) above	4812.18	0.00	4812.18
	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	756.04	0.00	756.04
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			

		Calculation of Interest on Normative Loan								PART-I FORM-N
Name of the Company :		NTPC Limited								
Name of the Power Station :		KIDDGI SUPER THERMAL POWER STATION STAGE-1								
S. No.	Particulars	Existing 2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	(Amount in Rs Lakh)		
	2	3	4	5	6	7	8			
1	Gross Normative loan – Opening	11,69,833.56	11,80,270.97	11,81,901.94	11,84,608.64	11,85,693.90	11,85,975.25			
2	Cumulative repayment of Normative loan up to previous year	3,97,902.98	48,209.0219	5,66,798.35	651,673.2553	736,684.156	821,744.0702			
3	Net Normative loan – Opening	7,71,930.57	6,98,191.94	6,15,103.59	5,32,935.38	4,49,009.75	3,64,231.18			
4	Add: Increase due to addition during the year / period		1,630.98	2,706.69	1,085.27	281.34	309.48			
5	Less: Decrease due to reversal during the year / period		0.00	0.00	0.00	0.00	0.00			
6	Net addition during the period *	10437.41	0.00	0.00	0.00	0.00	0.00			
7	Add: Increase due to discharges during the year / period		1630.98	2706.69	1085.27	281.34	309.48			
8	Less: Repayment of Loan	10437.41	1630.98	2706.69	1085.27	281.34	309.48			
9	Net addition during the period *	84588	84719.33	84874.90	85010.90	85059.91	85081.10			
10	Repayment adjustment on account of de-capitalisation	412.41	-	-	-	-	-			
11	Repayment adjustment on account of discharges/reversals corresponding to un-discharged liabilities deducted as on 1.4.2009		-	-	-	-	-			
12	Net Normative loan - Closing	698191.95	615103.59	532935.38	449009.75	364231.18	279459.55			
13	Average Normative loan	7,35,061.26	6,56,647.77	5,74,019.49	4,90,972.57	4,06,620.46	3,21,845.37			
14	Weighted average rate of interest	6.3904	6.4221	6.3345	6.4616	6.8271	7.2281			
15	Interest on Loan	47048.39	42170.58	36361.26	31724.68	27760.39	23263.30			
16										

(Petitioner)

Calculation of Interest on Working Capital

Name of the Company :		NTPC Limited							
Name of the Power Station :		KUDGI SUPER THERMAL POWER STATION STAGE-1							
		(Amount in Rs Lakh)							
S. No.	Particulars	Existing 2023-24	2024-25	2025-26	2026-27	2027-28	2028-29		
	2	3	4	5	6	7	8		
1	Cost of Coal/Lignite	1,24,982.44	121074.81	121074.81	121074.81	121074.81	121074.81		
2	Cost of Main Secondary Fuel Oil	1,350.83	2425.53	2425.53	2425.53	2432.18	2425.53		
3	Fuel Cost								
4	Liquid Fuel Stock								
5	O & M Expenses	4,795.29	5235.69	5494.71	5873.96	6241.03	6545.02		
6	Maintenance Spares	11,508.69	12565.66	13187.31	14097.51	14978.46	15708.05		
7	Receivables	1,52,886.13	150146.92	149860.06	149902.54	149879.92	149902.72		
8	Total Working Capital	295523.38	291448.61	292042.42	293374.35	294606.40	295656.13		
9	Rate of Interest	12.0000	11.9000	11.9000	11.9000	11.9000	11.9000		
10	Interest on Working Capital	35462.81	34682.38	34753.05	34911.55	35058.16	35183.08		

Petitioner

Computation of Energy Charges

Name of the Company: NTPC Limited
Name of the Power Station: KUDGI SUPER THERMAL POWER STATION STAGE-I

	2024-25	2025-26	2026-27	2027-28	2028-29
No of Days in the year	365	365	365	366	365
Sp. Oil consumption ml/kwh	1	1	1	1	1
Auxiliary consumption %	5.75	5.75	5.75	5.75	5.75
Heat Rate Kcal/Kwh	2,241.42	2,241.42	2,241.42	2,241.42	2,241.42

Computation of Variable Charges

Variable Charge (Coal) p/wh	524.760	524.760	524.760	524.760	524.760
Variable Charge (Oil) p/kwh	8.641	8.641	8.641	8.641	8.641
Total	533.401	533.401	533.401	533.401	533.401

Price of fuel from Form-15/15A

Coal Cost (Rs./MT)	7312.84	7312.84	7312.84	7312.84	7312.84
Oil Cost (Rs./KL) (After Adjustment)	81437.39	81437.39	81437.39	81437.39	81437.39
Coal GCV (kCal/Kg)	3300.25	3300.25	3300.25	3300.25	3300.25
Oil GCV (Rs./KL)	9369.08	9369.08	9369.08	9369.08	9369.08

Computation of Fuel Expenses for Calculation of IWC:

ESO in a year (MTUs)	16842.85	16842.85	16889.00	16842.85	16842.85
Cost of coal for 40 Days (Rs. Lakh)	121074.81	121074.81	121074.81	121074.81	121074.81
Cost of oil for 2 months (Rs. Lakh)	2425.53	2425.53	2432.18	2425.53	2425.53
Energy Expenses for 45 day (Rs. Lakh)	110761.56	110761.56	110761.56	110761.56	110761.56
Rate of Energy Charge = (Q _h X P _s) / (Q _s) X (GCV) _h	8.143738833	8.143738833	8.143738833	8.143738833	8.143738833
Heat Contribution from SFO / Alternate Fuel	9.369	9.369	9.369	9.369	9.369
Heat Contribution from coal	2232.046	2232.046	2232.046	2232.046	2232.046
Specific Primary Fuel Consumption = H _p / (GCV) _p	0.676	0.676	0.676	0.676	0.676
Rate of Energy charge from Primary Fuel (p/kwh) = ((REC) _p / (1-AUX))	494.587	494.587	494.587	494.587	494.587
Rate of Energy charge ex-his (p/kWh)	533.401	533.401	533.401	533.401	533.401

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)	8423.65	7164.84	7448.88	6716.89	6632.15	7544.98	6911.40	6828.82	7256.49	7595.91	7466.61	7743.45	7312.84
Wtd. Avg. GCV of Coal as received (kCal/Kg)	3578	3529	3509	3166	3261	3514	3323	3188	3197	3355	3458	3545	3385.25
Wtd. Avg. GCV of Coal as received after adjustment of 85 kcal/kg (kCal/Kg)	3493	3444	3424	3081	3176	3429	3238	3103	3112	3270	3373	3460	3300.25

Secondary Oil

Wtd. Avg. Price of Secondary Fuel (Rs./KL)	85841.10	85841.10	85841.10	78357.89	78357.89	78357.89	78357.89	81785.18	81533.46	81533.46	80720.84	80720.84	81437.39
Wtd. Avg. GCV of Secondary Fuel (kCal/L)	9361	9361	9361	9384	9384	9384	9384	9398	9398	9398	9308	9308	9369.08

Summary of issue involved in the petition

Name of the Company :		NTPC Limited
Name of the Power Station :		KUDGI SUPER THERMAL POWER STATION STAGE-1
1	Petitioner:	NTPC Limited
2	Subject	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 Kudgi Super Thermal power Station Stage (2400 MW) for the period from 01.04.2024 to 31.03.2029
3	Prayers: The Petitioner prays that the Hon'ble Commission may be pleased to: i) Approve tariff of Kudgi for the tariff period 01.04.2024 to 31.03.2029. ii) Allow the recovery of filing fees as & when paid to the Hon'ble Commission and publication expenses from the beneficiaries. iii) Allow reimbursement of Ash Transportation Charges directly from the beneficiaries on monthly basis based on auditor certificate, subject to true up. iv) Pass any other order as it may deem fit in the circumstances mentioned above.	
4	Respondents:	As per Petition
	Name of Respondents	
	a.	As per Petition
	b.	
	c.	
5	Project Scope	Kudgi Super Thermal Power Station (2400MW)
	Cost	
	Commissioning	
	Claim	
	AFC	As per form-I
	Capital cost	As per form-I
	Initial spare	
	NAPAF (Gen)	85%
	Any Specific	



ಕರ್ನಾಟಕ ರಾಜ್ಯ ಪೊಲೀಸ್
ಜಿಲ್ಲಾ ಪೊಲೀಸ್ ಕಛೇರಿ ವಿಜಯಪುರ

ನಂ:ಜಿಜ-2/ಕಟ್ಟಡ-67/2013.

ದಿನಾಂಕ: 12.05.2024

ಗೆ,

Chief General Manager
N.T.P.C Kudagi,
Tq-Kolhar
Dist-Vijayapur.

ಮಾನ್ಯರೆ,

ವಿಷಯ : ಕೂಡಗಿ ಪೊಲೀಸ್ ಠಾಣೆಗೆ ಒಂದು ಸುಸಜ್ಜಿತ ಕಟ್ಟಡ ಹಾಗೂ ವಸತಿ
ಗೃಹ [ಬ್ಯಾರಕ್] ಕಟ್ಟಿಸಿಕೊಡುವ ಕುರಿತು.

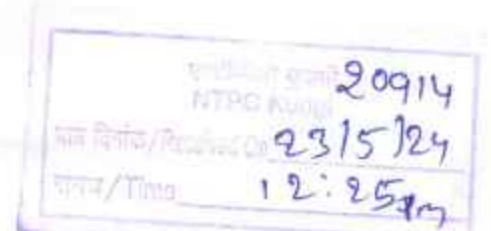
ಈ ಮೇಲ್ಕಂಡ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ, ಕೂಡಗಿ ಪೊಲೀಸ್ ಠಾಣೆಯು ದಿನಾಂಕ:25/03/2019 ರಂದು ಹೋಸದಾಗಿ ಪ್ರಾರಂಭವಾಗಿದ್ದು, ಪ್ರಸ್ತುತ ಠಾಣೆಯಲ್ಲಿ 02 ಪಿ.ಎಸ್.ಐ, 10 ಜನರು ಸಿ.ಹೆಚ್.ಸಿ, 24 ಜನರು ಸಿ.ಪಿ.ಸಿ ಒಟ್ಟು ಅಧಿಕಾರಿ/ಸಿಬ್ಬಂದಿ ಒಟ್ಟು 38 ಜನರು ಕರ್ತವ್ಯ ನಿರ್ವಹಿಸುತ್ತಿದ್ದು, ಸದರ ಠಾಣೆಗೆ ಇಲ್ಲಿಯವರೆಗೂ ಸ್ವಂತ ಜಾಗದಲ್ಲಿ ಸುಸಜ್ಜಿತ ಕಟ್ಟಡ ಇರುವುದಿಲ್ಲ. ಸದರಿ ಪೊಲೀಸ್ ಠಾಣೆಯು ಎನ್.ಟಿ.ಪಿ.ಸಿ ನಿಗಮದ ವತಿಯಿಂದ ನಿರ್ಮಿಸಿಕೊಟ್ಟಂತಹ ತಾತ್ಕಾಲಿಕ 04 ಪೋಲೀಸ್ ಕ್ಯಾಂಪ್ ನಿಂದ ನಿರ್ಮಿಸಿಕೊಟ್ಟಂತಹ ಶೇಡ್‌ನಲ್ಲಿ ಕಾರ್ಯ ನಿರ್ವಹಿಸುತ್ತಿದ್ದು ಸದರ ಶೇಡ್‌ನಲ್ಲಿ ಅಧಿಕಾರಿ & ಸಿಬ್ಬಂದಿ ವರ್ಗದವರಿಗೆ ಹಾಗೂ ಸಾರ್ವಜನಿಕರಿಗೆ ಸ್ಥಳಾವಕಾಶದ ಕೊರತೆ ಇದ್ದು, ಹಾಗೂ ಮಳೆಗಾಲ ಹಾಗೂ ಬಿಸಿಗಾಲದ ಸಂಧರ್ಭದಲ್ಲಿ ಕರ್ತವ್ಯ ನಿರ್ವಹಿಸಲು ತುಂಬಾ ತೊಂದರೆ ಆಗುತ್ತಿದ್ದು, ಕಾರಣ ತಮ್ಮದೆ ಜಾಗದಲ್ಲಿ ಸುಸಜ್ಜಿತ ಠಾಣೆ ಕಟ್ಟಡ ಹಾಗೂ ಅಧಿಕಾರಿ/ಸಿಬ್ಬಂದಿ ರವರಿಗೆ ವಸತಿ ಗೃಹ [ಬ್ಯಾರಕ್] ಮತ್ತು ಸರೇಡ್ ಗ್ರೌಂಡ್ ನಿರ್ಮಿಸಿ ಕೊಡಲು ಈ ಮೂಲಕ ಕೊರಿದೆ.

ತಮ್ಮ ವಿಶ್ವಾಸಿ

ಪೊಲೀಸ್ ಅಧೀಕ್ಷಕರು,
ವಿಜಯಪುರ.

ಪ್ರತಿ ಅಭಿನಂದನೆಗಳೊಂದಿಗೆ ಮಾಹಿತಿಗಾಗಿ :

- 1] ಹೆಚ್ಚುವರಿ ಪೊಲೀಸ್ ಮಹಾನಿರ್ದೇಶಕರು (ಜಿ&ಹೆಚ್‌ಆರ್), ಪೊಲೀಸ್ ಪ್ರಧಾನ ಕಛೇರಿ, ನಂ.02, ನೃಪತುಂಗ ರಸ್ತೆ, ಬೆಂಗಳೂರು.
- 2] ಪೊಲೀಸ್ ಮಹಾ ನಿರೀಕ್ಷಕರು, ಉತ್ತರ ಪಲಯ, ಬೆಳಗಾವಿ.



Annexure-02

Karnataka State Police
District Police Office Vijayapura

No:GB-2/Building-67/2013. Date:05.2024

Date: 22-05-2024

To,
Chief General Manager
N.T.P.C Kudagi
Tq- Kolhar
Dist- Vijayapur

Dear Sir.

Subject: Construction of a furnished building for Kudgi Police Station and accommodation (barracks) Reg.

This is with regards to the above subject, Kudgi police station started functioning on the Date: 25/03/2019, currently 02 PSI, 10 CHC, 24 CPC total officer/staff total 38 people are working in the station. This station does not have a well-equipped building in its own place. The said police station is functioning in a temporary 04 porta cabin shed constructed by NTPC Corporation and there is lack of space for officers & staff and public in the said shed and it becomes very difficult to perform duty during monsoon and hot season due to lack of well-equipped station building in the place.

It is hereby requested to construct a well-equipped station building and a residential house [barrack] for officers/staff and a parade ground in your own Land / area.

Yours Faithfully

Superintendent of Police,
Vijayapura.

For information on each compliment:

1] Additional Director General of Police (G&HR), Police Headquarters, No.02, Nripathuaga Road, Bangalore.

2] Inspector General of Police, North Zone, Belgaum

Annexure-03



ಕೃಷ್ಣಾ ಭಾಗ್ಯ ಜಲ ನಿಗಮ ನಿಯಮಿತ

(ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ಒಡೆತನದ)

KRISHNA BHAGYA JALA NIGAM LIMITED

(A Government of Karnataka Undertaking)

AGREEMENT

SUPPLY OF WATER
TO
NTPC- KUDGI STPP.

OFFICE OF THE
EXECUTIVE ENGINEER,
KBJNL : DAM DIVISION,
ALMATTI.



सत्यमेव जयते

INDIA NON JUDICIAL Government of Karnataka

e-Stamp

Certificate No.	: IN-KA20412768821407M
Certificate Issued Date	: 19-Aug-2014 12:28 PM
Account Reference	: NONACC (BK)/ kakscub08/ NIDAGUNDI/ KA-BJ
Unique Doc. Reference	: SUBIN-KAKAKSCUB0894392476858301M
Purchased by	: N T P C LTD KUDAGI
Description of Document	: Article 12 Bond
Description	: AGREEMENT
Consideration Price (Rs.)	: 0 (Zero)
First Party	: N T P C LTD KUDAGI
Second Party	: EXECUTIVE ENGINEER KBJNL DAM DIVISION ALMATTI
Stamp Duty Paid By	: N T P C LTD KUDAGI
Stamp Duty Amount(Rs.)	: 100 (One Hundred only)



Authorized Signatory
For Swami Vivekanand Sahakar
Bank Niyamit, Nidagundi-586213
Dt : Bijapur (Karnataka)

ORIGINAL ORIGINAL ORIGINAL ORIGINAL
ORIGINAL ORIGINAL ORIGINAL ORIGINAL
ORIGINAL ORIGINAL ORIGINAL ORIGINAL

-----Please write or type below this line-----

SUPPLY OF WATER AGREEMENT NO 1340/2014-15

The agreement made on 27th day of Sept - 2014 between KRISHNA BHAGYA JALA NIGAM LIMITED having its office at Almatti represented BY EXECUTIVE ENGINEER, KBJNL, DAM DIVISION, ALMATTI Basavanna Bagewadi Taluq, Bijapur District (hereinafter called "KRISHNA BHAGAYA JALA NIGAM LIMITED" which expression wherever the context so admits shall include its successors and assignees) on the ONE PART

AND

1/14

Statutory Alert:

1. The authenticity of this Stamp Certificate should be verified at "www.ahdilestamp.com". Any discrepancy in the details on this Certificate and as available on the website renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.

KUDGI Super Thermal Power Project, Post Kudgi, Taluk Basavana Bagewadi, Bijapur District, Pin:- 586121, of NTPC Limited (A Government of India Enterprise), having its registered office at NTPC BHAWAN, CORE-7, SCOPE COMPLEX, 7 INSTITUTIONAL AREA, LODI ROAD, NEW DELHI PIN:- 110003, (hereinafter called "NTPC" represented by its General Manager/ Authorized representative, which expression wherever the context so admits shall include its successors and assignees) on the OTHER PART.

WHEREAS NTPC has applied to government to supply water for its use, from the Almatti dam and the Government, vide the Government Order No.: WRD 59, KBN 2008 Bangalore Dt. 06.05.2010, has accorded permission to draw and utilize 5.2 TMC of water in a year from Almatti reservoir, required for the proposed 4000 MW capacity Super Thermal Power Project at Kudgi, in a Bijapur District, to be established by NTPC subject to the following conditions:-

1. *"In view of the usage of water for different sectors from Almatti reservoir, giving priority for irrigation, a separate storage should be created by NTPC Limited to meet one month requirement of water in a year and this quantity of water should be drawn from the Almatti reservoir only during the rainy season. The rain water should be kept stored and it should be utilized during the month of April or May when there will be deficit water in the reservoir.*
2. *An Agreement should be entered into with the project authorities of Krishna Bhagya Jala Nigam Limited before implementing the project.*
3. *Keeping in view the requirement of irrigation and drinking water demand in Almatti reservoir, a separate monthly schedule for the release of water to Kudgi Super Thermal Power Project from the reservoir should be prepared by Krishna Bhagya Jala Nigam and strictly adhered to."*

According to said order the NTPC will construct **MAKE UP WATER PUMP HOUSE**, required to draw water from the Almatti reservoir. In pursuance of the said agreement, and in consideration of the deposits and the monthly sums hereinafter made payable to Government and the covenants on the part of the NTPC hereinafter contain, the government hereby grants unto the NTPC the rights and liberties under conditions namely:

1. The authorized officers of KRISHNA BHAGYA JALA NIGAM LIMITED should be permitted at all reasonable times to inspect the structures of the water supply scheme of the NTPC and to check the water withdrawal records, which shall be maintained by the NTPC.
2. The NTPC shall draw water strictly as per the entitlement of **5.2 TMC per annum** as per permission granted by government vide GO No. WRD 59, KBN 2008 Bangalore Dt. 06.05.2010, as per the following monthly schedule.

S No.	Month	Quantity of Water in TMC
1	January	0.43*
2	February	0.43*
3	March	0.43*
4	April	-
5	May	0.43*
6	June	0.54

7	July	0.55
8	August	0.55
9	September	0.55
10	October	0.43
11	November	0.43
12	December	0.43
TOTAL		5.20

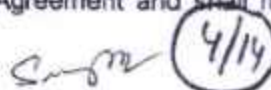
***Note:** Subject to availability of water considering the priority of drinking water and irrigation as per the **Govt Order. WRD 59, KBN 2008 Bangalore Dt. 06.05.2010**

3. Every year the drawl of water shall commence when the reservoir level is above 506.87 M. The intake channel sill shall be at RL 506.87 M i.e at MDDL.
4. The NTPC has been permitted to draw water to the sump by constructing intake channel along with Makeup water pump house from the back waters of Almatti reservoir. KBJNL shall lease the land required for the construction of Intake channel to the NTPC as per prevailing rent charges. Requisite approval of drawing shall be obtained from KRISHNA BHAGYA JALA NIGAM LIMITED. The construction of any structure shall not be endangered either canal, structure in the vicinity and shall be avoided or if any damage is caused shall be rectified by the NTPC at their cost.
5. The prevalent water rates fixed by the department of industries and commerce for the industrial use shall be paid to the KRISHNA BHAGYA JALA NIGAM LIMITED supported by the records of the water drawn (water meter readings).
6. For monitoring the quantity of water drawn by the NTPC, appropriate water meter of approved make shall be installed in the pump house in consultation with Executive Engineer, Dam Division, Almatti Dam. The records of water drawls on daily basis furnished to Executive Engineer, Dam Division, Almatti.
7. The NTPC shall either deposit a sum of Rs 52,80,000/- or submit a bank guarantee for the equal sum of amount or Pledge the NSC/ Fixed Deposit receipts for equal amount in favour of the Executive Engineer, Dam Division, Almatti Dam, within 15 days before the drawl of water. This deposit is to cover 3 months water charges.
8. The NTPC agrees to make the additional deposits in the event of revision of rates so that the deposit covers 3 months royalty charges at any given point of time. The NTPC shall also pay before the 10th of every month the royalty charges for actual quantity of water drawn during the previous month and intimate the same to the KRISHNA BHAGYA JALA NIGAM LIMITED. The rate for the water drawn being at charges of Rs 3200 per MCFT fixed for industrial use from the date of first drawl OR at such rates of Government fixes from time to time. In the event of termination of agreement, the above said deposit will be refunded to the NTPC without any interest.
9. This agreement for supply of water by KBJNL to NTPC shall be in force for a period of 25 (Twenty five) years or till life of plant whichever is later, from the date of agreement.
10. The list of duty staff of the NTPC authorities for operation and maintenance of the water supply scheme shall be registered with and in consultation with the KRISHNA BHAGYA JALA NIGAM LIMITED. The antecedents of such staff must be established from the police department by Executive Engineer, Dam Division, Almatti Dam, at the cost of the NTPC and a copy furnished to the Executive Engineer.



Signature (3/14)

11. The Chief Engineer, KBJNL, Dam zone, Almatti has right to cancel the permission granted if the NTPC committed breach of any conditions of this agreement at any point of time.
12. The NTPC should handle and manage all such public disputes arising at any time and the Water resources department/ KBJNL shall never be responsible for such disputes and the NTPC should bear all the expenses in settling such disputes.
13. The NTPC shall be well intimated that the permission given by Water Resource Department will be reviewed if necessary at any time and the NTPC will be asked to renew the permission at any time by Water Resource Department/ KBJNL.
14. The NTPC should conduct water audit after implementation of 4000 MW capacity of Kudgi Super Thermal Power Project and achieving optimum level of operation.
15. Before commencing the operations of the NTPC, the NTPC should inform the concerned officer of the Water Resource Department/ KBJNL and ensure that all the safety measures are taken and all the above conditions are complied with.
16. Choice of law
 - (i) This agreement will be governed by the laws of India
 - (ii) KBJNL and NTPC agree to comply with the provisions of all applicable Laws, Ordinances, Regulations and Codes in relation to the performance of this Agreement.
 - (iii) This agreement and all questions concerning the validity, interpretations and performance of any of its terms and provisions, or of any right or obligations of the parties hereto shall be governed by and resolved in accordance with the Laws of India. Any dispute arising out of or relating to this agreement shall be finally decided by Arbitration in accordance with the provisions of Arbitration and Conciliation Act, 1996. The venue of Arbitration shall be Bangalore, India. The Arbitration shall be conducted by a panel of three(3) Arbitrators. Each party to this agreement shall have the right to select one(1) Arbitrator and the two(2) Arbitrators selected by the parties hereto shall appoint the third Arbitrator. The reference to arbitration shall not restrict the parties, right to equitable remedies such as injunction.
17. KBJNL does not accept any responsibility to pay remuneration, compensation, provident fund, sales tax, ESI etc., or to provide any facilities to the employees of NTPC. NTPC expressly undertakes to pay PF and ESI, if any and obtain code number and shall abide by all the provisions of the Minimum Wages prescribed as per Karnataka minimum wages rules and remit the PF and ESI contributions if any to the concerned authorities. NTPC shall submit periodical returns to the concerned authorities. KBJNL will have absolutely no obligation to honour any liabilities and agrees to keep indemnified KBJNL against non-payment thereof.
18. NTPC shall be responsible for the supervision and control of persons engaged by him and take appropriate disciplinary action in case of misconduct committed by any of the personnel working with or under NTPC. NTPC shall issue appointments to such personnel for specific period as he engages them. NTPC agrees that there is no relationship of employer and employee between KBJNL and the personnel engaged by NTPC.
19. NTPC undertakes the performance of this Agreement as an independent establishment. This Agreement is a Principal-to-Principal Agreement and shall not



constitute a relationship of agency or partnership or a joint venture between the parties.


20. NTPC shall not be entitled to enter into any contract or commitment in the name and behalf of KBJNL nor bind or compromise on behalf of KBJNL in any way.
21. The NTPC shall be well informed that in case of failures to comply with any of the above conditions, the permission accorded to the NTPC for the drawl of water either form the Water Resource Department / KBJNL will be withdrawn without any prior notice. It is expressly agreed by the parties that the release of water is governed by the availability of water in the Almatti reservoir drinking water followed by the irrigation is the priority. In the event of non-availability of water, the KRISHNA BHAGYA JALA NIGAM LIMITED would not be responsible for any loses or consequential events.
22. The NTPC should have taken or obtained the necessary approvals from the respective authorities for laying the pipeline and construction of makeup water pump house.

IN WITNESS WHERE OF THE PARTIES MENTIONED ABOVE HAVE SIGNED THIS AGREEMENT THE DAY AND YEAR FIRST ABOVE WRITTEN.

Witness with name and address.

1.....

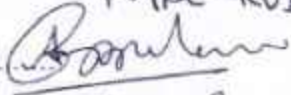
2.....



Executive Engineer,
KBJNL, Dam Division

By the Order and under the direction
of the Governor of Karnataka

Witness with name and address.

1. G. Brahmasi Rao
(G. BRAHMASI RAO
NTPC-KUDGI)

2. 
G. Appa Rao
NTPC - Kudgi


Authorized Signatory of NTPC Ltd.
Ms. Sathyabhama Annegowda
General Manager (Technical Services)
NTPC - Kudgi

Annexure-04



GOVERNMENT OF KARNATAKA

No: WRD 309 KBN 2023

Karnataka Government Secretariat
Vikasa Soudha
Bangalore, dated:12.02.2024

NOTIFICATION

Whereas the draft of the Karnataka Irrigation (Levy of Water Rates) (Amendment) Rules, 2018 was published as required by sub-section (1) of section 11 of the Karnataka Irrigation (Levy of Betterment Contribution and Water Rate) Act, 1957 (Karnataka Act 28 of 1957) in Notification No.WRD 272 KBN 2017(P-3), dated:18.09.2018 in part-IV-A, (No:42) of the Karnataka Gazette dated:25.10.2018 inviting objections and suggestions from all the persons likely to be affected within thirty days from the date of its publication in the Official Gazette.

Whereas, the said Gazette was made available to the public on 25th October, 2018.

And whereas, objections and suggestions received in this behalf have been considered by the State Government.

Now, therefore, in exercise of the powers conferred by section 11 of the Karnataka Irrigation (Levy of Betterment Contribution and Water Rate) Act, 1957 (Karnataka Act 28 of 1957), the Government of Karnataka hereby makes the following rules further to amend the Karnataka Irrigation (Levy of water Rates) Rules, 1965, namely:-

RULES

1. Title and Commencement.- (1) These rules may be called the Karnataka Irrigation (Levy of Water Rates)(Amendment)Rules, 2024.

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

[Handwritten Signature]
.....2

605
29/2/24

2. Amendment of rule 3C- Levy and determination of water rate for use of water for purposes other than agriculture.-
In the Karnataka Irrigation (Levy of Water Rates) Rules, 1965, in rule 3C-Levy and determination of water rate for use of water for purposes other than agriculture,-

- (i) in the heading, for the figure and letter "3C", the figure and letter "3-D" shall be substituted; and
- (ii) for sub-rule (1), including the provisos, the following shall be substituted, namely:-

"(1) Where water is used from any irrigation work for any purpose other than agriculture after obtaining necessary permission, water rate shall be levied at the following rates, namely:-

(a)	If water is used for domestic purpose	Rs.375 per Mcft
(b)	If water is drawn from natural water ways, rivers or streams for industrial use.	Rs.1.50 lakhs per Mcft
(c)	If water is drawn from Canal, Tank, Reservoir, Anicut, Bandhara, Pond, Kunta, Madagu, Talaparige belonging to Government or Nigam for Industrial use.	Rs.3.00 lakhs per Mcft

Note: After commencement of the Karnataka Irrigation (Levy of Water Rates) (Amendment) Rules, 2024 the said water rates shall be based on indexing to inflation (Yearly) specified by the Government, by Notification, from time to time."

By order and in the name of
the Governor of Karnataka

Vijayalakshmi S
(VIJAYALAKSHMI.S) 12/2/2024

Under Secretary to Government(Tech-5)
Water Resources Department

To: The Compiler, Karnataka Gazette. Bangalore-1, with a request to publish this Notification in Extra-Ordinary Gazette and send 500 copies to Water Resources Department

Copy to:

1. The Accountant General (A&E)/ (E&RSA)/G&SSA) Karnataka, Bangalore.
2. The Chief Secretary, Government of Karnataka, Vidhana Soudha, Bangalore.

3. The Additional Chief Secretary and Development Commissioner, Vidhana Soudha, Bangalore.
4. The Additional Chief Secretary to Government, Vidhana Soudha, Bangalore.
5. The Additional Chief Secretary to Government, Finance Department, Vidhana Soudha Bangalore.
6. The Additional Chief Secretary to Government, Commerce and Industry Department, Vikasa Soudha, Bangalore.
7. The Additional Chief Secretary to Government, Energy Department, Vikasa Soudha, Bangalore.
8. The Additional Chief Secretary to Government, Water Resources Department, Bangalore.
9. The Secretary to Government, Water Resources Department, Bangalore.
10. The Secretary to Government, Minor Irrigation Department, Bangalore.
11. The Secretary to Government, Department of Parliamentary Affairs and Legislation - for further needful action.
12. The Personal Secretary to Hon'ble Deputy Chief Minister, Vidhana Soudha Bangalore.
13. Managing Director, Krishna Bhagya Jala Nigam Limited, Bangalore.
14. Managing Director, Karnataka Neeravari Nigam Limited, Bangalore.
15. Managing Director, Cauvery Neeravari Nigam Limited, Bangalore.
16. Managing Director, Vishweshvaraiah Jala Nigam Limited, Bangalore.
17. The Chief Engineer, Water Resources Department, Bangalore.
18. The Chief Engineer (ISW), Water Resources Department, Bangalore.
19. The Chief Engineer, DSO, Anandrao Circle, Bangalore.
20. The Director, Directorate of CADA, Rajaji Nagar, Bangalore.
21. The Director, Walmi, Dharwad.
22. The Director, KERS, K.R. Sagar, Mandya.
23. The Director, Geomatics, Anandrao Circle, Bangalore.
24. The Registrar/ Chief Engineer, ACIWRM, Bangalore.
25. The Additional Secretary to Government,(Services), WRD, Bangalore.
26. The Deputy Secretary to Government, KBJN/MMI, WRD, Bangalore.
27. Joint Secretary to Government,(Cabinet), Vidhana Soudha, Bangalore (Case No. C 587/2023)
28. The Officer on Special Duty , Tec-1,2&3
29. The Under Secretary to Govt. Tech-4, & CADA, WRD, Bangalore.
30. Technical Assistant, Tech-6 & 7, WRD, Bangalore.
31. Section Guard File/ Spare copies.

Annexure-05

CEA (Cyber Security in Power Sector)

Regulation, 2024

New Delhi
January 2024

Chapter-1 Cybersecurity Governance Structure	0
1 Designating CISO and Alternate CISO.....	1
2 Information Security Division (ISD).....	3
3 Cyber Security Policy and Controls.....	6
4 Cyber Security Policy for Resilience	7
5 Cyber Security Training.....	8
6 Cyber Crisis Management Plan(C-CMP).....	0
7 Emergency Concept and Recovery Plan	1
Chapter-2 Cyber Security Risk Management	2
8 Cyber Risk Assessment and Mitigation Plan	3
9 Personnel Risk Assessment.....	4
10 Cyber Security Audit.....	5
11 Physical security.....	5
12 Cyber Security Measures	7
13 Phasing out of Legacy System	10
Chapter-3 Security Architecture & CII.....	12
14 Electronic Security Perimeter (ESP).....	13
15. Secure System Architecture	14
16 Identification of Critical Information Infrastructure (CII).....	15
Chapter-4 Operational Cybersecurity.....	17
17 Access Control Policy.....	18
18 Configuration Management and Change Management Process	20
19 Patch Management.....	22
20 Application Security and Testing.....	24
21 Maintenance and Testing	25
Chapter-5 Cyber incident Management.....	26
22. Incident Response, Reporting and Recovery Plan	27
23 Incident Management.....	29
24 Sabotage Reporting	30
25 Recovery Management.....	31
Chapter-6 Information Sharing and Data Security	32

26	Data Privacy	33
27	Data Security	34
28	Use of cloud Services	36
29	Cryptographic Algorithm	37
Chapter-7 Supply Chain Risk Management		38
30	Supply Chain Cyber Security Risk Management Plan	39
31	Procurement of ICT based goods and Services	40
32	Vendor Management	42
33	Outsourcing	0
Chapter-8 Miscellaneous.....		1
34	Documentation and Retention Policy	2
35	Miscellaneous	0
Standards: 2		
Abbreviations: - 3		
Definition of Terms:		4

CEA (Cyber Security in Power Sector) Regulation, 2024

Background:

Cyber-attacks on Power Supply System are carried out with malicious intent to compromise the System and to render grid operation in-secure. The compromise may result in mal-operations, equipment damages, cascading grid brownout/blackout.

The much-hyped air gap myth now stands shattered. The air gap artificially built between IT and OT through firewalls, can also now very well be jumped over, through the insider attacks or attacks carried out through social engineering. Tactics & Techniques used are Initial access, Execution, Persistence, Privilege Escalation, Defense Evasion, Command and Control, Exfiltration. Once inside the System, through privilege escalation, control of IT network and OT operations can be taken over remotely by these Nation sponsored, State sponsored adversaries and cyber attackers e.g., Ukraine Power Grid cyber-attack.

Further the loss or leakage of sensitive operational data may help Nation sponsored, State sponsored adversaries and cyber attackers design more sinister and advanced attacks e.g., Stuxnet attack at Natanz nuclear facilities. Besides the Responsible Entities, the Service Providers, Equipment Suppliers/Vendors and Consultants shall also have to strictly maintain a team of well-sensitized and trained cyber security personnel.

The strong and adaptive cyber security posture, based on threat intelligence, advisories and other inputs from periodical cyber audit reports shall have to be continuously improved upon. Reports of half yearly/yearly Cyber Audit of cyber security control, architecture, vulnerability management, network security, and periodic cyber security drills must be submitted for inspection by a dedicated team of sectoral CERT and CERT-In to flag any shortcomings in the compliances.

Cyber Resilience is a measure of preparedness, the ability to respond to any cyber-attack and to recover and resume critical business operation during/after a cyber-attack by any Responsible Entity. The Mandatory Requirements (MRs) detailed in the regulation includes measures, tools and processes intended to prevent cyber-attacks and improve cyber resilience, should be holistically built in by Responsible Entities in their cyber security framework as well as well as cyber security policy.

These regulations shall be mandatorily reviewed by CEA annually and as per directions from National Cyber Security Co-Ordinator or other Cyber Security Regulating Agencies as mandated by CERT-In.

Chapter-1 Cybersecurity Governance Structure

1 Designating CISO and Alternate CISO

- RI.1** The Responsible Entity shall mandatorily designate a CISO, and he should be an Indian national by birth. CISO shall confirm to qualification, if any, laid by Quality Council of India (QCI). In absence of CISO, the roles and responsibilities of CISO shall be executed by Alternate CISO. In case qualification for designating of CISO or Alternate CISO has been relaxed¹ for reasons recorded thereof, they must mandatorily acquire the minimum required cyber security skill sets within six months from the date of they been designated. In case CISO or Alternate CISO are unable to acquire the prescribed minimum skill sets within the time frame, the Responsible Entity must ensure that sufficient number of Engineers² are posted in the ISD having the qualifications prescribed for being designated as CISO.
- RI.2** The Responsible Entity shall maintain, serial wise record of all designated CISOs and Alternate CISOs. Date of taking over charge shall be duly recorded and signature of CISOs and Alternate CISOs appended against their names in the physical register³, maintained for the purpose. If any qualification requirement has been partly/fully relaxed for designating CISOs or Alternate CISO, the reason(s) shall thereof be recorded in the register.
- RI.3** The Responsible Entity, shall inform all his/her Employees vide Official Memorandum⁴ and to Stakeholders through display on its official website, details of the current CISO and Alternate CISO viz. Name, Designation, Office Phone and Office address.
- RI.4** The Responsible Entity shall document within seven (7) calendar days of the effective date of change, details of newly designated CISO or Alternate CISO, in the register as well as on the ISAC-Power Portal⁵ and shall also intimate to the concerned Sectoral CERT, CSIRT-Power, NCIIPC and CERT-In about the changes made.
- RI.5** The Responsible Entity shall define Roles and Responsibility of CISOs as laid out by CERT-In⁶ / NCIIPC⁷ and shall ensure that the duty of CISO is ring-fenced to the tasks of ensuring cyber security.

1 Relaxation may be provided by the board of directors against the agenda item to be discussed in their board meeting before designation of CISO or Alternate CISO with relaxation.

2 Board of director may decide to post officers other than engineers in case of sufficient number of engineers are not available for discharging the duty of ISD.

3 Register shall be kept under the custody of designating authority of CISO and Alternate CISO.

4 Official memorandum shall also contain the emergency contact details of CISO & Alternate CISO.

5 ISAC Power Portal shall be monitored and updated by CISO-MoP, or any other officer designated by MoP.

6 Refer Indian-Computer Emergency Response Team Ministry of Electronics and IT Government of India No. 6(12)/2017-PDP-CERT-In Dated: 14/03/2017.

7 Annexure 1.

- RI.6** The CISO shall be the nodal officer of the Responsible Entity for interaction on cyber security related issues with the Sectoral CERTs, CSIRT-Power, CERT-In, NCIIPC, CISO-MoP, Ministry of Power and other Government Agencies as well as for uploading cyber security related information pertaining to Responsible Entity on ISAC-Power Portal.
- RI.7** The CISO shall preferably report to the CEO/Head of the Responsible Entity. If for some reason, that is not possible, CISO must report directly to next senior most person in Responsible Entity.

2 Information Security Division (ISD)

- R2.1** The Responsible Entity shall have an Information Security Division (ISD), which shall be headed by CISO or the direct reporting officer of CISO.
- R2.2** The Responsible Entity shall ensure that the ISD must remain functional on 24x7x365 basis and is manned by sufficient numbers of Engineers² having valid certificate of successful completion of course⁸ on 'Cyber Security of Power Sector' from the Training Institutes designated by CEA.
- R2.3** The Responsible Entity shall ensure that ISD,
- i. Has deployed sufficient resources for cyber security of Cyber Assets belonging to the Responsible Entity as well as of other Entities for which Responsible Entity has entered into an agreement for ensuring cyber security,
 - ii. Has on-boarded all allocated used and unused public IPs with Cyber Swachhta Kendra (CSK).
 - iii. Is facilitated⁹ in all necessary respect, to timely act upon the advisories, guidelines and directive issued by NCIIPC, CERT-In, CSIRT-Power and Sectoral CERTs,
 - iv. Has deployed at each Access Point of all discrete Electronic Security Perimeter¹⁰, Intrusion Detection System and Intrusion Prevention System, capable of identifying behavioral anomaly of both IT and OT environment.
 - v. Shares with CERT-In, NCIIPC and CSIRT-Power regularly, the incident detected, reports on incident response by ISD and samples of infused malware or traces of other threat vectors as detected by ISD.
 - vi. Updates the firmware/software with the digitally signed OEM validated patches only.
 - vii. Enables only those ports and services that are required for normal operations. In case of any emergency requirement, the procedure as laid in Access management Policy shall be followed.
 - viii. Enforces strictly the protocol laid for grant of remote access in its Cyber Security Policy.
 - ix. Maintains logs of each perimeter devices (Firewall, UTM, etc.) and all other critical network components for the duration of atleast last 6 months and analyzed for all critical and high cybersecurity issues.
 - x. Retains document of FAT, SAT test results and report/ certificate of cyber tests carried out for compliance of Government Orders and Cyber Security Audit¹¹.
 - xi. Maintains all cyber logs and other records of all cyber incidents essential for digital forensics for at least¹² 90 days or as directed by MoP or CERT-In.

- R2.4** Head of ISD shall be responsible and held accountable for any lapses¹³ in ensuring cyber security and protection of Critical Information Infrastructures and the notified Protected System(s) of the Responsible Entity.
- R2.5** ISD shall continuously gather cyber threat intelligence, hence ISD shall have the capability to:
- i. Identify the trusted cyber threat intelligence sources, tap the information, and interpret the information relevant to cyber threats (including threats arising from Employees of the Responsible Entity, as well as from Employees of service providers and other entities), and
 - ii. Suggest measures that allows the Responsible Entity to Timely identify, assess, manage security threats and vulnerabilities and implement appropriate safeguards in its critical systems.
- R2.6** ISD shall identify and document, Cyber Asset/System wise:
- i. vulnerabilities as and when known, discovered, or disclosed publicly by the OEM/third party,
 - ii. possible internal as well as external cyber threats and exploits, from the above identified vulnerabilities as well as from the other known vulnerabilities,
 - iii. threat vectors and probable attack scenarios, with risk categorization. Threat Vectors, attack scenarios and risk categorization are to be continuously updated,
 - iv. likelihood of such threats resulting in any successful cyber-attacks and the impact on the Cyber Assets/Systems, as well as business continuity,
 - v. control measures to be enhanced commensurate with the criticality of the impact envisaged as above.
- R2.7** ISD shall on a quarterly basis review the cyber security preparedness and shall put up the report upon review as an agenda item in the Board Meeting, with suggested necessary action to be taken by the Responsible Entity.
- R2.8** ISD shall annually review the Cyber Security Policy Document. Any change(s) to be made in the document be it for strengthening the cyber security posture or to improve cyber resilience, shall be made only with the due approval of Board of Directors
- R2.9** ISD shall assess efficacy of existing cyber incidence response plan and shall put up the assessment report as an agenda item in the Board Meeting, with suggested measures for improvements to be taken by the Responsible Entity.
- R2.10** ISD shall periodically review circumstances leading to instances of cyber-attacks, if any occurred in the System of Responsible Entity as well as either domestically or globally. ISD on the basis of the review, shall put up as an agenda item in the next Board Meeting recommending the additional measures to be taken by the Responsible Entity to strengthen the cyber security posture.

- R2.11** ISD shall test randomly, the day-to-day operations of Critical System for being in compliance with Cyber Security Policy and the ISO/IEC Standards pertaining to area of responsibility of the Responsible Entity. Any non-compliance, if identified, shall be recorded, and reviewed. To address the cause(s) of non-compliance(s), ISD shall take actions for required improvement either in the applied security controls, security awareness, or training of the Employee(s).
- R2.12** ISD shall plan, document, and conduct security awareness programs to ensure that the Personnel having authorized cyber or physical (escorted or unescorted) access, receives on-going reinforcement on cyber security best practices. The reinforcement on cyber security best practices shall include security awareness programs held on at least monthly basis using mechanisms such as:
- i. Direct communications (e.g., emails, memos, computer-based training, etc.).
 - ii. Indirect communications (e.g., posters, intranet, brochures, etc.).
 - iii. Management support and reinforcement (e.g., presentations, meetings, etc.).
- R2.13** ISD shall on a quarterly basis review the implementation of the cyber security policy and such review must include:
- i. Review of current cyber security capabilities.
 - ii. Review of capabilities of cyber security tools and processes.
 - iii. Review of goals set for a targeted level of cyber resilience.
 - iv. Review of Incident response plan to improve upon cyber resilience level and strengthening of cyber security incident handling capabilities.
 - v. Review of measures for improvement in Cyber Security posture.
- R2.14** The Responsible Entity shall regularly review the necessary requirements and shall provide the resources needed for the establishment, implementation, maintenance and for continual improvement in the functioning of the ISD.

8 advance courses conducted by NPTI.

9 directive and permission for routine and crisis response.

10 NERC -CIP -005

11 FAT, SAT must include comprehensive cyber security tests of the component/equipment/system to be delivered/delivered at site.

12 90 days from date of the commissioning of the system/recovery from any incident, whichever is later.

13 Information Technology (Information Security Practices and Procedures for Protected System) Rules, 2018, Rule 3(3)(a)

3 Cyber Security Policy and Controls.

- R3.1** The Responsible Entity shall be ISO/IEC 27001 certified (including power sector specific controls as per ISO/IEC 27019).
- R3.2** The Responsible Entity shall have a documented Cyber Security Policy¹⁴, drawn upon the “Guidelines for Protection of Critical Information Infrastructure” issued by NCIIPC or any industry accepted standard recommended by the NCIIPC. The Cyber Security Policy shall amplify and resonate with the commitment and ability of the Responsible Entity, to secure its Critical Information Infrastructure(s) and also the Protected System(s) if any notified by appropriate Government.
- R3.3** The Responsible Entity shall make readily available, Cyber Security Policy document¹⁵ in implementation, to all its Personnel having access to, or are responsible for operating and securing Critical Information Infrastructure(s) and the Protected System(s) owned and/or operated by the Responsible Entity.
- R3.4** The CISO shall be responsible and accountable to implement the Cyber Security Policy through the Information Security Division.
- R3.5** 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 when the compensatory control(s) to mitigate residual cyber security risks have been duly provisioned and the due approval as laid in the Change Management Process has been accorded by the Board of Directors.
- R3.6** The CISO shall record the exemptions sought in statement of applicability controls, while getting the ISO 27001 certified. All needed exemptions and its justification shall be in synchronization with Cyber Security Policy of the Responsible Entity.
- R3.7** The Responsible Entity shall make provision in cybersecurity policy for allocation of sufficient Annual budget for implementing cyber security initiatives and for meeting emergency response arising out of cyber incidents.

14 The Cyber Security Policy shall leverage state-of-art cyber security technologies to mitigate the cyber security risks, like multiple layered Access Management Process.

15 Latest version as approved by Board of Directors.

4 Cyber Security Policy for Resilience

R4.1 The Responsible Entity shall include in their cyber security policy for ensuring resilience the following functions to discern, assess and manage cyber security risk associated with processes, information, networks, and systems:

- i. 'Identify' -critical IT/OT/ICS assets and map risks associated with each asset.
- ii. 'Protect' -assets by deploying suitable controls, tools, and measures, especially implementation of controls listed in IEC 62443 Standards.
- iii. 'Detect' -incidents, anomalies, and attacks through appropriate monitoring tools / processes, deployed at Security Operation Centre (SOC) or critical IT/OT/ICS assets are monitored at CSK of CERT-In and at CSIRT-Power.
- iv. 'Respond' -by taking immediate steps after identification of the incident, anomaly, or attack, including communication to appropriate Regulatory Authorities, CERT-In, CSIRT-Power and NCIIPC.
- v. 'Recover' -from incident through incident management, disaster recovery and business continuity framework.

R4.2 The Responsible Entity shall establish the process to receive, analyze and respond to disclosed vulnerabilities from internal and external sources. (e.g., internal testing, security bulletins/alerts/advisories, or from security research).

R4.3 The Responsible Entity shall ensure that the integrity of the information and availability of systems, and functionalities that are required to ensure integrity of safety functions shall be protected in accordance with power sector-specific standards* and legal requirements**.

* ISO 27019, NERC-CIP, IEC/ISA62443, IS 16335

** CERT-In, CEA, NCIIPC Rules and Regulations

5 Cyber Security Training.

- R5.1** 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.
- R5.2** The Responsible Entity shall ensure that all Personnel engaged in O&M of IT & OT Systems, including the personnel of contractors and service vendors, shall mandatorily undergo courses on cyber security of Power Sector from any of the training institute designated by CEA/NCIIPC.
- R5.3** The Responsible Entity shall ensure that the Training on cyber security shall cover the policies, access controls, and procedures as implemented for the Security of the Critical Cyber Assets, and shall include, at a minimum, the following required aspects addressing the personnel roles and responsibilities:
- i. The proper use of Critical Cyber Assets.
 - ii. Physical and electronic access controls to Critical Cyber Assets.
 - iii. The proper handling of Critical Cyber Asset information; and,
 - iv. Action plans and procedures to recover or re-establish Critical Cyber Assets and access thereto following a Cyber Security Incident.
 - v. User responsibility towards reporting weaknesses or events or incidents without any delay to the concerned authority.
- R5.4** The Responsible Entity shall review annually their cyber security training program and shall update it as per the feedback received from the Personnel. Annual Review shall record evaluation of the effectiveness of the trainings held.
- R5.5** The Responsible Entity shall ensure that their Cyber Security Training Program designed for their IT as well as OT O&M Persons must include following topics and additional topics as per their functional requirements and security concerns:
- i. User authentication and authorization.
 - ii. Cyber Security and Protection mechanisms of IT/OT/ICS Systems.
 - iii. Introduction to various standards i.e., ISO/IEC:15408, ISO/IEC:24748-1, ISO: 27001, ISO: 27002, ISO 27019, IS 16335, IEC/ISO:62443.
 - iv. Training on implementation of ISO / IEC 27001 and awareness on IEC 62443.
 - v. Vulnerability Assessment in the Critical System.
 - vi. Monitoring and preserving of logs of electronic access of Critical Cyber Assets.
 - vii. Detecting cyber-attacks on SCADA and ICS systems
 - viii. The handling of Critical System during cyber crisis.

- ix. Action plans and procedures to recover or re-establish normal functioning of Critical Cyber Assets and access thereto following a Cyber Security Incident.
- x. Hands on SCADA operation at any Regional Load Dispatch Centre.
- xi. Handling of risks involved in procuring COTS Products.
- xii. User authentication and authorization. / Identity and Access Management (IAM)
- xiii. Assessment and Mitigation of Supply Chain Contamination Risk

R5.6 NPTI and other training institutes³¹ 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 and other training institutes shall conduct these courses at all their branches on regular basis and shall maintain the list of the Participants successfully completing the course.

R5.7 The Responsible Entity shall ensure that none of their newly hired/current Personnel have access to Critical System, prior to the satisfactory completion of cyber security training program from the Training Institute designated³² in India, except in specified circumstances such as an emergency.

R5.8 The Responsible Entity shall give special focus to build awareness levels and skills of staff from non-technical disciplines and training of 'High-risk groups', such as those with privileged system access or deployed in sensitive business functions.

Note: The Responsible Entity shall ensure that Privileged users, Senior executives, cybersecurity personnel and third-party stakeholders are fully aware of their roles and responsibilities for ensuring cybersecurity.

R5.10 The Responsible Entity shall provide specific cybersecurity and resiliency training which inter alia should include:

- i. Phishing exercises to help employees identify phishing emails.
- ii. Preventive measures such as identifying and responding to indicators of breaches and obtaining OEM / Supplier/ Employee confirmation if behavior appears suspicious.
- iii. Mobile device policies and effective practices to protect mobile devices.

R5.11 The Responsible Entity shall ensure that CISO and members of ISD are regularly nominated for special cyber security training programs in IT, OT and ICS security with suitable certification and Periodic cyber security Audit.

³¹ Recognized by National Accreditation Board for Education and Training (NABET) for imparting training in cybersecurity.

³² Refer R5.6

6 Cyber Crisis Management Plan(C-CMP)

- R6.1** The Responsible Entity shall prepare a Cyber Crisis Management Plan and submit to the sectoral-CERT for review with intimation to Ministry of Power/CISO-MoP. Responsible Entity shall update their C-CMP based on 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.
- R6.2** The Responsible Entity shall ensure that the C-CMP is reviewed, after any major change in their ICT infrastructure or if the responsible entity gets impacted by major cyber incident causing potential damage or as required at least annually. The CISO of Responsible Entity shall ensure that all changes are made in C-CMP only with the due approval of Board of Directors. The changes made in C-CMP shall be communicated through a verifiable means to all the concerned Personnel of the Responsible Entity.
- R6.3** The Responsible Entity shall mandatorily define in their Cyber Security Policy, criteria(s) identified based on impact analysis, for declaring the occurrence of Cyber Security Incident(s) in their System, as a Cyber Crisis.
- R6.4** The Responsible Entity shall mandatorily designate and empower a senior level Personnel and his/her standby, by name and designation with their contact details made available in the Cyber Crisis Management Plan, to declare the occurrence of incident(s) to be a Cyber Crisis.
- R6.5** The Responsible Entity shall ensure that essential communication links remain functional even in case of occurrence of major disturbances, natural disasters, accidents, or any other emergencies, or if there is a risk of occurrence thereof, with their own emergency IT/OT personnel and/or of other utilities, with essential control systems and with external emergency organizations necessary for the protection and handling of, or recovery from, such incidents.
- R6.6** The CISO of the Responsible Entity shall be responsible and accountable for ensuring implementation of C-CMP by the ISD, during a cyber-crisis, as and when cyber crisis is declared by the designated Officer. (Refer Regulation, R6.4).

7 Emergency Concept and Recovery Plan

- R7.1** The Responsible Entity shall identify and evaluate relevant emergency crisis scenarios as part of a business emergency and continuity management. To this end, functions and application shall be classified according to their importance for business processes with particular attentions to a secure operational management. For the identified scenarios, emergency concepts and recovery plans shall be developed. The system design shall also be factored in the defined maximum down time and recovery periods, stated in the emergency concept.
- R7.2** The vendor[#] shall provide documented and tested procedures and recovery plan including expected restoration times for all relevant emergency and crisis scenarios. This documentation and these procedures shall be updated and retested as part of the approval process for Change Management.
- R7.3** The Responsible Entity shall ensure that wherever supports and services from the Vendor are required for recovery and emergency operations, this shall be mentioned in the Agreement or in the Contract signed with the Vendor.
- R7.4** The Responsible Entity shall document Recovery Plan(s) for every Critical System in the C-CMP. Recovery Plan(s) shall be based upon lessons drawn during handling of cyber incidents or mock drills exercises and shall be regularly updated to remove the identified shortcoming(s). Changes in the Recovery Plan shall be made in line with Process of Change Management.
- R7.5** The Responsible Entity shall communicate the updated Recovery Plan(s) to all its Personnel responsible for implementation of C-CMP.

#vendor includes Original Equipment Manufacturer, System Integrator, Suppliers, Service Providers

Chapter-2 Cyber Security Risk Management

8 Cyber Risk Assessment and Mitigation Plan

- R8.1** The Responsible Entity shall have a Cyber Risk Assessment and Mitigation Plan drawn upon the best practices being followed in the Power Sector. The risk assessment and mitigation plan along with the risk acceptance criteria shall be as approved by Board of Directors.
- R8.2** The Responsible Entity shall ensure that the Cyber Risk Assessment and Mitigation Plan drawn by them shall be capable to demonstrate that periodic cyber security risk assessment delivers consistent, valid, and comparable results to the previous assessment. The Cyber Risk Assessment and Mitigation Plan must contain a clearly defined risk matrix for both IT and OT environment and the latest modified risk acceptance criteria as approved by the Board of Directors.
- R8.3** The Responsible Entity shall ensure that ISD carries out Cyber Risk Assessment as per periodicity stipulated in their Cyber Risk Assessment and Mitigation Plan. Based upon the Cyber Risk Assessment report generated, ISD shall identify and characterize the inherent and/or residual risks within their Critical System and shall update the Mitigation Plan to minimize the residual risks.
- R8.4** The Responsible Entity shall ensure that ISD reviews the risk matrix, at least once in a Quarter or after any significant change in their risk acceptance criteria. For more effective implementation of Cyber Risk Assessment and Mitigation Plan, the risk assessment procedure and mitigations measures exercised in the previous quarters shall be analyzed in these Quarterly reviews.
- R8.5** The CISO shall be responsible for implementation and regular review of the Cyber Risk Assessment and Mitigation Plan. The review shall be based on internal and external feedbacks and cyber threat intelligence gathered by ISD.

9 Personnel Risk Assessment

R9.1 The Responsible Entity shall have a documented procedure for Personnel Risk Assessment, applicable to all Personnel having authorized cyber or authorized unescorted physical access to their Critical System, which shall be in accordance with the prevailing law of the land and shall be subject to the latest collective bargaining unit* agreements. Pursuant to this procedure, the designated nodal officer for grant of access, shall conduct Personnel Risk Assessment within thirty days of grant of such access to any Personnel.

* Trade union or any executive bodies interacting with the management for enforcement of rights of the personnel in regard to ensuring privacy as well as fundamental rights as enshrined in Constitution of India.

R9.2 The Responsible Entity shall ensure that all Employees including outsourced staff on their payrolls as well as employees of service providers and other utilities, who have authorized access to their Critical Systems, networks, and other computer resources, are subjected to the stringent supervision, monitoring and access restrictions. The Responsible Entity may also implement the User and Entity Behavior Analytics tools (UEBA) as part of their procedure for personnel risk assessment for combating insider cyber threats.

R9.3 The Responsible Entity in their Cyber Security Policy, shall have provisions of the requirement of periodic personnel risk assessment of the Employee before and during grant of the access to the critical cyber asset. The Responsible entity shall include these provisions in their Terms and Conditions of the Employment.

R9.4 The Responsible Entity to mitigate insider threats shall conduct background screening/checks of every new Employee as per the procedure for Personnel Risk Assessment.

R9.5 The Responsible Entity shall document in their Cyber Security Policy the process, and controls to mitigate risks from Personnel after their termination from employment or upon change of their job responsibilities.

R9.6 The Responsible Entity shall ensure that each Personnel engaged by them sign an undertaking to protect the Confidentiality, Integrity and Availability of the Critical System and sensitive information owned and operated by the Responsible Entity.

R9.7 The Responsible Entity shall put in place disciplinary process to take action against Personnel committing an information security breach.

10 Cyber Security Audit

- R10.1** The Responsible Entity shall make available all documents related to the implemented Security controls covering all its Cyber Assets to the Auditor if asked for.
- R10.2** The Responsible Entity shall facilitate, mandatory conduct of comprehensive cyber security audit two times a year, first audit between April to September and second audit between October to March for their entire IT system as well as once in a year for their entire OT system. If the scope of any periodic audit does not cover entire IT system or entire OT system, then in the next board meeting the reasons should be apprised by the CISO. The audit should commence immediately once it becomes due and the auditor should submit the report within 6 weeks from completion of the audit.
- R10.3** The Responsible Entity shall get their IT system audited through a CERT-In Empaneled Cyber Security IT/OT Auditor. Further, shall get their OT system audited through a CERT-In Empaneled Cyber Security OT auditor having power sector domain expertise. The Responsible Entity shall ensure closure of all critical and high-risk vulnerabilities within a period of one month and medium as well as low risks vulnerabilities before the next audit.
- R10.4** The Responsible Entity shall ensure that cyber–Security Audit shall be carried out as per ISO / IEC 27001 along with sector specific standard ISO/IEC 27019, IS 16335, ISO/IEC 27017 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 all non-conformities, based on the criticality. Effective closure of all non-conformities shall be verified during next audit.
- R10.5** ISD of the Responsible Entity shall place the audit report and compliance status of the same before the Board of Directors for review. The ISD shall implement the corrective actions suggested during review taken by the Board of Directors and shall submit to the Board of Directors, regular updates on the reduction in number of reported vulnerabilities and non-compliances being observed subsequently during internal and external cyber audits. ISD shall submit the audit reports along with action taken report on reported non-conformances to CSIRT-Power as well as to the respective sectoral CERT (if asked for) in secure mode within one month of submission of the report by the auditor.
- R10.6** The Responsible Entity may change the Cyber Security IT/OT Auditor at regular interval if the Auditing agency is not a government organization, but no three consecutive audits shall be done by the same Auditing agency.
- R10.7** The CISO of the Responsible Entity shall ensure that ISD has all the required systems and documents in place, as mandated in base line cyber security audit directive of NSCS¹⁷.¹⁷ List of Documents from NSCS Directive

11 Physical security

- R11.1** The Responsible Entity shall identify all cyber and non-cyber critical assets and protect them from physical attack and likely damages from sabotage or cyber-attack directly or indirectly.
- R11.2** The Responsible Entity shall ensure that all access points to perimeter of all Critical System is secured physically and monitored by employing physical, human, and procedural controls such as the use of security guards, CCTVs, card access systems, mantraps, bollards, etc. whichever appropriate.
- R11.3** The Responsible Entity shall ensure that the Physical access to the Critical Systems (especially OT and ICS) is restricted to a minimum and Physical access by outsourced staff/visitors shall be properly supervised.
- R11.4** The Responsible Entity shall ensure that the grant of Physical access to the Critical Systems is revoked immediately if the same is no longer required or in case of a perceptible threat of physical damage.
- R11.5** The Responsible Entity shall ensure that the network used for ensuring effective physical security by application of digital means, is kept completely separated from the production network.
- R11.6** The Responsible Entity shall ensure that all of their peripheral sites where equipment and devices for communication with the control system set up at peripheral site itself or at other site(s) where ICS is deployed, physical security controls shall be designed, developed and implemented or appropriate countermeasures to be applied to mitigate the risk if a sufficient level of physical protection for peripheral sites is not feasible.

12 Cyber Security Measures

- R12.1 The Responsible Entity shall ensure a separation (logical or possibly physical) between control network and business network. Segregation of IT network and OT network, through DMZ (Demilitarized Zone) and separation via firewalls and authentication checks must be implemented.
- R12.2 The Responsible Entity shall install network security devices, such as firewalls as well as intrusion detection and prevention systems, to protect its IT and OT infrastructure from security exposures originating from internal and external sources.
- R12.2 The Responsible Entity shall ensure that, before grant of any access to Critical Cyber Assets - cyber or physical (escorted or unescorted) to its Personnel, Personnel of contractors as well as service vendors, these personnel must have undergone cyber security awareness and training program. Further, during any risk assessment of these Personnel if done, nothing adverse has been recorded against them.
- R12.3 The Responsible Entity shall ensure that its critical and sensitive Cyber Assets are not discoverable on public platform by any external Entity, unless permissible under the provisions of Cyber Security Policy or explicit policy decision has been taken otherwise.
- R12.4 The Responsible Entity shall formulate and include in cyber security policy, an Internet access policy, to monitor and regulate the use of the Internet, Internet-based services, and Internet connected devices by its Personnel, e.g., social media sites, cloud-based internet storage sites, etc.
- R12.5 The Responsible Entity shall develop procedures for monitoring the user access to all its cyber asset that shall include:
- i. monitoring of logs for failed login attempts and account lockouts,
 - ii. ensuring secure handling of requests for username and password changes as well as procedures for authenticating anomalous or unusual customer requests,
 - iii. ensure that any changes/upgrades in procedure if required are approved and properly implemented and has provision for investigation if any anomaly is brought to the notice at any point of time,
 - iv. regularly review System requirement for any changes/upgrades required in hardware and software.
- R12.6 The Responsible Entity before granting any remote access, shall evaluate the cyber risk and potential impact in case of any compromise, as a consequence of the Cyber Assets/Resources being accessed remotely by its own Personnel, or Personnel of any service provider or other utilities. The measures for mitigation of cyber risk, if any, shall be taken, before granting any remote access and residual risk is to be approved by the competent authority.
- R12.7 The Responsible Entity shall ensure that before grant of any remote access to any Cyber Asset/Resources, cyber security of associated Cyber Assets/Resources are sufficiently

hardened against external threats through the use of firewalls and other security solutions along with appropriate access control mechanisms as provisioned in cyber security policy. Provided that the remote access to these Cyber Assets/Resources shall be limited to bare minimum duration and of least privileged facility that is deemed essential requirement for the continuity of the business process of the Responsible Entity.

R12.8 The Responsible Entity before implementing any remote access solution shall design and test, a prototype. The prototype of the design may be tested evaluated and documented for:

i) Connectivity, ii)Traffic protection, iii)Authentication, iv)Management, v)Logging, vi)Performance, vii)Security requirements, and viii)Interference with other Applications.

R12.9 The Responsible Entity shall ensure that the security controls are defined in the Cyber Security Policy pertaining to authorized or intruded unauthorized remote access, shall be based on the following inherent assumptions:

- i. The communication channel is susceptible to interception.
- ii. That the command and control of Cyber Assets/Resources if gained by malicious entities, shall attempt to extract sensitive data from the devices.
- iii. Through leveraged privileges to devices accessed shall try to gain access to IT and in particular OT systems of the Responsible Entity with objective to cause service/system disruption and damage.
- iv. That the networks made/are available for remote access cannot be trusted, hence further network segmentation/security is must.
- v. That remote end devices are highly infected with malware.

R12.10 The Responsible Entity if operating Substations remotely, then shall ensure that all such Substations are protected with multi layered ruggedized firewalls along with Intrusion Prevention Systems (IPS). e.g., verification of source addresses (IP addresses) not only at the substation's external interface (Firewall), but also by the target device(s).

R12.11 Sectoral CERTs may add requirement on Independent, fault tolerant implementation of critical plant/SCADA safety functions as enlisted in following clauses of ISO/IEC 27002:2013:

- i. 9.4.1(Restrict access to information and applications),
- ii. 13.1.3(Use segregation to protect networks),
- iii. 14.2.4(Restrict and control changes to software packages),
- iv. 14.2.7(Control outsourced system development projects),
- v. 17.2.1(Use redundancies to ensure information processing continuity)

- R12.12 The Responsible Entity shall ensure availability of valid licensed Anti-virus software on all servers and other computing systems. Regular updation of Anti-virus definition files and automatic anti-virus scanning shall be ensured by the Responsible Entity. ICS devices which are resource constrained or for which anti-virus software is not available, shall have other ways of detecting intrusion, anomaly, and changes in performance.
- R12.13 The Responsible Entity shall not permit BYOD devices within its own network, except in rarest of rare instance, that to after establishing a separate, external, dedicated network for use of such BYOD. This network shall be secured and monitored in a manner consistent with those pertaining to remote access segments. The Responsible Entity may, if desired, use such a network for third party-controlled client devices also.
- R12.14 The Responsible Entity shall ensure that their network infrastructure of ICS is divided into multiple zones as per functions and protection requirements. In particular, different technical and operational domains should be segregated from one another, as per criticality. If compliance to this is not technically feasible then suitable compensatory countermeasures shall be deployed and the same should be recorded with valid reasons and approval of the same shall be taken by competent authority. Refer Annexure-2-CEA document on reference architecture for power sector utilities.
- R12.15 The Responsible Entity shall ensure that the clocks of all relevant information processing systems within their ICS network including enterprise network are synchronized to a single reference time source¹⁶. If the single reference time source is in variance with the direction issued by CERT-In, the reasons thereof shall be put up for approval of Ministry of Power.

¹⁶ Time source shall be preferably NAVIC based.

13 Phasing out of Legacy System

- R13.1** The Responsible Entity shall ensure that all IT Systems deployed in enterprise IT or OT functionality have the ability to be upgraded, as the life cycle of the Equipment/System deployed in Power Supply System is longer than that of related IT Systems deployed therein.
- R13.2** The Responsible Entity shall ensure that their Information Security Division shall draw the list of all communicable equipment/systems nearing end of life or are left without support from OEM. Thereafter CISO of the responsible entity 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.
- R13.3** The Responsible Entity shall regularly conduct vulnerability assessment to detect security vulnerabilities in both IT and OT environment. The Responsible Entity shall also carry out periodic penetration tests, at least twice in a year, in order to conduct an in-depth evaluation of the security posture of the system through simulations of actual attacks on its systems and networks.
- R13.4** The Responsible Entity shall perform vulnerability scanning and conduct penetration testing prior to the commissioning of any system in case of replacement or hardening of the legacy system which offers internet accessibility and open network interfaces.
- R13.5** The Responsible Entity shall ensure that till equipment/systems nears end of life or are left without support of 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., whitelisting of applications installed may be explored across all legacy systems.
- R13.6** The Responsible Entity in addition to the periodic vulnerability assessment and penetration testing conducted to evaluate security posture, shall also conduct periodic table-top exercises, mock drills, etc. to improve its preparedness to handle cyber breach/incident. Such exercises should be followed-up with a detailed review by ISD.
- R13.7** The Responsible Entity shall document in their Cyber Security Policy a Standard Operating Procedure²⁸ for safe and secure disposal of outlived or legacy devices. The Responsible Entity shall frame suitable policy for disposal of the storage media and systems. The data/information on such devices and systems should be removed/destroyed as per set policy by using methods viz. wiping / cleaning / overwrite, degauss and physical destruction, as applicable.
- R13.9** The Responsible Entity shall ensure that before disposing of a telecommuting client device or remote access server, all sensitive data has been securely purged.

R13.10 The Responsible Entity shall ensure that the decommissioning and disposal of legacy hardware and software does not create system vulnerabilities by using processes to:

i. Run Vulnerability Assessment and Penetration Testing (VAPT) to reassess vulnerability and risk assessments whenever legacy systems are replaced with more modern systems.

ii. Remedial actions shall be immediately taken to address gaps that are identified during vulnerability assessment and penetration testing.

28 template of safe and secure disposal

Chapter-3 Security Architecture & CII

14 Electronic Security Perimeter (ESP)

- R14.1 The Responsible Entity shall identify and document the Electronic Security Perimeter(s) and all access points to these ESP(s). Access points to the Electronic Security Perimeter(s) shall also include any externally connected communication end point (for example, dial-up modems) terminating at any device within the Electronic Security Perimeter(s).
- R14.2 The Responsible Entity shall follow procedure of identifying “Electronic Security Perimeter” in case of distributed and/or hybrid information infrastructure, as per IS 16335 (5.4.1as amended from time to time).
- R 14.3 The Responsible Entity shall ensure that every Cyber Asset of their Critical System resides within an Electronic Security Perimeter(s)²⁰. Any non-critical Cyber Asset within a defined Electronic Security Perimeter shall also be identified and protected.
- R14.4 The Responsible Entity shall define for a dial-up accessible Critical Cyber Asset that uses a non-routable protocol, an Electronic Security Perimeter for that single access point at the dial-up device²¹. Communication links connecting discrete Electronic Security Perimeters shall not be considered part of the Electronic Security Perimeter. However, end points of these communication links within the Electronic Security Perimeter(s) shall be considered access points to the Electronic Security Perimeter(s)²².
- R14.5 The Responsible Entity to protect Cyber Assets against compromise, which could lead to mis-operation or instability in the associated Power Supply System, shall manage electronic access to these Cyber Assets by specifying a controlled Electronic Security Perimeter²³.
- R14.6 The Responsible Entity shall carry out cyber-Vulnerability Assessment of each of the electronic Access Points to all Electronic Security Perimeter(s) at least once in every 6 (six) months and/or after any change in security of system architecture. The Responsible Entity shall ensure that all critical and high vulnerabilities identified upon cyber vulnerability assessment of access points of each ESPs shall be closed, documented, and verified for the effective closure.
- R14.7 The Responsible Entity shall implement mechanisms (e.g., failsafe, load balancing, hot swap) to achieve resilience requirements in normal and adverse situations. Islanding mechanisms and other isolation techniques shall be implemented for resilient function and graceful degradation of service.

20: NERC-CIP for ESP examples

21: Modem, Phone Line Connection

22: secure and controlled connections to ensure the integrity and confidentiality of data transmitted.

23: Established to safeguard sensitive information, data, or resources from unauthorized access

15. Secure System Architecture

R15.1 The Responsible Entity during early planning phase, based on risk analysis shall work out required level of cybersecurity. Accordingly, Responsible Entity shall design their System Architecture to meet the necessary cyber security requirements.

R15.2 The Responsible Entity shall design the System Architecture and its individual components, so as to ensure cyber secure operations with minimal requirement of security hardening. The design of the system architecture shall have inherent capability to minimize repercussions arising from persistent attacks and un-authorized access, if any.

It is recommended that the Secure System Architecture should be based on the following principle:

- i. Minimal need to know principle: Each resource is assigned the only needed rights to execute the function for which they have been authorized. For example, Applications and network services are not to run under administrator privileges, but only with the bare minimum required system access right.
- ii. Defense in Depth principle: As security risks cannot be tackled via single protection measures, they are to be mitigated through the implementation of staggered, multi-level and complementary security measures.
- iii. Redundancy principle: The system architecture is designed so as to ensure that, the failure of individual components does not impair security related functions.

R15.3 The Responsible Entity shall establish baseline standards to facilitate consistent application of cybersecurity configuration to operating systems, databases, network devices and enterprise mobile devices within the IT environment and same for its OT/ICS environment. The Responsible Entity shall conduct regular enforcement checks to ensure that the baseline standards are applied as per best practices.

16 Identification of Critical Information Infrastructure (CII).

- R16.1 The Responsible Entity shall co-ordinate and furnish, the needed information to NCIIPC in regard to identification of CIIs and for notification of some of the identified CIIs as Protected System.
- R16.2 The Responsible Entity shall submit details of their Critical Business Processes and underlying information infrastructure along with mapped impact and Risk Profile to NCIIPC for identification of CIIs. The process of the notification/declaration of CII/Protected system by Appropriate Government shall follow thereafter.
- R16.3 The Responsible Entity having Critical Information Infrastructure/ Protected System shall comply to the guidelines issued by NCIIPC from time to time.
- R16.4 The Responsible Entity in regard to protect their identified critical information infrastructure and for ensuring business continuity shall collaborate/consult NCIIPC, CSIRT-Power, CERT-In and any other national agencies mandated for ensuring cyber security.
- R16.5 The Responsible Entity shall identify and categorize¹⁸ their Cyber Systems and the associated Cyber Assets for the application of cyber security requirements commensurate with the adverse impact in case of any cyber-attack.
- R16.6 The Responsible Entity shall submit to NCIIPC through Sectoral CERT, details of their Cyber Systems/ Cyber Assets which use a routable protocol to communicate outside the Electronic Security Perimeter drawn by the Responsible Entity or a routable protocol within a control center and dial-up accessible Cyber Assets, within 30 days from the date of their commissioning of such cyber systems/cyber assets in the Power Supply System.
- R16.7 The Responsible Entity shall follow up with appropriate Government, upon receipt of written communication from NCIIPC for notification of their identified CIIs, as a "Protected System" in the Official Gazette under Section 70 of ITAA 2008.
- R16.8 The Responsible Entity shall get reviewed their declared/notified Critical Information Infrastructure/ Protected Systems by NCIIPC at least once a year or upon any change in the security architecture, to address changes in functional dependencies, protocols, and technologies.
- R16.9 The Responsible Entity having Critical Information Infrastructure/ Protected System shall strictly comply with the "Rules for the Information Security Practices and Procedures for Protected System"^{19,20}
- R16.10 The Responsible Entity shall ensure that all Cyber Assets, identified/notified as Critical Information Infrastructure are recorded in their asset register and are considered for risk assessments, as well as for finalization of controls in statement of applicability for certification of ISO/IEC 27001:2022.

R16.11 The Responsible Entity having Critical Information Infrastructure/ Protected System shall report within the prescribed time limits, all Cyber Security Incidents to CERT-In, and NCIIPC. The details of the Root Cause Analysis carried out for these cyber incidents and all other information as sought shall be furnished to CERT-In and NCIIPC at the earliest.

18 Categorization as per impact on CIA triage and Safety.

19. As promulgated vide Gazette Notification dated 22 May 2018 <https://www.meity.gov.in/writereaddata/files/NCIIPC-Rules-notification.pdf>

Chapter-4 Operational Cybersecurity

17 Access Control Policy

- R21.1** The Responsible Entity shall document in their cyber security policy, an Access Control Policy to protect their Cyber Assets/Systems and also guidance for implementation.
- R21.2** The Responsible Entity shall ensure that the Access Control Policy must include the procedures and systems that shall:
- i. Limit access as appropriate, including during on-boarding, transfers, and terminations.
 - ii. Manage access permissions and authorizations, incorporating the principles of separation of duties and least privilege in order to restrict both visibility and accessibility.
 - iii. Re-certify user's access rights on a periodic basis (paying particular attention to accounts with elevated privileges including users, administrators, and service accounts). Addresses strong password controls for user's access to systems, applications, networks, and databases. Password controls shall inter alia include:
 - (a)Change password upon first log on, (b)Minimum password length and history, (c>Password complexity as well as maximum validity period. (d) Lock account access after 3 (three) failed log on attempts. (e>User credential data is stored using strong hashing algorithms. (f)Utilize Multi-Factor Authentication (MFA)
 - iv. Deactivate access privileges immediately of Personnel, no longer engaged with the Responsible Entity or whose access privileges have been withdrawn due to various reasons, including Personnel of former service providers.
 - v. Not allow to any Personnel except for functional reasons, by virtue of rank or position, any intrinsic right to access confidential data, applications, system resources or facilities.
 - vi. Accept access requests, made from systems located on Responsible Entity owned network infrastructure, with the same security requirements as the access requests and communication are granted from any other Entity owned network.
 - vii. All communication shall be secured (encrypted and authenticated).
 - viii. Allow access to physical and logical assets and associated facilities, limited to authorized users, processes and devices. The access shall be managed consistently with the assessed risk of any unauthorized access percolating to authorized activities and transactions.
 - ix. Secure all components of telecommuting and remote access solutions, including client devices, remote access servers and internal servers accessed through remote access, against variety of threats.
- R21.3** The Responsible Entity shall maintain a list of Personnel(s) designated for granting logical or physical access to protected Critical System or Critical Information. The Responsible Entity shall identify Personnel(s) by his/her Name and Designation, and the Critical System or Critical Information for which they have been designated for granting access.

- R21.4** The Responsible Entity in their Access Control Policy shall ensure that access to individual cyber-Assets/Resources is granted on a need-to-know basis and only after successful trust evaluation of the entity requesting access. Further, authentication for access to one critical resource shall not automatically mean grant of access to another critical resource(s) also.
- R21.5** The Responsible Entity shall ensure that the Access Control Policy is Cyber Asset/Resource based and shall have the flexibility to vary in accordance with the change in sensitivity and criticality of the Asset/Resource/data.
- R21.6** The Responsible Entity shall ensure that the Access Control Policy inter alia has provision for checking that:
- i. Users, devices, and processes are authenticated, commensurate with the risk of the access to the resource (e.g., individuals' security and privacy risks and other organizational risks).
 - ii. Identities are approved and bound to credentials and asserted in interactions.
 - iii. Physical access to assets is managed and protected appropriately.
- R21.7** The Responsible Entity in their Access Control Policy shall have provision for deploying additional controls and security measures to supervise Personnel(s) with elevated system access and entitlements (such as admin or privileged users). Such controls and measures should inter-alia include restricting the number of privileged users, periodic review of privileged user's activities, deny privileged users from accessing systems logs in which their activities are being captured, strong controls over remote access by privileged users, etc.
- R21.8** The Responsible Entity shall have requisite provisions and procedures in their cybersecurity policy for the secured use of mobile devices for operation and maintenance activities.
- R21.9** The Responsible Entity shall maintain list(s) of Personnel having authorized cyber access to Critical Cyber Assets as well as authorized unescorted physical access. The list shall have the details of the access of specific rights and resources.

18 Configuration Management and Change Management Process

- R18.1** The Responsible Entity shall document in their cyber security policy, a comprehensive process for Change Management that explicitly evaluates cyber risks, in terms of residual cyber risks identified both prior to and during any change. Further if any new cyber risk emerges post-change, as well as that while considering the request from CISO for exemption from any of the provision of cyber security policy, shall also be covered in the process for Change Management.
- R18.2** The Responsible Entity shall ensure that the Process for Change Management details the supporting Configuration Management activities, e.g., to identify controls and document all changes made or to be made in the hardware and software components of Critical System and the same shall be reviewed for relevancy and impact on business (technical, financial and reputation).
- R18.3** The Responsible Entity shall ensure that for any planned change, at minimum the Process for Change Management shall mandate:
- i. A description of the proposed change,
 - ii. The risk the system shall be exposed to, in implementing the change.
 - iii. Test procedure(s) and roll-out-plan and fallback plan,
 - iv. Time & duration for testing and change,
 - v. Report on testing carried out in a non-productive environment,
 - vi. Result from implemented change,
- R18.4** The Responsible Entity shall ensure that only those configuration changes in a cyber asset be implemented which has been approved as per the process of Change Management. The changes to be performed shall follow the accepted engineering practices for testing and in accordance with the Change Management Process.
- R18.5** The Responsible Entity shall ensure that all changes in software and/or update shall be version controlled and all relevant supporting documentation shall be preserved as per their Change Management policy.
- R18.6** The Responsible Entity shall ensure that a fallback procedure for aborting and recovering from unsuccessful changes has been documented in the process for Change Management. The procedure shall be available with ISD and communicated to all team members. The responsible entity shall maintain the record of all unsuccessful attempted changes with reason thereof.
- R18.7** CISO shall record the details of all emergency changes made along with reasons in a register which shall be submitted for post facto approval as per the process of Change Management.
- R18.8** The responsible entity shall ensure that the configuration details of Critical System shall be updated with each changes made and at all times the configuration details maintained

shall be the current one. The configuration details shall be kept in other than the same environment of the cyber asset and may be kept on a backup device if in place.

R18.9 The Responsible Entity shall ensure that the decommissioning of any cyber asset shall follow only after verifying that the cyber asset is no longer required, or an upgraded/replacement has been/is being installed. The decommissioning process shall include the removal of software and information available from the cyber asset. Sensitive software and information shall be securely removed and shall be preserved under the custody of CISO.

R18.10 The Responsible Entity shall ensure that the use of live data for testing new system or system changes may only be permitted where adequate controls for the security of the data are in place.

19 Patch Management

R19.1 The Responsible Entity shall document for all assets of their critical systems in detail, the patch management procedures (the procedure for security patch installation and uninstallation as well as procedures for rollback). Further, the Responsible Entity shall also ensure that document includes the identification, categorization, and prioritization of security patches. Processes executed as part of this patch management procedure should meet recognized standards (like ISMS / ISO/IEC 27001, 27K family, IEC 62443, etc.)

R19.2 The Responsible Entity shall establish timeframe for application of each category of security patches and ensure its implementation in a timely manner²⁴.

R19.3 The Responsible Entity shall verify the integrity of security patches & updates, and before deployment into the production environment shall perform rigorous testing so as to ensure that the application of patches do not impact other systems²⁵. To facilitate a fast and easy return to the latest functional version and configuration test, in case of faulty patches or failed tests a fall back, rollback options shall be included in patch management procedure.

Note: The installations of security patches and firmware updates for process related components (e.g., Controllers, PLCs, field units, protection devices) might require a facility shutdown, e.g., during a revision. Ideally, such components should be implemented and installed in a way that allows for on location patching with minimal testing efforts and without removal of the actual component.

R19.4 The ISD of the Responsible Entity shall ensure that Patch installations and un-installation in critical systems do not occur automatically, however for exception, documented permission shall be taken by CISO.

Note: The Responsible Entity may authorize through written instruction(s) the concerned Employee, or the nodal officer of the service provider engaged, to install the security patches and updates.

R19.5 The Responsible Entity shall ensure that the security updates and patches are made available by the OEM/Supplier for all system components throughout the entire contractually stipulated operating timeframe.

Where the OEM/Supplier does not provide entire systems, he shall indicate the necessary processes and requirements to install security patches and other updates on the third-party components used by the system. The OEM/ Supplier must inform in writing to the Responsible Entity, before its end of contractual term, the End of Support/ End of life of all hardware/ software/ system, including those of third parties, supplied by them".

R19.7 The Responsible Entity shall ensure that where no security patch is available to address a vulnerability, hardening controls are instituted to reduce any risk posed by such vulnerability to such a system and even in this case relevant²⁶ security controls must be implemented in a time bound manner.

R19.8 The Responsible Entity shall ensure that on each patch, OEM/Supplier has done clear labelling and provided version number. Where patches need specific firmware versions, compliance by OEM/Supplier shall be verified and ensured separately by the Responsible Entity.

24. DHS Guidelines

25. Provision for smaller entity

26. As per OEM/Supplier Recommendations

20 Application Security and Testing

- R20.1** The Responsible Entity shall ensure that regression testing²⁷ is undertaken before new or modified system is implemented. The scope of tests should cover Functionality, Security controls and system performance under various stress-load scenarios and recovery conditions.
- R20.2** The Responsible Entity shall ensure that no Software/Application is introduced in the production environment without adequate testing. Certificates on testing of security features of software/Application should be mandatorily provided by OEM obtained from third party certification bodies designated by MoP.
- R20.3** The responsible entity shall ensure that all Software/Applications as well as websites must pass through Security Audit before being hosted on Internet. Any changes/update/upgrades in software/applications as well as websites shall need to pass through security audit before being hosted on Internet.
- R20.4** The Responsible Entity to identify plausible complexities, dependencies and weaknesses that may have been overlooked in its recovery plans, shall include in testing all scenarios that cover breaches affecting multiple portions of the Responsible Entity's ecosystem. Traditional isolated testing implicitly assumes that all other systems operate as usual.
- R20.5** The Responsible Entity shall ensure that their OEM/Supplier of must document both the necessary test cases and the expected results of a successful test run. (Test book, depending on system criticality, functional testing might require specific test system at the supplier's location and additional testing at the location of Responsible Entity).

²⁷ Regression Testing after every change to ensure that the change introduces no unintended breaks.

21 Maintenance and Testing

- R21.1** The Responsible Entity shall establish and manage a baseline of network operations and expected data flows for users and systems for their critical business functions...
- R21.2** The Responsible Entity shall perform on their own or through Vendor from the listed Trusted Sources, the System Healthiness Scanning of critical systems, which shall include but not limited to the following: -
- i. Match each open port to a service and protocol.
 - ii. Identify server uptime to latest patch releases.
 - iii. Identify the application behind the service and the patch level using banners or fingerprinting.
 - iv. Verify the application to the system and the version.
 - v. Locate and identify service remapping or system redirects.
 - vi. Identify the components of the listening service.
 - vii. Use UDP-based service and Trojan requests to all the systems in the network.
 - viii. Exhaustive Malware Scanning for hostile or intrusive software, including computer viruses, worms, Trojan horses, ransomware, spyware, adware, scareware, and other malicious programs.
 - ix. Lockout Testing to mitigate the brute force attack etc.
 - x. Password Cracking to mitigate the brute force attack, cryptographic attack etc.
- R21.3** The Responsible Entity shall maintain all testing and maintenance records as per the document retention policy.

Chapter-5 Cyber incident Management

22. Incident Response, Reporting and Recovery Plan

R22.1 The Responsible Entity shall develop a risk-based cybersecurity incident response and recovery plan for various scenarios including denial of service attacks, malicious disinformation, ransomware attacks, as well as other extreme but plausible scenarios.

NOTE: The Responsible Entity shall take into consideration the past cybersecurity incidents and current cyber-threat intelligence in developing incident response and recovery plan which shall be in conformity with their business continuity plans, policies and procedures.

R22.2 The Responsible Entity shall establish and maintain procedures for implementation of incident response and recovery plan that should include:

- i. timely notification and response of the cyber event detected.
- ii. a process to escalate incidents to appropriate levels of management, including legal and compliance functions.
- iii. communication with key stakeholders.
- iv. The response and recovery plan shall define responsibilities and actions to be performed by employees and support / outsourced staff in the event of cyber-attacks or breach of cyber security mechanism.

R22.3 The Responsible Entity shall ensure that their incident response and recovery plan is effective in timely restoration of systems affected by incidents of cyber-attacks or breaches. The provisions for recovery made in the plan shall be in line with the Recovery Time Objective (RTO) and Recovery Point Objective (RPO) as specified in their Cyber Security Policy as well as in Cyber Crisis Management Plan.

R22.4 The Responsible Entity shall test the efficacy of the Cyber Security Incident Response and Recovery Plan, at least annually through mock drill(s) carried out as simulation exercise(s), if feasible or as a tabletop exercise(s) with wider participation of their employees, in consultation with CERT-In and sectoral CERT and in case if any shortcomings observed, suitable changes in the Cyber Security Incident Response and Recovery Plan shall be made.

R22.5 The Responsible Entity in their response and recovery plan shall define responsibilities and actions to be performed by employees and support / outsourced staff in the event of cyber-attacks or breach of cyber security. The finer details of responsibilities and actions to be performed shall be made part of Cyber Crisis Management Plan.

R22.6 The Responsible Entity shall ensure that alerts generated from monitoring and detection system are thoroughly investigated, including impact of such alerts, in order to determine activities that are to be performed to prevent escalation of such potential incident of cyber-attack or breach, mitigate its effect, and re-occurrence.

Note: The response activities should be coordinated with internal and external stakeholders (e.g., external support from law enforcement agencies).

R22.7 The Responsible Entity shall report all Cyber Security Incidents, classified as reportable incident, as per procedures and in the formats prescribed by CERT-In / NCIIPC (for CIIs and PSs) & CSIRT-Power.

R22.8 The Responsible Entity shall prepare periodically, Cyber Incidence Reports containing information on threats and cyber-attacks if any encountered. The controlled copy of the report shall be submitted to Ministry of Power as well as NCIIPC.

Note:The report shall contain measures taken to mitigate vulnerabilities, threats and attacks including information on bugs/vulnerabilities/threats that may be useful for other Responsible Entities,

R22.9 The Responsible Entity shall ensure that during any Cyber Incident, their ISD shall monitor minutely and record every details of cyber security incidents in both IT and OT infrastructure.

R22.10The Responsible Entity shall carry out Root Cause Analysis of each cyber incidents and work out the corrective action in response and recovery plan, to prevent and effectively mitigate any re-occurrence of such incidents.

R22.11The Responsible Entity shall ensure that each cyber incident is handled as per Cyber Security Incident Response and Recovery Plan and the declared cyber-crisis is handled as per Cyber Crisis Management Plan.

R22.12The head of the ISD shall compile details of incident detection, incident handling, learnings from incident and damage claims made if any and shall report to CERT-In, NCIIPC as well as CSIRT-Power.

R22.13The Responsible Entity shall mandatorily define in their Cyber Security Policy, risk acceptance criteria(s) determined on the basis of impact analysis.

R22.14 The Responsible Entity shall document in their cybersecurity policy, the criteria for declaring the occurrence of any Cyber Security Incident(s) as a Cyber Crisis, the Responsible Entity shall also designate an officer by the name and designation, who shall declare a cybersecurity incident as a cyber crisis. The Responsible Entity may designate an alternate officer also.

Note:the information of the designated officer shall be updated regularly by the HR department of the responsible entity and the updated information shall be disseminated to all the operating personnel responsible for handling of cyber crisis.

23 Incident Management

- R23.1** The Responsible Entity shall have procedures for the recognition of and for making their operating Personnel aware of sabotage* events on their infrastructure and multi-site sabotage likely to affect the functioning of Critical System.
- R23.2** The Responsible Entity shall provide sabotage response guidelines to all its Personnel, including information of contact persons for reporting disturbances due to sabotage.
- R23.3** The Responsible Entity shall designate Personnel for the communication of information concerning sabotage/ Cybersecurity incidents to the sectoral CERT, CSIRT-Power, NCIIPC as well as CERT-In.
- R23.4** The Responsible Entity shall have the capability to conduct or assist in forensic investigations of cyber incidents and implement 'protective and detective controls' to facilitate the investigative process. The Responsible Entity shall take appropriate steps so that investigations can still be performed post-event to the extent possible, e.g., through preservation of necessary system logs and evidence.
- Note:***The Responsible Entity shall establish relevant system logging policies that include the types of logs to be maintained and their retention periods.*
- R23.5** The Responsible Entity shall retain all logs and records of security devices such as firewall, Intrusion Detection System, Intrusion Protection System, SIEM etc., as well as digital forensic records and logs of affected Cyber Assets and shall preserve them for at least 90 days and make them available as and when called upon for investigation by the concerned Agencies.

24 Sabotage Reporting

- R24.1** The Responsible Entity shall incorporate procedure for identifying and reporting of sabotage in their Cyber Security Policy, within 30 days from notification of the CEA (Cyber Security in Power Sector) Regulation or grant of license to the Responsible Entity.
- R24.2** The head of the ISD shall be liable for reporting of identified sabotage(s) as per procedure laid in the Cyber Security Policy of the Responsible Entity.
- R24.3** The head of the ISD 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 CERT-In within 24 hours of occurrence.
- R24.4** The head of the ISD shall submit to National Critical Information Infrastructure Protection Centre (NCIIPC) the report on every sabotage classified as cyber incidents(s) on "Protected System" within 24 hours of occurrence.

25 Recovery Management

R25.1 The Responsible Entity shall set up data-sharing agreements in advance, as in the event of a successful cyber-attack that results in compromise of the integrity of the Responsible Entity's data, a successful recovery may require obtaining uncorrupted data from third parties and/or other Entities.

R25.2 The Responsible Entity shall work together with its interconnected entities to enable the resumption of operations (the first priority being its business-critical services) as soon as it is safe and practicable to do so without causing unnecessary risk to the allied sector or further detriment to system stability.

Note: Responsible Entity's systems and processes are often interconnected with the systems and processes of other entities within its ecosystem, in the event of a large-scale cyber incident it is possible for a Responsible Entity to pose contagion risk (i.e., propagation of malware or corrupted data) to, or be exposed to contagion risk from, its ecosystem (for example from or to Load Dispatch Centers).

R25.3 The CISO shall ensure that each cyber incident is handled strictly as per the Cyber Security Incident Response and Recovery Plan as detailed in cybersecurity policy or as per Cyber Crisis Management Plan in case of cyber crisis. The Responsible Entity shall ensure that the Incident Response and Recovery Plan are executed as per the laid processes and procedures to ensure timely and effective restoration of systems or assets affected by cybersecurity incidents.

R25.4 The Responsible Entity shall endeavor to improve the Incident Response and Recovery Plan and that the recovery strategies are updated from time to time by incorporating in the plan, the lessons learned.

R25.5 The Responsible Entity shall review each and every recovery activities the performed incident wise and may communicate the best practices on recovery activities to the internal and external stakeholders directly or indirectly concerned with the incident handling.

Chapter-6 Information Sharing and Data Security

26 Data Privacy

R26.1 The Responsible Entity shall document a Privacy Policy to support compliance of cyber security activities with minimum data protection and privacy standards. The Responsible Entity shall assess and address whether, when, how, and the extent to which personal information is shared outside the organization as part of cyber security information sharing activities. A process should be instituted to conduct a privacy review of the Responsible Entity's anomalous activity detection controls and Standard Operating Procedure (SOP) for monitoring of cyber security architecture-

Note: Manufactures, and suppliers are requested to supply the technical and organizational requirement of the existing protection regulation as operative functions of their products.

R26.3 The Responsible Entity shall ensure that adequate steps have been taken to identify and address the privacy implications of identity management and access control measures to the extent that they involve collection, disclosure, or use of personal information.

R26.4 The Responsible Entity shall include applicable information from its privacy policies in cyber security workforce training and awareness activities. Service providers that provide cyber security-related services for the Responsible Entity shall be informed about the organization's applicable privacy policies.

27 Data Security

- R27.1** The Responsible Entity shall implement and document a procedure to identify, classify, and protect information associated with Critical Systems.
- i. The Responsible Entity shall classify information to be protected as per this procedure based on the sensitivity of the Critical Systems information.
 - ii. The Responsible Entity shall, at least annually, assess adherence to its protection procedure of the Critical System information, document the assessment results, and implement an action plan to remediate deficiencies identified during the assessment.
- R27.2** The Responsible Entity shall have a policy of encrypting sensitive data when data is at rest on the device, on a removable media or in transit. The creation and use of cryptographic keys for encrypting remote data at rest should follow the same policies that the Responsible Entity has for other keys that protect data at rest.
- R27.3** The Responsible Entity shall ensure that the sensitive information, such as certain types of Personally Identifiable Information (PII) (e.g., personnel records, financial records, transaction records), that is stored on or sent to or from telecommuting devices should be protected so that malicious parties cannot access or alter it.
- R27.4** The Responsible Entity shall implement measures to prevent unauthorized access or copying or transmission of data / information held in contractual or fiduciary capacity. It should be ensured that confidentiality of information is not compromised during the process of exchanging and transferring information with external parties.
- R27.5** The Responsible Entity shall ensure that the information security policy should also cover use of devices such as mobile phones, photocopiers/printers, scanners, etc. that can be used for capturing and transmission of data.
- R27.6** The Responsible Entity shall allow only authorized data storage devices through appropriate validation processes.
- R27.7** The Responsible Entity shall ensure that to avoid disaster due to Ransomware attack, backup of all data, system, applications, encrypted credentials, firmware etc. should be taken at a frequency defined in their cyber security policy.
- R27.8** The Responsible Entity shall ensure that sharing of data with the Employees/Suppliers/Business partner through remote access is as per their Information Sharing and Data Security policies.
- R27.9** The Responsible Entity shall put in place adequate safeguards to prevent, copying, or saving sensitive information to personally owned computers, smartphones or tablets by their Personnel as well as including the Personnel of contractors and service vendors.

R27.10The Responsible Entity shall ensure that only hardened or cyber tested hardware / software are deployed in their system. The Responsible Entity shall ensure the following during the hardening process, default passwords are replaced with strong passwords and all unnecessary services are removed or disabled in equipment/software.

- i. all removable media are protected, and their use restricted according to their Information Sharing and Data Security policies.
- ii. All USB ports shall be disabled on the machines on critical segments of the network.

R27.11 The Responsible Entity shall ensure that all ports which are not in use or can potentially be used for exploitation of data should be blocked. Other essential open ports shall be monitored, and appropriate measures taken to secure these ports.

R27.12 The Responsible Entity shall ensure that the software developer of their information system/software components enables integrity verification of software and firmware components through Cryptographic Techniques.

R27.13 The Responsible Entity shall ensure that telecommuting client devices containing sensitive information (which inter alia include Computers, laptops, smartphones, and tablets) are secured.

Note Depending on the device type and product type, the Responsible Entity shall provide guidance to device administrators and users (who are responsible for securing telecommuting mobile devices) on how they should be secured.

28 Use of cloud Services

R28.1 The Responsible Entity shall ensure the following requirements where cloud services are used:

- i. Agreements shall be made with the cloud service provider about cybersecurity related processes for cloud infrastructure operations.
- ii. Functions for the control of CII & Protected system where manipulation could threaten the energy supply, shall not be realized in external cloud services.
- iii. Downtime of a cloud services access to this service shall not lead to significant restriction of the system defined basic function. Cloud services disruptions or outages shall also be considered in the emergency concept and restoration plans.
- iv. Interoperability, segmentation, control, certification of audit.

29 Cryptographic Algorithm

R29.1 The Responsible Entity while selecting cryptographic algorithm and minimum key size, shall consider state-of-the-art technological knowledge and in compliance with CERT-In advisory so as to secure for the near future.

R29.2 The supplier shall not use any custom cryptographic algorithm for particular filed application. Wherever possible, the implementation of cryptographic algorithm should involve recognized libraries to avoid implementation errors.

Note the IEC 62351 standard series defines clear requirement for supported cryptographic mechanism.

Chapter-7 Supply Chain Risk Management

30 Supply Chain Cyber Security Risk Management Plan

R30.1 The Responsible Entity shall have documented cyber supply chain risk management plan(s) consistent to the organization's risk management procedure and approved risk acceptance criteria. The plan should be applicable for all high and medium impact Cyber Systems²⁹. The plan(s) shall include:

- i. One or more process(es) used in planning for the procurement of Cyber Systems to identify and assess cyber security risk(s) to the Power Supply System from vendor products or services resulting from: (a)procuring and installing vendor equipment and software; and (b)transitions from one vendor(s) to another vendor(s).
- ii. One or more process(es) used in procuring Cyber Systems that address the following, as applicable-(a) Notification by the vendor of vendor-identified incidents related to the products or services provided to the Responsible Entity that pose cyber security risk to the Responsible Entity. (b) Coordination of responses to vendor-identified incidents related to the products or services provided to the Responsible Entity that pose cyber security risk to the Responsible Entity. (c) Notification by vendors when remote or onsite access should no longer be granted to vendor representatives. (d) Disclosure by vendors of known vulnerabilities related to the products or services provided to the Responsible Entity. (e) Verification of software integrity and authenticity of all software and patches provided by the vendor for use in the Cyber System; and (f) Coordination of controls for vendor-initiated Interactive Remote Access, and system-to-system remote access with a vendor(s)

R30.2 The Responsible Entity through ISD shall ensure implementation of cyber supply chain risk management plan(s) and CISO shall ensure recording of all instances of violation for appraisal of Board of Directors.

R30.3 The Responsible Entity shall ensure that ISD shall review cyber supply chain risk management plan(s) at least once in a year and CISO shall seek approval of Board of Directors for necessary changes required to ensure that violations as recorded in R30.2 are not repeated if they were due to genuine shortcomings in the plan.

²⁹ high and medium impact Cyber Systems": The impact needs to be defined along with such possible cyber triggers which may impact the connected power system

31 Procurement of ICT based goods and Services.

- R31.1** 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 all ICT based components/equipment/systems to be used for their infrastructure System.
- R31.2** The Responsible Entity shall ensure that all the Communicable Intelligent Equipment and Services for the Critical Systems shall be sourced from only from the list of the Trusted Sources, as and when drawn by Ministry of Power/CSIRT-Power.
- R31.3** The Responsible Entity shall ensure that, in case, for 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 02.07.2020 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.
- R31.4** The Responsible Entity shall ensure that the cyber security tests carried out successfully during FAT, SAT as detailed in Annex-A of CEA (Cyber Security in Power Sector) Guidelines, 2021. The equipment/System besides for functionality shall also be tested in the factory for vulnerabilities, design flaws, parts being counterfeit or tainted, 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 dated 8th June 2020.
- R31.5** The Responsible Entity shall ensure that all cyber tests for compliance of MoP order dated 02.07.2020, to check for any kind of embedded malware/Trojan/cyber threat and for adherence to Indian Standards, by the successful bidder, shall be done as per Test Protocol notified by Ministry of Power, Government of India and at the Labs designated in the country by Ministry of Power, Government of India.
- R31.6** The Responsible Entity, shall ensure that the Equipment/System supplied by the successful bidder shall accompany with a certificate obtained by vendor^{R27} from a certification body accredited to assess devices and process for conformance to IEC 62443-4 Standards, during design and manufacturing. 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.
- R31.7** The Responsible Entity in compliance to the requirement of Regulation 20.6 shall also accept, till the setting up of an adequate certification facility in 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 vendor as per the format prescribed by MoP/CSIRT-Power.

R31.8 The vendor shall ensure that within the planned and contractually stipulated operating timeframe, manufacturer's support and security updates shall be available for system components developed by both the vendors and third parties (e.g., operating system, database management system etc.). A binding agreement should cover the discontinuation procedure as well as relevant minimum terms like last customer shipping and end of support. Due to expected extended operating timeframes of systems, vendors are often unable to provide such a guarantee. To reflect this particular concern, they should provide/include rough concepts and cost estimate for a migration to newer versions.

³⁰ The term 'Vendors' includes OEM, Retailers, System Integrator & Service Providers.

32 Vendor Management

- R32.1** The Responsible Entity shall put in place a vendor management program to ensure that vendors meet security requirements and that appropriate safeguards are implemented for mitigation of supply chain cybersecurity risk. The Responsible Entity is encouraged to adopt industry standards (e.g., SOC2, SSAE18) as well as independent audits. The program shall inter alia contain established procedures for terminating or replacing vendors, including cloud-based service providers.
- R32.2** The Responsible Entity shall be conversant with all contract terms including rights, responsibilities, expectations, and other specific terms related to cybersecurity and shall ensure that all contracting parties are capable of addressing cybersecurity risk. The Responsible Entity shall be capable of managing the risks arising from vendor outsourcing, including the vendor's use of cloud-based services.
- R32.3** The Responsible Entity shall monitor the cybersecurity practices of all its vendor to ensure that the vendor meets security requirements as per their cybersecurity policy and be aware of changes to services rendered by the vendor and their personnel policy.
- R32.4** The Responsible Entity shall establish appropriate systems and processes to facilitate continuous monitoring of security events and timely detection of unauthorized or malicious activities, changes, access and unauthorized copying or transmission of data / information held in contractual or fiduciary capacity, by internal as well as external parties. The security logs of systems, applications and network devices should also be monitored for anomalies.
- R32.5** The Responsible Entity shall ensure that the information system and assets are monitored to identify cybersecurity events and verify the effectiveness of threat mitigating measures. This shall inter alia include the following functions:
- i. The network is monitored to detect cybersecurity events in real time.
 - ii. The physical environment is monitored to detect cybersecurity events.
 - iii. Personnel activity is monitored to detect cybersecurity events in real time.
 - iv. Malicious code is detected.
 - v. Unauthorized mobile code is detected.
 - vi. External service provider activity is monitored to detect cybersecurity events.
 - vii. Monitoring for unauthorized personnel, connections, devices, and software is performed.
 - viii. Vulnerability scans are performed.
- R32.6** The Responsible Entity shall put in place necessary systems for monitoring the activities of the external service provider to detect potential cybersecurity risks.

R32.7 The Responsible Entity shall implement suitable mechanism for timely detection of attacks on systems and networks. The Responsible Entity shall also monitor capacity utilization of its critical systems and networks for ensuring high resilience, and high availability.

To that effect, the Responsible Entity shall ensure the following:

- i. A baseline of network operations and expected data flows for users and systems is established and managed.
- ii. Detected events are analyzed to understand attack targets and methods.
- iii. Event data are collected and correlated from multiple sources and sensors.
- iv. Impact of events is determined.
- v. Incident alert thresholds are established.
- vi. Sensor measurements traditionally used for control shall be monitored for anomalies and alert generation.

R32.8 The Responsible Entity shall ensure that monitoring is performed constantly for unauthorized personnel, connections, devices, and software. Suitable alerts should be generated in the event of detection of unauthorized or abnormal system activities, transmission errors or unusual sensor readings, or control system anomalies.

R32.9 The protective controls deployed by Responsible Entity shall enable the monitoring and detection of anomalous activity across multiple layers of the infrastructure.

Note: *Controls should be implemented in a way that will assist in monitoring for, detecting, containing, and analyzing anomalous activities, if protective measures fail. As a cyber-attack typically progresses in a sequence of stages before attaining its end objective. Responsible Entity should also apply approaches that enable them to delay or disrupt the attackers' ability to advance within the attack sequence.*

33 Outsourcing

- R33.1** The Responsible Entity shall ensure that the Services outsourced only from those Vendors, identified as Trusted Sources. The cyber security requirements for outsourcing shall be mandatorily included in the Service Level Agreement including Non-Disclosure Agreement if any signed by the Vendors.
- R33.2** The Responsible Entity shall ensure that the Service Level Agreement (SLA) with the vendor or third-party service provider should have legally enforceable terms/ clauses. And should have provision for legal recourse in case of damage or loss to the property or reputation.
- R33.3** The Responsible Entity may consider long-term SLAs having provision for interim amendments (on mutually agreeable terms) in order to comply with any newly introduced regulatory mandate/s.

Chapter-8 Miscellaneous

34 Documentation and Retention Policy

R34.1 The CISOs shall be the custodian of all the cyber security related documents including Cyber Crisis Management Plan, Cyber Risk Assessment and Mitigation Plan, Statement of Applicability of Controls, and compliance to Regulator's requirement.

List of Documents to be maintained as per IS 16335:

1. List of critical assets as per along with the criteria for identification.
2. List of critical cyber assets.
3. Approval record
4. Assignment of senior manager and changes thereof, if any.
5. Approved cyber security policy.
6. Approved exception list
7. Documented information protection program
8. Documented access control program
9. Change control and configuration management documentation.
10. Documentation of security awareness and reinforcement program
11. Cyber security training program, review records, and training records (
12. Personnel risk assessment program and records
13. List of personnel with access rights and associated review and revocation records if any
14. Electronic security perimeter, list of all cyber assets within the perimeter, and the cyber assets deployed for access control.
15. Documentation of the electronic access controls to the electronic security perimeter(s)
16. Documented monitoring and logging at access points to the electronic security perimeter(s)
17. Vulnerability assessment documentation and associated mitigation if any
18. Documented physical security perimeter, approved physical security plan and associated implementation records.
19. Documented protection of physical perimeter(s)
20. Documentation certifying that electronic access controls for protection of electronic security perimeter are within physical security perimeter.
21. Methods for controlling physical access to each access point of a physical security perimeter.
22. Methods for monitoring physical access.
23. Methods for logging physical access and access logs for access to physical security perimeter(s).
24. Implementation of physical security system maintenance and testing program.
25. Documentation of security test procedures.
26. Documentation to confirm only essential ports and services are open, and documented exceptions and mitigation.
27. Documentation and records of security patch management program).

28. Documentation and records of malicious software prevention program.
29. Documentation and records of account management program.
30. Documentation and records of security status monitoring program.
31. Documentation and records of program for the disposal or redeployment of Cyber Assets
32. Documentation and records of yearly vulnerability assessment of all Cyber Assets within the Electronic Security Perimeters(s)
33. Composition of the Security Incident Response Team and list of incidents reported to the Team.
34. Approved Cyber Security Incident Response plan, its review and all follow-up of incidents as required by law.
35. Documentation of all reportable cyber security incidents.
36. Approved recovery plan.
37. Documentation of exercise of recovery plan(s)
38. Documentation of changes to the recovery plan(s), and documentation of all associated communications.
39. Documentation regarding information backup, periodic testing of the backup, and storage of the backup.

35 Miscellaneous

- R35.1 The responsible entity shall ensure that wherever concerns of intellectual property rights in software or products deployed in their system are there, software and product has been obtained through appropriate procedure and law of the land to avoid any legal implications.
- R35.2 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.
- R35.3 The Responsible Entity may challenge their own cyber security ecosystems through the use of red and blue team exercises to introduce an adversary perspective in a controlled setting. The Red and Blue team exercise may consist of the own Employees of the Responsible Entity and/or outside experts, who are case independent of the security functions being tested.

Note Red teams serve to test for possible vulnerabilities and Blue Team checks the effectiveness of mitigating controls defense strategy adopted by the Responsible Entity.

Annexure: -1 Frequently Asked Questions:

(To be developed for more clarity on Regulations)

1. What is meant by ‘authorized cyber access?’

The phrase “authorized cyber access” is similar in intent to “authorized unescorted physical access” (see Standard CIP-006, Requirement R1.6). In other words, the phrase refers to permitting (“authorizing”) someone to have “trusted,” unsupervised access in a cyber environment. Other than in emergency situations, some form of supervision is appropriate for anyone with cyber access who has not been subjected to a personnel risk assessment and appropriate training. Procedures covering cyber access under emergency circumstances must be covered in the Responsible Entity’s cyber security policy as required by Standard CIP-003. (Emphasis added)

Annexure-2

Where technically feasible, the network zones should be separated, e.g., by firewalls, data diodes, filtering routers or gateways. Network connections to external networks, such as the corporate office network, external partners, or remote maintenance access connections, should be routed exclusively via especially hardened application proxies, which are located in a separate network zone (i.e., demilitarized zone), designed specifically for this purpose.

If applicable and technically feasible, the networks and distributed systems should be divided into independent horizontal segments (e.g., according to different locations or plant units). These segments should be separated, e.g., by firewalls, data diodes, filtering routers or gateways.

Standards:

ReferenceDescription

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

NERC CIP 002-014 Critical Infrastructure Protection Standards for Bulk Electric Providers

Abbreviations: -

CERT: -Computer Emergency Response Team
CERT-In: - Indian Computer Emergency Response Team
CII: - Critical Information Infrastructure
CIP: - Critical Infrastructure Protection
CISO: - Chief Information Security Officer
ESP: - Electronic Security perimeter
ICS: - Industrial Control Systems
IEC: - International Electro Technical Commission
ISAC: - Information Sharing and Analysis Centre
ISD: - Information Security Division
ISO: - International Organization for Standardization
ISMS :- Information Security Management System
IT: - Information Technology
FAT: - Factory Acceptance Test
NCIIPC: - National Critical Information Infrastructure Protection Centre
NCSC: - National Cyber Security Co-Ordinator
NERC: - North American Electric Reliability Corporation
NSCS: - National Security Council Secretariat
OEM: - Original Equipment Manufacturer
OT: - Operation Technology
SAT: - Site Acceptance Test
SCADA: - Supervisory Control and Data Acquisition Systems
SIEM: - Security Information and Event Management
SLA: - Service Level Agreement
QCI: - Quality Council of India

Definition of Terms:

Access Management: shall mean policy 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.

Accreditation: shall mean the process of verifying that an organization is capable of conducting the tests and assessments against a product / process that are required to for it to be certified

Accreditation Body: shall mean an organization that has been accredited to verify organizations that wish to become a certification body.

Act: shall mean the Information Technology Act, 2000 (21 of 2000)

ITAA 2008: shall mean Information Technology (Amendment) Act, 2008

Asset: shall mean anything that has value to the organization.

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 organization, which is accredited to conduct the certification process

Certification Body: shall mean an organization that has been accredited by an accreditation body to certify products / process against a certification scheme.

Certification Scheme: shall mean the processes, paperwork, tools, and documentation that define how a product or manufacturer is certified.

Chief Information Security Officer: shall means the designated employee of Senior management, 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

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 Bulk Electric System.

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:

The cyber asset uses a routable protocol to communicate outside the electronic security perimeter.

The cyber asset uses a routable protocol within a control center.

The cyber asset is dial-up accessible.

- Critical Information Infrastructure:** shall mean Critical Information Infrastructure as defined in explanation of sub-section (1) of Section 70 of the Act Critical Systems.
- 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.
- 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.
- 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. *A cyber security breach is a precursor of any developing cyber-security incident.*
- 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 and Distribution.
- Cyber Security Policy:** shall mean documented set of business rules and processes for protecting information, computer resources, networks, devices, Industrial control systems, and OT resources.
- Cyber Security Protocol:** shall mean procedure or system operations rules officially laid down by Responsible Entity for ensuring cyber security. The cyber security protocol shall be in consonance with the cyber security policy laid down by Responsible Entity.
- Cyber Threat:** shall mean circumstance or event with the potential to adversely impact the Responsible Entity's critical business operations, safety and security of assets, employees and other works engaged persons, created through unauthorized access, destruction, disclosure, or modification of information, and/or denial of service exploiting Information system or operational systems of Responsible Entity
- Electronic Security Perimeter:** shall mean the logical border surrounding a network to which BES Cyber Systems are connected using a routable protocol.
- Evaluation Assurance Level (EAL):** shall mean a numerical rating describing the depth and rigor of the evaluation, which corresponds to a set of the Security Assurance Requirements (SARs). A higher rating indicates that higher numbers of SARs have been assessed (and have been verified). **Refer Appendix-I**

External Cyber Audit: shall mean periodic process of getting cyber audited by a competent authority such as a CERT-In empaneled organization. The non-compliances of these audit reports are to be mitigated and required intercepts of the complied audited report should be shared with Sectoral CERT and CERT-In.

External threat: shall mean a threat originating outside an organization, government agency, or institution.

Information and Operational Security Practices: shall mean implementation of cyber security policies, procedures, and cyber security protocol to minimize the cyber security incidents and cyber security breaches.

Information Security Division: shall mean a division accountable for security and protection of the Critical System of the Responsible Entity.

Internal Cyber Audit: shall mean the practice of vulnerability assessment and penetration testing of components as well as entire OT and IT systems periodically in order to inspect cyber posture continuously and suggest improvements. Such audit reports should be recorded and kept for external audit.

Internal Threat: shall mean a threat originating inside an organization.

Operational guidelines: shall mean any additional set of rules and procedures laid down in cyber security framework by a Responsible Entity to complements their cyber security protocol.

Policy: shall mean an Overall intention and direction as formally expressed by management.

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.

Remote access: shall mean **authorized** mechanism to access Responsible Entity's computing/non-computing resources from external locations other than the Responsible Entity's site facilities or physical premises.

Risk Modelling and Risk Assessment: shall mean modelling the risk to various components of the Responsible Entity's information and operational assets taking into account threats, vulnerabilities, insider attacks, advisories etc. –and the model should be a live model continuously updated in order to know the risks to various cyber assets in real-time and identification of critical assets and their risks.

Robustness: shall mean the persistence of a system's characteristic behavior under perturbations or conditions of uncertainty.

Threat modelling: shall mean risk assessment to model aspects of the cyber-attack and defense sides of a particular logical entity, such as a piece of data, an application, a host, a system, or an environment. The fundamental principle underlying threat modelling is that there are always limited resources for security, and it is necessary to determine how to use those limited resources effectively.

Multi-Factor Authentication (MFA): shall mean the use of two or more factors to verify an account holder's claimed identity.

Vulnerability Assessment: shall mean a systematic review of **security** weaknesses in an information system. It evaluates if the system is susceptible to any known **vulnerabilities**, assigns severity levels to those **vulnerabilities**, and recommends remediation or mitigation, if and whenever needed.

Annexure-06

रजिस्ट्री सं. डी. एल.—(एन)04/0007/2003—20

REGISTERED NO. DL—(N)04/0007/2003—20



भारत का राजपत्र The Gazette of India

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

सं. 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.

(3) It shall not apply to the offices of the Central Government, offices of the State Government and any ship of war of any nationality:

Provided that the Code shall apply in case of contract labour employed through contractor in the offices of the Central Government or in the offices of the State Government, where, the Central Government or, as the case may be, the State Government is the principal employer.

Definitions.

2. (J) In this Code, unless the context otherwise requires,—

(a) "adolescent" shall have the same meaning as assigned to it in clause (i) of section 2 of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986; 61 of 1986.

(b) "adult" means a person who has completed his eighteenth year of age;

(c) "agent" when used in relation to a mine, means every person, whether appointed as such or not, who, acting or purporting to act on behalf of the owner, takes part in the management, control, supervision or direction of such mine or of any part thereof;

(d) "appropriate Government" means—

(i) in relation to, establishments [other than those specified in sub-clause (ii)] carried on by or under the authority of the Central Government or concerning any such controlled industry as may be specified in this behalf by the Central Government or the establishment of railways including metro railways, mines, oil field, major ports, air transport service or telecommunication service, banking company or any insurance company (by whatever name called) established by a Central Act or a corporation or other authority established by a Central Act or a Central public sector undertaking or subsidiary companies set up by the Central public sector undertakings or autonomous bodies owned or controlled by the Central Government, including establishment of contractors for the purposes of such establishment, corporation or other authority, Central public sector undertakings, subsidiary companies or autonomous bodies, as the case may be, the Central Government;

Provided that in the case of Central Public Sector Undertakings the appropriate Government shall continue to be the Central Government even if the holding of the Central Government reduces to less than fifty per cent. equity of the Central Government in that Public Sector Undertakings after the commencement of this Code; and

(ii) in relation to a factory, motor transport undertaking, plantation, newspaper establishment and establishment relating to beedi and cigar including the establishments not specified in clause (i), the concerned State Government where it is situated.

Explanation.—For the removal of doubts it is hereby clarified that State Government shall be the appropriate Government in respect of occupational safety, health and working conditions in a factory situated in that State;

(e) "audio-visual production" means audio-visual produced wholly or partly in India and includes—

(i) animation, cartoon depiction, audio-visual advertisement;

(ii) digital production or any of the activities in respect of making thereof; and

(iii) features films, non-feature films, television, web-based serials, talk shows, reality shows and sport shows;

(f) "audio-visual worker" means a person, who is employed, directly or through any contractor, in or in connection with the audio-visual production to work as an

artist including actor, musician, singer, anchor, news reader, dancer, dubbing artist or stunt person or to do any work, skilled, unskilled, manual, supervisory, technical, artistic or otherwise, and his remuneration with respect to such employment in or in connection with the production of audio-visual does not exceed, where remuneration is by way of monthly wages or where such remuneration is by way of lump sum, in each case, such amount as may be notified by the Central Government;

(g) "banking company" means a banking company as defined in clause (c) of section 5 of the Banking Regulation Act, 1949 and includes the Export-Import Bank of India, the Industrial Reconstruction Bank of India, the Small Industries Development Bank of India established under section 3 of the Small Industries Development Bank of India Act, 1989, the Reserve Bank of India, the State Bank of India, a corresponding new bank constituted under section 3 of the Banking Companies (Acquisition and Transfer of Undertakings) Act, 1970, a corresponding new bank constituted under section 3 of the Banking Companies (Acquisition and Transfer of Undertakings) Act, 1980;

(h) "building or other construction work" means the construction, alteration, repairs, maintenance or demolition in relation to buildings, streets, roads, railways, tramways, airfields, irrigation, drainage, embankment and navigation works, flood control works (including storm water drainage works), generation, transmission and distribution of power, water works (including channels for distribution of water), oil and gas installations, electric lines, internet towers, wireless, radio, television, telephone, telegraph and overseas communications, dams, canals, reservoirs, watercourses, tunnels, bridges, viaducts, aqua-ducts, pipelines, towers, cooling towers, transmission towers and such other work as may be specified in this behalf by the Central Government, by notification, but does not include building or other construction work which is related to any factory or mine and the building or other construction work where such work is for own residential purposes of an individual or group of individuals for their own residence and the total cost of such work does not exceed rupees fifty lakhs or such higher amount and employing more than such number of workers as may be notified by the appropriate Government;

(i) "building worker" means a person who is employed to do any highly skilled, skilled, semi-skilled or unskilled, manual, technical or clerical work for hire or reward, whether the terms of such employment are express or implied, in connection with any building or other construction work, but does not include any such person who is employed mainly in a managerial or supervisory or administrative capacity;

(j) "cargo" includes anything carried or to be carried in a ship or other vessel, or vehicle;

(k) "Chief Inspector-cum-Facilitator" means a Chief Inspector-cum-Facilitator appointed under sub-section (5) of section 34;

(l) "competent person", means a person or an institution recognised as such by the Chief Inspector-cum-Facilitator for the purposes of carrying out tests, examinations and inspections required to be done in an establishment having regard to—

(i) the qualifications and experience of the person and facilities available at his disposal; or

(ii) the qualifications and experience of the persons employed in such institution and facilities available therein;

Provided that in case of mines the competent person includes such other person who is authorised by the manager referred to in section 67 to supervise or perform any work, or to supervise the operation of machinery, plant or equipment and is responsible for such duties assigned to him and also includes a shot firer or blaster;

(*m*) "contract labour" means a worker who shall be deemed to be employed in or in connection with the work of an establishment when he is hired in or in connection with such work by or through a contractor, with or without the knowledge of the principal employer and includes inter-State migrant worker but does not include a worker (other than part time employee) who is regularly employed by the contractor for any activity of his establishment and his employment is governed by mutually accepted standards of the conditions of employment (including engagement on permanent basis), and gets periodical increment in the pay, social security coverage and other welfare benefits in accordance with the law for the time being in force in such employment;

(*n*) "contractor", in relation to an establishment, means a person, who—

(*i*) undertakes to produce a given result for the establishment, other than a mere supply of goods or articles of manufacture to such establishment, through contract labour; or

(*ii*) supplies contract labour for any work of the establishment as mere human resource,

and includes a sub-contractor;

(*o*) "controlled industry" means any industry the control of which by the Central Government has been declared under any Central Act in the public interest;

(*p*) "core activity of an establishment" means any activity for which the establishment is set up and includes any activity which is essential or necessary to such activity:

Provided that the following shall not be considered as essential or necessary activity, if the establishment is not set up for such activity, namely:—

(*i*) sanitation works, including sweeping, cleaning, dusting and collection and disposal of all kinds of waste;

(*ii*) watch and ward services including security services;

(*iii*) canteen and catering services;

(*iv*) loading and unloading operations;

(*v*) running of hospitals, educational and training Institutions, guest houses, clubs and the like where they are in the nature of support services of an establishment;

(*vi*) courier services which are in nature of support services of an establishment;

(*vii*) civil and other constructional works, including maintenance;

(*viii*) gardening and maintenance of lawns and other like activities;

(*ix*) housekeeping and laundry services, and other like activities, where these are in nature of support services of an establishment;

(*x*) transport services including, ambulance services;

(*xi*) any activity of intermittent nature even if that constitutes a core activity of an establishment;

(*g*) "day" means a period of twenty-four hours beginning at mid-night;

(*r*) "District Magistrate", in relation to any mine, means the District Magistrate or the Deputy Commissioner, as the case may be, who is vested with the executive powers of maintaining law and order in the revenue district in which the mine is situated:

Provided that in case of a mine, which is situated partly in one district and partly in another, the District Magistrate for the purpose shall be the District Magistrate authorised in this behalf by the Central Government;

(s) "dock work" means any work in or within the vicinity of any port in connection with, or required for, or incidental to, the loading, unloading, movement or storage of cargoes into or from ship or other vessel, port, dock, storage place or landing place, and includes—

(i) work in connection with the preparation of ships or other vessels for receipt or discharge of cargoes or leaving port;

(ii) all repairing and maintenance processes connected with any hold, tank structure or lifting machinery or any other storage area on board the ship or in the docks; and

(iii) chipping, painting or cleaning of any hold, tank, structure or lifting machinery or any other storage area on board the ship or in the docks;

(t) "employee" means,—

(i) in respect of an establishment, a person (other than an apprentice engaged under the Apprentices Act, 1961) employed on wages by an establishment to do any skilled, semi-skilled, unskilled, manual, operational, supervisory, managerial, administrative, technical, clerical or any other work, whether the terms of employment be express or implied; and

(ii) a person declared to be an employee by the appropriate Government, but does not include any member of the Armed Forces of the Union:

Provided that notwithstanding anything contained in this clause, in case of a mine a person is said to be "employed" in a mine who works as the manager or who works under appointment by the owner, agent or manager of the mine or with the knowledge of the manager, whether for wages or not—

(a) in any mining operation (including the concomitant operations of handling and transport of minerals up to the point of dispatch and of gathering sand and transport thereof to the mine);

(b) in operations or services relating to the development of the mine including construction of plant therein but excluding construction of buildings, roads, wells and any building work not directly connected with any existing or future mining operations;

(c) in operating, servicing, maintaining or repairing any part of any machinery used in or about the mine;

(d) in operations, within the premises of the mine, of loading for dispatch of minerals;

(e) in any office of mine;

(f) in any welfare, health, sanitary or conservancy services required to be provided under this Code relating to mine, or watch and ward, within the premises of the mine excluding residential area; or

(g) in any kind of work, whatsoever, which is preparatory or incidental to, or connected with, mining operations;

(u) "employer" means a person who employs, whether directly or through any person, or on his behalf, or on behalf of any person, one or more employees in his establishment and where the establishment is carried on by any Department of the Central Government or the State Government, the authority specified, by the head of

such Department, in this behalf or where no authority, is so specified, the head of the Department and in relation to an establishment carried on by a local authority, the Chief Executive of that authority, and includes,—

(i) in relation to an establishment which is a factory, the occupier of the factory;

(ii) in relation to mine, the owner of the mine, agent or manager referred to in section 67;

(iii) in relation to any other establishment, the person who, or the authority which has ultimate control over the affairs of the establishment and where said affairs are entrusted to a manager or managing director, such manager or managing director;

(iv) contractor; and

(v) legal representative of a deceased employer;

(v) "establishment" means—

(i) a place where any industry, trade, business, manufacturing or occupation is carried on in which ten or more workers are employed; or

(ii) motor transport undertaking, newspaper establishment, audio-video production, building and other construction work or plantation, in which ten or more workers are employed; or

(iii) factory, for the purpose of Chapter II, in which ten or more workers are employed, notwithstanding the threshold of workers provided in clause (w); or

(iv) a mine or port or vicinity of port where dock work is carried out.

Provided that in sub-clauses (i) and (ii), the threshold of worker specified therein shall not be applicable in case of such establishment or class of establishments, in which such hazardous or life threatening activity is being carried on, as may be notified by the Central Government:

Provided further that notwithstanding any threshold provided in the definition of factory in clause (w), for the purposes of Chapter II, the establishment specified in sub-clause (i) or sub-clause (ii) or sub-clause (iii) shall be deemed to be the establishment within the meaning of this clause though the number of employees employed are ten or more;

(w) "factory" means any premises including the precincts thereof—

(i) whereon twenty or more workers are working, or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on with the aid of power, or is ordinarily so carried on; or

(ii) whereon forty or more workers are working, or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on without the aid of power, or is ordinarily so carried on,

but does not include a mobile unit belonging to the armed forces of the Union, railways running shed or a hotel, restaurant or eating place:

Provided that where under any law for the time being in force in a State immediately before the commencement of this Code, the number of workers specified is more or less than the number specified in clause (i) or clause (ii), then, the number specified under the law of the State shall prevail in that State till it is amended by the competent Legislature.

Explanation I.—For computing the number of workers for the purposes of this clause all the workers (in different groups and relays) in a day shall be taken into account.

Explanation II.—For the purposes of this clause, the mere fact that an Electronic Data Processing Unit or a Computer Unit is installed in any premises or part thereof, shall not be construed as factory if no manufacturing process is being carried on in such premises or part thereof;

(x) "family", when used in relation to a worker, means—

(i) spouse;

(ii) children including adopted children of the worker who are dependent upon him and have not completed the age of eighteen years; and

(iii) parents, grand-parents, widowed daughter and widowed sister dependent upon such worker.

Explanation.—For the purposes of this clause, such dependents shall not be included who are, for the time being, getting such income from such sources, as may be prescribed by the appropriate Government;

(y) "godown" means any warehouse or other place, by whatever name called, used for the storage of any article or substance required for any manufacturing process which means any process for, or incidental to, making, finishing or packing or otherwise treating any article or substance with a view to its use, sale, transport, delivery or disposal as finished products;

(z) "hazardous" means involving danger or potential danger;

(za) "hazardous process" means any process or activity in relation to an industry or plantation specified in the First Schedule where, unless special care is taken, raw materials used therein or the intermediate or finished products, bye-products, hazardous substances, wastes or effluents thereof or spraying of any pesticides, insecticides or chemicals used therein, as the case may be, would—

(i) cause material impairment to the health of the persons engaged in or connected therewith, or

(ii) result in the pollution of the general environment;

(zb) "hazardous substance" means any substance or such quantity of the substance as may be prescribed by the appropriate Government or preparation of which by reason of its chemical or physio-chemical properties or handling is liable to cause physical or health hazards to human being or may cause harm to other living creatures, plants, micro-organisms, property or the environment;

(zc) "industrial premises" means any place or premises (not being a private dwelling house), including the precincts thereof, in which or in any part of which any industry, trade, business, occupation or manufacturing is being ordinarily carried on with or without the aid of power and includes a godown attached thereto;

(zd) "industry" means any systematic activity carried on by co-operation between an employer and worker (whether such worker is employed by such employer directly or by or through any agency, including a contractor) for the production, supply or distribution of goods or services with a view to satisfy human wants or wishes (not being wants or wishes which are merely spiritual or religious in nature), whether or not,—

(i) any capital has been invested for the purpose of carrying on such activity; or

(ii) such activity is carried on with a motive to make any gain or profit,
but does not include—

(a) institutions owned or managed by organisations wholly or substantially engaged in any charitable, social or philanthropic services; or

(b) any activity of the appropriate Government relating to the sovereign functions of the appropriate Government including all the activities carried on by the Departments of the Central Government dealing with defence research, atomic energy and space; or

(c) any domestic service; or

(d) any other activity as may be notified by the Central Government;

(ze) "Inspector-cum-Facilitator" means an Inspector-cum-Facilitator appointed under sub-section (J) of section 34;

(zf) "inter-State migrant worker" means a person who is employed in an establishment and who—

(i) has been recruited directly by the employer or indirectly through contractor in one State for employment in such establishment situated in another State; or

(ii) has come on his own from one State and obtained employment in an establishment of another State (hereinafter called destination State) or has subsequently changed the establishment within the destination State,

under an agreement or other arrangement for such employment and draws wages not exceeding the amount of rupees eighteen thousand per month or such higher amount as may be notified by the Central Government from time to time;

(zg) "machinery" means any article or combination of articles assembled, arranged or connected and which is used or intended to be used for converting any form of energy to perform work, or which is used or intended to be used, whether incidental thereto or not, for developing, receiving, storing, containing, confining, transforming, transmitting, transferring or controlling any form of energy;

(zh) "major port" means a major port as defined in clause (8) of section 3 of the Indian Ports Act, 1908;

15 of 1908.

(zi) "manufacturing process" means any process for—

(i) making, altering, repairing, ornamenting, finishing, packing, oiling, washing, cleaning, breaking up, demolishing, or otherwise treating or adapting any article or substance with a view to its use, sale, transport, delivery or disposal; or

(ii) pumping oil, water, sewage or any other substance; or

(iii) generating, transforming or transmitting power; or

(iv) composing, printing, printing by letter press, lithography, offset, photogravure screen printing, three Dimensional or four Dimensional printing, prototyping, flexography or other types of printing process or book binding; or

(v) constructing, reconstructing, repairing, refitting, finishing or breaking up ships or vessels; or

(vi) preserving or storing any article in cold storage; or

(vii) such other processes as the Central Government may notify;

(zj) "medical officer" means the medical officer appointed under sub-section (1) of section 42;

60 of 2002. (zk) "metro railway" means the metro railway as defined in sub-clause (i) of clause (1) of section 2 of the Metro Railways (Operation and Maintenance) Act, 2002;

(zl) "mine" means any excavation where any operation for the purpose of searching for or obtaining minerals has been or is being carried on and includes—

(i) all borings, bore holes, oil wells and accessory crude conditioning plants, including the pipe conveying mineral oil within the oilfields;

(ii) all shafts, in or adjacent to and belonging to a mine, whether in the course of being sunk or not;

(iii) all levels and inclined planes in the course of being driven;

(iv) all open cast workings;

(v) all conveyors or aerial ropeways provided for bringing into or removal from a mine of minerals or other articles or for the removal of refuse therefrom;

(vi) all adits, levels, planes, machinery, works, railways, tramways and sidings in or adjacent to and belonging to a mine;

(vii) all protective works being carried out in or adjacent to a mine;

(viii) all workshops and stores situated within the precincts of a mine and under the same management and used primarily for the purposes connected with that mine or a number of mines under the same management;

(ix) all power stations, transformer sub-stations, converter stations, rectifier stations and accumulator storage stations for supplying electricity solely or mainly for the purpose of working the mine or a number of mines under the same management;

(x) any premises for the time being used for depositing sand or other material for use in a mine or for depositing refuse from a mine or in which any operations in connection with such sand refuse or other material is being carried on, being premises exclusively occupied by the owner of the mine;

(xi) any premises in or adjacent to and belonging to a mine on which any process ancillary to the getting, dressing or preparation for sale of minerals or coke is being carried on;

(xii) a mine owned by the Government;

(zm) "minerals" means all substances which can be obtained from the earth by mining, digging, drilling, dredging, hydraulic mining, quarrying or by any other operation and includes mineral oils (such as natural gas and petroleum);

(zn) "motor transport undertaking" means a motor transport undertaking employing motor transport worker and engaged in carrying passengers or goods or both by road for hire or reward, and includes a private carrier;

(zo) "motor transport worker" means a person who is employed in a motor transport undertaking directly or through an agency, whether for wages or not, to work in a professional capacity on a transport vehicle or to attend the duties in connection with the arrival, departure, loading or unloading of such transport vehicle and includes a driver, conductor, cleaner, station staff, line checking staff, booking clerk, cash clerk, depot clerk, time-keeper, watchman or attendant, but does not include any such person—

(i) who is employed in a factory;

(ii) to whom the provisions of any other law for the time being in force regulating the conditions of service of persons employed in shops or commercial establishments apply;

(zp) "newspaper" means any printed periodical work containing public news or comments on public news and includes such other class of printed periodical work as may, from time to time, be notified in this behalf by the Central Government;

(zq) "newspaper establishment" means an establishment under the control of any person or body of persons, whether incorporated or not, for the production or publication of one or more newspapers or for conducting any news agency or syndicate and includes following newspaper establishments which shall be deemed to be one establishment, namely:—

(i) two or more newspaper establishments under common control;

(ii) two or more newspaper establishments owned by an individual and his or her spouse unless it is shown that such spouse is a sole proprietor or partner or a shareholder of a corporate body on the basis of his or her own individual funds;

(iii) two or more newspaper establishments publishing newspapers bearing the same or similar title and in the same language in any place in India or bearing the same or similar title but in different languages in the same State or Union territory.

Explanation 1.—For the purposes of sub-clause (i) two or more establishments shall be deemed to be under common control where—

(a) (i) the newspaper establishments are owned by a common individual or individuals;

(ii) the newspaper establishments are owned by firms, if such firms have a substantial number of common partners;

(iii) the newspaper establishments are owned by bodies corporate, if one body corporate is a subsidiary of the other body corporate, or both are subsidiaries of a common holding company or a substantial number of their equity shares are owned by the same person or group of persons, whether incorporated or not;

(iv) one establishment is owned by a body corporate and the other is owned by a firm, if a substantial number of partners of the firm together hold a substantial number of equity shares of the body corporate;

(v) one is owned by a body corporate and the other is owned by a firm having bodies corporate as its partners if a substantial number of equity shares of such bodies corporate are owned, directly or indirectly, by the same person or group of persons, whether incorporated or not, or

(b) there is functional integrality between concerned newspaper establishments.

Explanation 2.—For the purposes of this clause,—

(i) different departments, branches and centres of newspaper establishments shall be treated as parts thereof;

(ii) a printing press shall be deemed to be a newspaper establishment if the principal business thereof is to print newspaper;

(zr) "notification" means a notification published in the Gazette of India or the Official Gazette of a State, as the case may be, and the expression "notify" with its grammatical variations and cognate expressions shall be construed accordingly;

(zs) "occupier" of a factory means the person who has ultimate control over the affairs of the factory:

Provided that—

(i) in the case of a firm or other association of individuals, any one of the individual partners or members thereof;

(ii) in the case of a company, any one of the directors, except any independent director within the meaning of sub-section (6) of section 149 of the Companies Act, 2013;

(iii) in the case of a factory owned or controlled by the Central Government or any State Government, or any local authority, the person or persons appointed to manage the affairs of the factory by the Central Government, the State Government or the local authority or such other authority as may be prescribed by the Central Government,

shall be deemed to be the occupier:

Provided further that in the case of a ship which is being repaired, or on which maintenance work is being carried out, in a dry dock which is available for hire, the owner of the dock shall be deemed to be the occupier for all purposes except the matters as may be prescribed by the Central Government which are directly related to the condition of ship for which the owner of ship shall be deemed to be the occupier;

(zt) "office of the mine" means an office at the surface of the mine concerned;

(zu) "open cast working" means a quarry, that is to say, an excavation where any operation for the purpose of searching for or obtaining minerals has been or is being carried on, not being a shaft or an excavation which extends below superjacent ground;

(zv) "ordinarily employed" with reference to any establishment or part thereof, means the average number of persons employed per day in the establishment or part thereof during the preceding calendar year obtained by dividing the number of man days worked by the number of working days excluding rest days and other non-working days;

(zw) "owner", in relation to a mine, means any person who is the immediate proprietor or lessee or occupier of the mine or of any part thereof and in case of a mine the business whereof is being carried on by a liquidator or receiver, such liquidator or receiver; but does not include a person who merely receives a royalty, rent or fine from the mine, or is merely the proprietor of the mine, subject to any lease grant or licence for the working thereof, or is merely the owner of the soil and not interested in the minerals of the mine; but any contractor or sub-lessee for the working of a mine or any part thereof shall be subject to this Code in like manner as if he were an owner but not so as to exempt the former from any liability;

(zx) "plantation" means—

(a) any land used or intended to be used for—

(i) growing tea, coffee, rubber, cinchona or cardamom which admeasures five hectares or more;

(ii) growing any other plant, which admeasures five hectares or more and in which persons are employed or were employed on any day of the preceding twelve months, if, after obtaining the approval of the Central Government, the State Government, by notification, so directs.

Explanation.—Where any piece of land used for growing any plant referred to in this sub-clause admeasures less than five hectares and is

contiguous to any other piece of land not being so used, but capable of being so used, and both such pieces of land are under the management of the same employer, then, for the purposes of this sub-clause, the former piece of land shall be deemed to be a plantation, if the total area of both such pieces of land admeasures five hectares or more; and

(b) any land which the State Government may, by notification, declare and which is used or intended to be used for growing any plant referred to in sub-clause (a), notwithstanding that it admeasures less than five hectares;

Provided that no such declaration shall be made in respect of such land which admeasures less than five hectares immediately before the commencement of this Code; and

(c) offices, hospitals, dispensaries, schools and any other premises used for any purpose connected with any plantation within the meaning of sub-clause (a) and sub-clause (b); but does not include factory on the premises;

(zy) "prescribed" means prescribed by rules made by the appropriate Government under this Code;

(zz) "principal employer", where the contract labour is employed or engaged, means—

(i) in relation to any office or Department of the Government or a local authority, the head of that office or Department or such other officer as the Government or the local authority, may specify in this behalf;

(ii) in a factory, the owner or occupier of the factory and where a person has been named as the manager of the factory, the person so named;

(iii) in a mine, the owner or agent of the mine;

(iv) in relation to any other establishment, any person responsible for the supervision and control of the establishment;

(zza) "producer", in relation to audio-visual production, means the company, firm or other person by whom the arrangements necessary for producing such audio-visual (including the raising of finances and engaging audio-visual workers for producing audio-visual) are undertaken.

Explanation.—For the purposes of this clause, the expressions "company" and "firm" have the same meaning as respectively assigned to them in the Companies Act, 2013 and the Indian Partnership Act, 1932; 18 of 2013.
9 of 1932.

(zzb) "qualified medical practitioner" means a medical practitioner who possesses any recognised medical qualification as defined in clause (i) of section 2 of the Indian Medical Council Act, 1956 and who is enrolled on a Indian Medical Register as defined in clause (e) and on a State Medical Register as defined in clause (j) of the said section; 102 of 1956.

(zxc) "railway" means the railway as defined in clause (31) of section 2 of the Railways Act, 1989; 24 of 1989.

(zxd) "relay" means a set of two or more persons carrying out the same kind of work during different periods of the day and each such period is called a "shift";

(zxe) "sales promotion employees" means any person by whatever name called employed or engaged in any establishment for hire or reward to do any work relating to promotion of sales or business, or both, but does not include any such person who,—

(i) being employed or engaged in a supervisory capacity, draws wages exceeding eighteen thousand rupees per mensem or an amount as may be notified by the Central Government from time to time; or

(*ii*) is employed or engaged mainly in a managerial or administrative capacity;

(*zzf*) "Schedule" means the Schedule appended to this Code;

(*zzg*) "serious bodily injury" means any injury which involves, or in all probability will involve, the permanent loss of any part or section of a body or the use of any part or section of a body, or the permanent loss of or injury to the sight or hearing or any permanent physical incapacity or the fracture of any bone or one or more joints or bones of any phalanges of hand or foot;

(*zzh*) "standards", "regulations", "rules", "bye-laws" and "orders" respectively means standards, regulations, rules, bye-laws and orders made or declared, as the case may be, under this Code;

(*zzi*) "telecommunication service" means the telecommunication service as defined in clause (*k*) of sub-section (*J*) of section 2 of the Telecom Regulatory Authority of India Act, 1997;

24 of 1997.

(*zzj*) "wages" means all remuneration whether by way of salaries, allowances or otherwise, expressed in terms of money or capable of being so expressed which would, if the terms of employment, express or implied, were fulfilled, be payable to a person employed in respect of his employment or of work done in such employment, and includes,—

- (*i*) basic pay;
- (*ii*) dearness allowance; and
- (*iii*) retaining allowance, if any;

but does not include—

(*a*) any bonus payable under any law for the time being in force, which does not form part of the remuneration payable under the terms of employment;

(*b*) the value of any house-accommodation, or of the supply of light, water, medical attendance or other amenity or of any service excluded from the computation of wages by a general or special order of the appropriate Government;

(*c*) any contribution paid by the employer to any pension or provident fund, and the interest which may have accrued thereon;

(*d*) any conveyance allowance or the value of any travelling concession;

(*e*) any sum paid to the employed person to defray special expenses entailed on him by the nature of his employment;

(*f*) house rent allowance;

(*g*) remuneration payable under any award or settlement between the parties or order of a court or Tribunal;

(*h*) any overtime allowance;

(*i*) any commission payable to the employee;

(*j*) any gratuity payable on the termination of employment;

(*k*) any retrenchment compensation or other retirement benefit payable to the employee or any *ex gratia* payment made to him on the termination of employment.

Provided that, for calculating the wages under this clause, if payments made by the employer to the employee under sub-clauses (*a*) to (*i*) exceeds

one-half, or such other per cent. as may be notified by the Central Government, of the all remuneration calculated under this clause, the amount which exceeds such one-half, or the per cent. so notified, shall be deemed as remuneration and shall be accordingly added in wages under this clause:

Provided further that for the purpose of equal wages to all genders and for the purpose of payment of wages, the emoluments specified in sub-clauses (d), (f), (g) and (h) shall be taken for computation of wages.

Explanation.—Where an employee is given in lieu of the whole or part of the wages payable to him, any remuneration in kind by his employer, the value of such remuneration in kind which does not exceed fifteen per cent. of the total wages payable to him, shall be deemed to form part of the wages of such employee;

(zzk) "week" means a period of seven days beginning at midnight on Saturday night or such other night as may be approved in writing for a particular area by the Chief Inspector-cum-Facilitator;

(zzi) "worker" means any person employed in any establishment to do any manual, unskilled, skilled, technical, operational, clerical or supervisory work for hire or reward, whether the terms of employment be express or implied, and includes working journalists and sales promotion employees, but does not include any such person—

(i) who is subject to the Air Force Act, 1950, or the Army Act, 1950, or the Navy Act, 1957; or

45 of 1950.

46 of 1950.

62 of 1957.

(ii) who is employed in the police service or as an officer or other employee of a prison; or

(iii) who is employed mainly in a managerial or administrative capacity; or

(iv) who is employed in a supervisory capacity drawing wage exceeding eighteen thousand rupees per month or an amount as may be notified by the Central Government from time to time;

(zzm) "Working Journalist" means a person whose principal avocation is that of a journalist and who is employed as such, either whole-time or part-time, in, or in relation to, one or more newspaper establishment, or other establishment relating to any electronic media or digital media such as newspaper or radio or other likemedia and includes an editor, a leader-writer, news editor, sub-editor, feature-writer, copy-tester, reporter, correspondent, cartoonist, news-photographer and proof-reader, but does not include any such person who is employed mainly in a managerial, supervisory or administrative capacity;

(2) For the purposes of this Code, a person working or employed in or in connection with mine is said to be working or employed—

(a) "below ground" if he is working or employed—

(i) in a shaft which has been or is in the course being sunk; or

(ii) in any excavation which extends below superjacent ground; and

(b) "above ground" if he is working in an opencast working or in any other manner not specified in clause (a).

CHAPTER II

REGISTRATION

3. (1) Every employer of any establishment,—

- (a) which comes into existence after the commencement of this Code; and
- (b) to which this Code shall apply,

Registration
of certain
establishments.

shall, within sixty days from the date of such applicability of this Code, make an application electronically to the registering officer appointed by the appropriate Government (hereinafter referred to as the registering officer) for the registration of such establishment:

Provided that the registering officer may entertain any such application for registration after the expiry of such period on payment of such late fees as may be prescribed by the appropriate Government.

(2) Every application under sub-section (1) shall be submitted to the registering officer in such manner, in such form, containing such particulars including the information relating to the employment of inter-State migrant workers and shall be accompanied by such fees as may be prescribed by the appropriate Government.

(3) After the receipt of an application under sub-section (1), the registering officer shall register the establishment and issue a certificate of registration electronically to the employer thereof in such form and within such time and subject to such conditions as may be prescribed by the Central Government:

Provided that if the registering officer fails to register an establishment under the application so made or to entertain the application within the prescribed period, then, such establishment shall be deemed to have been registered under this Code immediately on the expiration of such period and the electronic certificate of registration shall be auto generated and the responsibility of such failure shall be on the registering officer.

(4) Any change in the ownership or management or in any particulars referred to in sub-section (2) which occurs after the registration of an establishment under this Code, shall be intimated by the employer electronically to the registering officer within thirty days of such change in such form as may be prescribed by the Central Government and thereafter the registering officer shall make amendment in the certificate of registration electronically in such manner as may be prescribed by the Central Government.

(5) The employer of an establishment shall, within thirty days of the closing of the establishment—

- (a) inform the closing of such establishment; and
- (b) certify payment of all dues to the workers employed in such establishment,

to the registering officer in such manner as may be prescribed by the Central Government and the registering officer shall, on receiving such information and certificate remove such establishment from the register of establishments maintained by him and cancel the registration certificate of the establishment within sixty days from the receipt of such information :

Provided that if the registering officer fails to cancel the registration certification of the establishment under this sub-section within such sixty days, then, the registration certificate of such establishment shall be deemed to have been cancelled under this Code immediately on the expiration of such period of sixty days and the cancellation of registration certificate shall be auto generated and the responsibility of such failure shall be on the registering officer.

(6) If an employer of an establishment—

- (a) has obtained the registration of his establishment by misrepresentation or suppression of any material fact, or

(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.

(4) Nothing contained in sub-sections (1) and (2) shall be construed to require a person to repeat the testing, examination or research which has been carried out otherwise than by him or at his instance in so far as it is reasonable for him to rely on the results thereof for the purposes of the said sub-sections.

(5) Any duty imposed on any person by sub-sections (1) and (2) shall extend only to things done in the course of business carried on by him and to matters within his control.

(6) Every person,—

(a) who erects or installs any article for use in a factory, shall ensure, so far as practicable, that such article so erected or installed does not make it unsafe or a risk to health when that article is used by the persons in such factory;

(b) who manufactures, imports or supplies any substance for use in any factory shall—

(i) ensure, so far as practicable, that such substance when used in the factory does not make it unsafe or a risk to health of persons working in such factory;

(ii) carry out or arrange for carrying out of such tests and examination in relation to such substance as may be necessary;

(iii) take such steps as are necessary to secure that the information about the results of tests carried out in connection with the use of the substance as referred to in sub-clause (ii) is available in a factory along with conditions necessary to ensure its safe use and no risks to health;

(c) who undertakes the manufacture of any substance for use in any factory shall carry out or arrange for carrying out of any necessary research with a view to discover and, so far as practicable, to ensure the elimination or minimisation of any risks to health or safety to which the substance may give rise out of such manufacture or research;

(7) For the purposes of this section, an article and substance is not to be regarded as properly used, if they are used without regard to any information or advice relating to their use which has been made available by the person who has designed, manufactured, imported or supplied the article and substance.

Explanation.—For the purpose of this section—

(a) "article" shall include plant and machinery;

(b) "substance" means any natural or artificial substance whether in a solid or liquid form or in the form of a gas or vapour; and

(c) "substance for use in any factory" means such substance, whether or not intended for use by persons working in a factory.

9. (1) It shall be the duty of the architect, project engineer or designer responsible for any building or other construction work or the design of any project or part thereof relating to such building or other construction work to ensure that, at the planning stage, due consideration is given to the safety and health aspects of the building workers and employees who are employed in the erection, operation and execution of such projects and structures as the case may be.

Duties of
architect,
project
engineer and
designer.

(2) Adequate care shall be taken by the architect, project engineer and other professionals involved in the project referred to in sub-section (1), not to include anything in the design which would involve the use of dangerous structures or other processes or materials, hazardous to health or safety of building workers and employees during the course of erection, operation and execution as the case may be.

(3) It shall also be the duty of the professionals, involved in designing the buildings structures or other construction projects, to take into account the safety aspects associated with the maintenance and upkeep of the structures and buildings where maintenance and upkeep may involve such hazards as may be notified by the appropriate Government.

Notice of
certain
accident.

10. (1) Where at any place in an establishment, an accident occurs which causes death, or which causes any bodily injury by reason of which the person injured is prevented from working for a period of forty-eight hours or more immediately following the accident or which is of such nature as may be prescribed by the appropriate Government, then,—

(a) employer or owner or agent or manager referred to in section 67 of such establishment if it is mine; or

(b) employer or manager in relation to such establishment if it is factory or relates to dock work; or

(c) the employer of a plantation or an establishment relating to building or other construction or any other establishment,

shall send notice thereof to such authorities, in such manner and within such time, as may be prescribed by the appropriate Government.

(2) Where a notice given under sub-section (1) relates to an accident causing death in a plantation or an establishment relating to building or other construction work or any other establishment, the authority to whom the notice is sent shall make an inquiry into the occurrence within two months of the receipt of the notice or if there is no such authority, the Chief Inspector-cum-Facilitator shall cause the Inspector-cum-Facilitator to make an inquiry within the said period.

Notice of
certain
dangerous
occurrences.

11. Where in an establishment there is any dangerous occurrence of such nature, (whether causing any bodily injury or disability, or not) the employer shall send notice thereof to such authorities, and in such form and within such time, as may be prescribed by the appropriate Government.

Notice of
certain
diseases.

12. (1) Where any worker in an establishment contracts any disease specified in the Third Schedule, the employer of the establishment shall send notice thereof to such authorities, and in such form and within such time, as may be prescribed by the appropriate Government.

(2) If any qualified medical practitioner attends on a person, who is or has been employed in an establishment, and who is, or is believed by the qualified medical practitioner, to be suffering from any disease specified in the Third Schedule, the medical practitioner shall without delay send a report in writing to the office of the Chief Inspector-cum-Facilitator in such form and manner and within such time as may be prescribed by the appropriate Government.

(3) If any qualified medical practitioner fails to comply with the provisions of sub-section (2), he shall be punishable with penalty which may extend to ten thousand rupees.

Duties of
employee.

13. Every employee at workplace shall,—

(a) take reasonable care for the health and safety of himself and of other persons who may be affected by his acts or omissions at the workplace;

(b) comply with the safety and health requirements specified in the standards;

(c) co-operate with the employer in meeting the statutory obligations of the employer under this Code;

(d) if any situation which is unsafe or unhealthy comes to his attention, as soon as practicable, report such situation to his employer or to the health and safety representative and in case of mine, agent or manager referred to in section 67, safety officers or an official for his workplace or section thereof, as the case may be, who

shall report it to the employer in the manner as may be prescribed by the appropriate Government;

(e) not wilfully interfere with or misuse or neglect any appliance, convenience or other thing provided at workplace for the purpose of securing the health, safety and welfare of workers;

(f) not do, wilfully and without reasonable cause, anything, likely to endanger himself or others; and

(g) perform such other duties as may be prescribed by the appropriate Government.

14. (1) Every employee in an establishment shall have the right to obtain from the employer information relating to employee's health and safety at work and represent to the employer directly or through a member of the Safety Committee as constituted under section 22, if constituted by the employer for such purpose, regarding inadequate provision for protection of his safety or health in connection with the work activity in the workplace, and if not satisfied, to the Inspector-cum-Facilitator. Rights of employee.

(2) Where the employee referred to in sub-section (1) in any workplace has reasonable apprehension that there is a likelihood of imminent serious personal injury or death or imminent danger to health, he may bring the same to the notice of his employer directly or through a member of the Safety Committee referred to in sub-section (1) and simultaneously bring the same to the notice of the Inspector-cum-Facilitator.

(3) The employer or any employee referred to in sub-section (1) shall take immediate remedial action if he is satisfied about the existence of such imminent danger and send a report forthwith of the action taken to the Inspector-cum-Facilitator in such manner as may be prescribed by the appropriate Government.

(4) If the employer referred to in sub-section (3) is not satisfied about the existence of any imminent danger as apprehended by his employees, he shall, nevertheless, refer the matter forthwith to the Inspector-cum-Facilitator whose decision on the question of the existence of such imminent danger shall be final.

15. No person shall intentionally or recklessly interfere with, damage or misuse anything which is provided in the interest of health, safety or welfare under this Code. Duty not to interfere with or misuse things.

CHAPTER IV

OCCUPATIONAL SAFETY AND HEALTH

16. (1) The Central Government shall, by notification, constitute the National Occupational Safety and Health Advisory Board (hereinafter in this Code referred to as the National Board) to discharge the functions conferred on it by or under this Code and to advise the Central Government on the matters relating to— National Occupational Safety and Health Advisory Board.

(a) standards, rules and regulations to be declared or framed under this Code;

(b) implementation of the provisions of this Code and the standards, rules and regulations relating thereto;

(c) the issues of policy and programme relating to occupational safety and health referred to it, from time to time, by the Central Government; and

(d) any other matter in respect of this Code referred to it, from time to time, by the Central Government.

(2) The National Board shall consist of—

(a) Secretary, Ministry of Labour and Employment—Chairperson *ex officio*;

(b) Director General, Factory Advice Service and Labour Institutes, Mumbai—Member *ex officio*;

(c) Director General, Mines Safety, Dhanbad—Member *ex officio*;

(d) Chief Controller of Explosives, Nagpur—Member *ex officio*;

(e) Chairman, Central Pollution Control Board, New Delhi—Member *ex officio*;

(f) Chief Labour Commissioner (Central), New Delhi—Member *ex officio*;

(g) Principal Secretaries dealing with labour matters of four States (by rotation as the Central Government may deem fit)—Member *ex officio*;

(h) Director General, Employee's State Insurance Corporation, New Delhi—Member *ex officio*;

(i) Director General, Health Services, New Delhi—Member *ex officio*;

(j) five representatives of employers—Member *ex officio*;

(k) five representatives of employees—Member *ex-officio*;

(l) a representative of professional body associated with the matter for which standards, rules, policies being framed—Member;

(m) five eminent persons connected with the field of Occupational Safety and Health, or representatives from reputed research institutions or similar other discipline—Member;

(n) special invitees from the State Government or the Government of Union territory for seeking inputs in specific matters or industry or sector which is predominant in that State or Union territory—Member;

(o) Joint Secretary, Ministry of Labour and Employment—Member Secretary *ex officio*.

(3) The terms of office of the Members referred to in clauses (g), (j), (k), (l) and (m) of sub-section (2) shall be of three years and the procedure for their nomination, and discharge of their functions shall be such as may be prescribed by the Central Government.

(4) The Central Government may, in consultation with the National Board, determine the number, nature and categories of other officers and employees required to assist the National Board in the efficient discharge of its functions and terms and conditions of service of such officers and employees of the National Board shall be such as may be prescribed by the Central Government.

(5) The Central Government may constitute as many technical committees or advisory committees consisting of such number of members having such qualifications as may be prescribed by the Central Government, to assist the National Board in discharge of its function specified in sub-section (1).

(6) The National Board shall consult the State Governments whose Principal Secretaries are the Members of the National Board as required under clause (g) of sub-section (2) of section 16 and in case of specific issues relating to plantation, factories and like other issues, the State Government concerned may be invited by the National Board as special invitee for obtaining their inputs on such issues.

17. (1) The State Government shall constitute a Board to be called the State Occupational Safety and Health Advisory Board (hereinafter referred to as "State Advisory Board") to advise the State Government on such matters arising out of the administration of this Code as may be referred to it by the State Government.

(2) The constitution, procedure and other matters relating to State Advisory Board shall be such as may be prescribed by the State Government.

State
Occupational
Safety and
Health
Advisory
Board.

(3) The State Government may constitute as many technical committees or advisory committees of the State Advisory Board including site appraisal committees, consisting of such number of members and having such qualifications as may be prescribed, to assist the State Government or State Advisory Board in discharge of their functions relating to the area falling within their respective jurisdictions.

18. (1) The Central Government shall declare, by notification, standards on occupational safety and health for workplaces relating to factory, mine, dock work, *beedi* and cigar, building and other construction work and other establishments.

Occupational
safety and
health
standards.

(2) In particular and without prejudice to the generality of the power to declare standards to be followed under sub-section (1), such standards shall relate to—

(a) physical, chemical, biological and any other hazards to be dealt with for the working life of employee to ensure to the extent feasible on the basis of the best available evidence or functional capacity, that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to such hazards;

(b) the norms—

(i) appraising the hazards to employees and users to whom such hazards are exposed;

(ii) relating to relevant symptoms and appropriate energy treatment and proper conditions and precautions of safe use or exposure;

(iii) for monitoring and measuring exposure of employees to hazards;

(iv) for medical examination and other tests which shall be made available, by the employer or at his cost, to the employees exposed to hazards; and

(v) for hazard evaluation procedures like safety audit, hazard and operability study, fault free analysis, event free analysis and such other requirements;

(c) medical examination including criteria for detection and reporting of occupational diseases to be extended to the employees even after he ceases to be in employment, if he is suffering from an occupational disease which arises out of or in the course of employment;

(d) such aspects of occupational safety and health relating to workplaces which the Central Government considers necessary on the report of the authority designated by such Government for such purpose;

(e) such safety and health measures as may be required having regard to the specific conditions prevailing at the workplaces relating to mine, factory, building and other construction work, *beedi* and cigar, dock work or any other establishments notified; and

(f) matters specified in the Second Schedule to this Code.

(3) Notwithstanding anything contained in section 131, the Central Government may, on the basis of the recommendation of the National Board and after notifying its intention so to do for not less than forty-five days', by notification, amend the Second Schedule.

(4) The State Government may, with the prior approval of the Central Government, by notification amend the standards made under sub-section (1) and sub-section (2) for the establishment for which it is the appropriate Government situated in the State.

Research related activities.

19. It shall be the duty of such institutions in the field of occupational safety and health as the Central or State Government may notify to conduct research, experiments and demonstrations relating to occupational safety and health and thereafter submit their recommendations to the Central Government or the State Government, as the case may be:

Provided that the State Government shall consult National Board before notifying conduct of research, experiments and demonstration relating to occupational safety and health.

Safety and occupational health surveys.

20. (1) At any time during the normal working hours of an establishment or at any other time as he may deem necessary,—

(a) the Chief Inspector-cum-Facilitator in the case of factory or mine; or

(b) the Director General of Factory Advice Service and Labour Institute in the case of factory; or

(c) the Director General of Mines Safety in the case of mine; or

(d) the Director General of Health Services in the case of factory or mine; or

(e) such other officer as may be authorised by the appropriate Government in the case of any other establishment or class of establishments,

after giving notice in writing to the employer, conduct survey of the factory or mine or such other establishment or class of establishments and such employer shall afford all facilities for such survey, including facilities for the examination and testing of plant and machinery and collection of samples and other data relevant to the survey.

Explanation.—For the purposes of this sub-section, the expression "employer" includes manager for the factory or in the case of any other establishment or class of establishments such person who is for the time being responsible for the safety and the occupational health of such other establishment or class of establishments, as the case may be.

(2) For the purpose of facilitating surveys under sub-section (1) every worker shall, if so required by the person conducting the survey, present himself to undergo such medical examination as may be considered necessary by such person and furnish all information in his possession which is relevant to the survey.

(3) Any time spent by a worker for undergoing medical examination or furnishing information under sub-section (2) shall, for the purpose of calculating wages and extra wages for overtime work, be deemed to be working hour for him.

Explanation.—For the purposes of this section, the report submitted to the appropriate Government by the person conducting the survey under sub-section (1) shall be deemed to be a report submitted by an Inspector-cum-Facilitator under this Code.

Collection of statistics and portal for inter-State migrant workers.

21. (1) For the purposes of this Code, the Central Government and the State Government shall collect, compile and analyse occupational safety and health statistics in such form and manner as may be prescribed.

(2) The Central Government and the State Governments shall maintain the database or record, for inter-State migrant workers, electronically or otherwise in such portal and in such form and manner as may be prescribed by the Central Government:

Provided that an inter-State migrant worker may register himself as an inter-State migrant worker on such portal on the basis of self-declaration and Aadhaar:

Provided further that the workers who have migrated from one State to any other State and are self-employed in that other State may also register themselves on that portal.

Explanation.—For the purposes of this sub-section, the expression "Aadhaar" shall have the same meaning as assigned to it in clause (a) of section 2 of the Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016.

22. (1) The appropriate Government may, by general or special order, require any establishment or class of establishments to constitute in the prescribed manner a Safety Committee consisting of representatives of employers and workers engaged in such establishment in such manner that the number of representatives of workers on the Committee shall not be less than the number of representatives of the employer and the representatives of the workers shall be chosen in such manner and for such purpose as may be prescribed by the appropriate Government.

Safety Committee and safety officers.

(2) In every establishment which is a—

- (a) factory wherein five hundred workers or more; or
- (b) factory carrying on hazardous process wherein two hundred fifty workers or more; or
- (c) building or other construction work wherein two hundred fifty workers or more; or
- (d) mine wherein one hundred workers or more, are ordinarily employed,

the employer shall also appoint such number of safety officers, who shall possess such qualifications and perform such duties, as may be prescribed by appropriate Government.

CHAPTER V

HEALTH, SAFETY AND WORKING CONDITIONS

23. (1) The employer shall be responsible to maintain in his establishment such health, safety and working conditions for the employees as may be prescribed by the Central Government.

Responsibility of employer for maintaining health, safety and working conditions.

(2) Without prejudice to the generality of the power conferred under sub-section (1), the Central Government may prescribe for providing all or any of the following matters in the establishment or class of establishments, namely:—

- (i) cleanliness and hygiene;
- (ii) ventilation, temperature and humidity;
- (iii) environment free from dust, noxious gas, fumes and other impurities;
- (iv) adequate standard of humidification, artificially increasing the humidity of the air, ventilation and cooling of the air in work rooms;
- (v) potable drinking water;
- (vi) adequate standards to prevent overcrowding and to provide sufficient space to employees or other persons, as the case may be, employed therein;
- (vii) adequate lighting;
- (viii) sufficient arrangement for latrine and urinal accommodation to male, female and transgender employee separately and maintaining hygiene therein;
- (ix) effective arrangements for treatment of wastes and effluents; and
- (x) any other arrangement which the Central Government considers appropriate.

CHAPTER VI

WELFARE PROVISIONS

24. (1) The employer shall be responsible to provide and maintain in his establishment such welfare facilities for the employees as may be prescribed by the Central Government, including,—

Welfare facilities in the establishment, etc.

(i) adequate and suitable facilities for washing to male and female employees separately;

(ii) bathing places and locker rooms for male, female and transgender employees separately;

(iii) place of keeping clothing not worn during working hours and for the drying of wet clothing;

(iv) sitting arrangements for all employees obliged to work in a standing position;

(v) facilities of canteen in an establishment for employees thereof, wherein one hundred or more workers including contract labourers are ordinarily employed;

(vi) in case of mines, medical examination of the employees employed or to be employed in the mines, before their employment and at specific intervals;

(vii) adequate first-aid boxes or cupboards with contents readily accessible during all working hours; and

(viii) any other welfare measures which the Central Government considers, under the set of circumstances, as required for decent standard of life of the employees.

(2) Without prejudice to the generality of the powers referred to under sub-section (1), the Central Government may also prescribe for the following matters, namely:—

(i) ambulance room in every factory, mine, building or other construction work wherein more than five hundred workers are ordinarily employed;

(ii) medical facilities at the operating centres and halting stations, uniforms, raincoats and other like amenities for protection from rain or cold for motor transport workers;

(iii) adequate, suitable and separate shelters or rest-rooms for male, female and transgender employees and lunch-room in every factory and mine wherein more than fifty workers are ordinarily employed and in motor transport undertaking wherein employee is required to halt at night;

(iv) the appointment of welfare officer in every factory, mine or plantation wherein two hundred and fifty or more workers are ordinarily employed and the qualification, conditions of service and duties of such welfare officer;

(v) for providing by the employer temporary living accommodation, free of charges and within the work site or as near to it as may be possible, to all building workers employed by him and for causing removal or demolition of such temporary living accommodation and for returning by the employer the possession of any land obtained by him for such purpose from Municipal Board or any other local authority;

(vi) for payment by the principal employer the expenses incurred on providing the accommodation to the contractor, where the building or other construction work is done through the contractor;

(vii) any other matter which may be prescribed.

(3) The Central Government may make rules to provide for the facility of crèche having suitable room or rooms for the use of children under the age of six years of the employees at suitable location and distance either separately or along with common facilities in establishments wherein more than fifty workers are ordinarily employed:

Provided that an establishment can avail common crèche facility of the Central Government, State Government, municipality or private entity or provided by non-Governmental organisation or by any other organisation or group of establishments may pool their resources for setting up of common crèche in the manner as they may agree for such purpose.

CHAPTER VII

HOURS OF WORK AND ANNUAL LEAVE WITH WAGES

25. (1) No worker shall be required or allowed to work, in any establishment or class of establishment for more than—

Daily and weekly working hours, leave, etc.

(a) eight hours in a day; and

(b) the period of work in each day under clause (a) shall be so fixed, as not to exceed such hours, with such intervals and spread overs, as may be notified by the appropriate Government:

Provided that subject to clause (a) in the case of mines,—

(i) the persons employed below ground in a mine shall not be allowed to work for more than such hours as may be notified by the Central Government in any day;

(ii) no work shall be carried on below ground in any mine except by a system of shifts so arranged that the period of work for each shift is not spread over more than the daily maximum hours as notified under clause (i);

(iii) no person employed in a mine shall be allowed to be present in any part of a mine below ground except during the periods of work shown in respect of him in the register maintained under clause (a) of section 33:

Provided further that subject to clause (a) that the hours of work in case of motor transport worker shall include—

(i) the time spent in work done during the running time of the transport vehicle;

(ii) the time spent in subsidiary work; and

(iii) period of mere attendance at terminals of less than fifteen minutes.

Explanation.—For the purposes of this sub-section—

(a) "running time" in relation to a working day means the time from the moment a transport vehicle starts functioning at the beginning of the working day until the moment when the transport vehicle ceases to function at the end of the working day, excluding any time during which the running of the transport vehicle is interrupted for a period exceeding such duration as may be prescribed by the Central Government during which period the persons who drive, or perform any other work in connection with the transport vehicle are free to dispose of their time as they please or are engaged in subsidiary work;

(b) "subsidiary work" means the work in connection with a transport vehicle, its passengers or its load which is done outside the running time of the transport vehicle, including in particular—

(i) the work in connection with accounts, paying of cash, signing of registers, handover of service sheets, the checking of tickets and other similar work;

(ii) taking over and garaging of the transport vehicles;

(iii) travelling from the place where a person signs on to the place where he takes over the transport vehicle and from the place where he leaves the transport vehicle to the place where he signs off;

(iv) work in connection with the upkeep and repair of the transport vehicle; and

(v) the loading and unloading of the transport vehicle;

(c) "period of mere attendance" means the period during which a person remains at his post solely in order to reply to possible calls or to resume action at the time fixed in the duty schedule.

(2) Notwithstanding anything contained in sub-section (1), the hours of work for working journalist shall, subject to a maximum of one hundred and forty-four hours of work during any period of four consecutive weeks and a period of not less than twenty-four consecutive hours of rest during any period of seven consecutive days, be such as may be prescribed by the Central Government.

(3) Notwithstanding anything contained in sub-sections (1) and (2), a sales promotion employee or the working journalist,—

(i) in addition to such holidays, casual leave or other kinds of leave as may be prescribed by the Central Government, shall be granted, if requested for—

(a) earned leave on full wages for not less than one-eleventh of the period spent on duty;

(b) leave on medical certificate on one-half of the wages for not less than one-eighteenth of the period of service;

(ii) may accumulate earned leave up to such maximum limit as may be prescribed by the Central Government;

(iii) shall be entitled for the limit up to which the earned leave may be either encashed or availed of at a time by him and the reasons for which such limit may be exceeded shall be such as may be prescribed by the Central Government;

(iv) shall,—

(a) when he voluntarily relinquishes his post or retires from service; or

(b) when his services are terminated for any reason whatsoever (not being termination as punishment),

be entitled to cash compensation, subject to such conditions and restrictions as may be prescribed by the Central Government (including conditions by way of specifying the maximum period for which such cash compensation shall be payable), in respect of the earned leave earned by him and not availed of;

(v) who dies while in service, his heirs shall be entitled to cash compensation for the earned leave earned by him and not availed of his heirs shall be paid the cash compensation in respect of any period of earned leave for which he or his heirs, is or are entitled to cash compensation under clause (iv) or clause (v), which shall be an amount equal to the wages due to him for such period.

(4) Notwithstanding anything contained in this section, the working hours of an adolescent worker shall be regulated in accordance with the provisions of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986.

61 of 1986.

Weekly and
compensatory
holidays.

26. (1) No worker shall be allowed to work in an establishment for more than six days in any one week:

Provided that in any motor transport undertaking, an employer may, in order to prevent any dislocation of a motor transport service, require a worker to work on any day of weekly holiday which is not a holiday so arranged that the worker does not work for more than ten days consecutively without a holiday for a whole day intervening.

(2) The appropriate Government may, by notification, exempt such workers as it thinks fit from the provisions of sub-section (1), subject to such conditions as may be prescribed.

(3) Where, as a result of the passing of an order or the making of a rule under the provisions of this Code exempting an establishment or the workers therein from the provisions of sub-section (1), a worker is deprived of any of the weekly holidays, the worker shall be allowed, within the month in which the holidays were due or within the two months immediately following that month, compensatory holidays of equal number to the holidays, so deprived.

27. There shall be paid wages at the rate of twice the rate of wages in respect of overtime work, where a worker works in an establishment or class of establishment for more than such hours of work in any day or in any week as may be prescribed by the appropriate Government and the period of overtime work shall be calculated on a daily basis or weekly basis, whichever is more favourable to such worker:

Extra wages for overtime.

Provided that a worker shall be required to work overtime by the employer subject to the consent of such worker for such work:

Provided further that the appropriate Government may prescribe the total number of hours of overtime.

28. Where a worker in an establishment works on a shift which extends beyond midnight,—

Night shifts.

(a) for the purposes of section 26, a weekly holiday for a whole day shall mean in his case a period of twenty-four consecutive hours beginning when his shift ends;

(b) the following day for him shall be deemed to be the period of twenty-four hours beginning when such shift ends, and the hours he has worked after midnight shall be counted in the previous day.

29. (1) The work shall not be carried on in any establishment by means of a system of shifts so arranged that more than one relay of workers is engaged in work of the same kind at the same time.

Prohibition of overlapping shifts.

(2) The appropriate Government or subject to the approval of the appropriate Government, the Chief Inspector-cum-Facilitator, may, by written order and for the reasons specified therein, exempt on such conditions as may be deemed expedient, any establishment or class of establishments or any department or section of an establishment or any category or description of workers therein from the provisions of sub-section (1):

Provided that the provisions of this sub-section shall not apply to mines.

30. No worker shall be required or allowed to work in a mine or factory if he has already been working in any other such similar establishment within the preceding twelve hours, save in such circumstances as may be prescribed by the appropriate Government.

Restriction on double employment in factory and mine.

31. (1) There shall be displayed and correctly maintained in every establishment a notice of periods of work, showing clearly for every day the periods during which workers may be required to work in accordance with the provisions of this Code.

Notice of periods of work.

(2) The form of notice required by sub-section (1), the manner of display of such notice and the manner in which such notice shall be sent to the Inspector-cum-Facilitator shall be such as may be prescribed by the appropriate Government.

(3) Any proposed change in the system of work in any establishment which will necessitate a change in the notice referred to in sub-section (1) shall be intimated to the Inspector-cum-Facilitator before the change is made, and except with the previous sanction of the Inspector-cum-Facilitator, no such change shall be made until one week has elapsed since that last change.

Annual leave
with wages,
etc.

32. (1) Every worker employed in an establishment shall be entitled for leave in a calendar year with wages subject to the following conditions, namely:—

(i) that he has worked one hundred and eighty days or more in such calendar year;

(ii) that he shall be entitled for one-day leave for every twenty days of his work, in the case of adolescent worker for fifteen days of his work, and in case of worker employed below ground mine, at the rate of one day for every fifteen days of his work, in such calendar year;

(iii) any period of layoff, maternity leave or annual leave availed by such worker in such calendar year shall be counted for calculating the period of one hundred and eighty days or more under clause (i), but he shall not earn leave for the period so counted;

(iv) any holidays falling between the leave availed by such worker (in a calendar year or prefixed or suffixed holiday) shall be excluded from the period of leave so availed;

(v) in case of such worker whose service commences otherwise than on the first day of January shall be entitled to leave with wages at the rate specified in clause (ii), if he has worked for one-fourth of the total number of days in the remainder of the calendar year;

(vi) in case such worker is discharged or dismissed from service or quits employment or is superannuated or dies while in service, during the course of the calendar year, such worker or his heir or nominee, shall be entitled to wages in lieu of the quantum of leave to which such worker was entitled immediately before his discharge, dismissal, quitting of employment, superannuation or death, calculated as specified in preceding clauses, even if such worker has not worked for the required period under this sub-section making such worker eligible to avail such leave, and such payment shall be made—

(a) where such worker is discharged or dismissed or quits employment before the expiry of the second working day from the date of such discharge, dismissal or quitting; and

(b) where such worker is superannuated or dies while in service, before the expiry of two months from the date of such superannuation or death;

(vii) if such worker does not in any one calendar year take the whole of the leave allowed to him under this sub-section and the rules made thereunder, then, any leave not taken by him shall be added to the leave to be allowed to him in the succeeding calendar year so that—

(a) the total number of days of leave that may be carried forward to a succeeding year shall not exceed thirty days; and

(b) such worker, who has applied for leave with wages but has not been given such leave in accordance with this sub-section and the rules made thereunder shall be entitled to carry forward the leave refused without any limit;

(viii) without prejudice to clause (vi) such worker shall be entitled on his demand for encashment of leave at the end of calendar year;

(ix) such worker shall be entitled, where his total number of leave exceeds thirty days under sub-clause (a) of clause (vii), to encash such exceeded leave.

(2) The appropriate Government may, by notification, extend the provisions of sub-section (1) to any other establishment except railway establishment.

(3) The provisions of sub-section (1) shall not operate to the prejudice of any right to which a person employed in a mine may be entitled under any other law or under the terms of any award, agreement or contract of service:

Provided that if such award, agreement or contract of service, provides for longer annual leave with wages than that provided in sub-section (1), the quantum of leave, which the person employed shall be entitled to, shall be in accordance with such award, agreement or contract of service but leave shall be regulated in accordance with the provisions of sub-section (1) with respect of matters not provided for in such award, agreement or contract of service:

Provided further that where the Central Government is satisfied that the leave rules applicable to persons employed in any mine provide benefits which in its opinion are not less favourable than those provided for in sub-section (1) it may, by order in writing and subject to such conditions as may be specified therein exempt the mine from all or any of the provisions of sub-section (1).

CHAPTER VIII

MAINTENANCE OF REGISTERS, RECORDS AND RETURNS

33. An employer of an establishment shall—

(a) maintain register in prescribed form, electronically or otherwise, containing such particulars of workers as may be prescribed by the appropriate Government including,—

- (i) work performed by them;
- (ii) number of hours of work constituting normal working hours in a day;
- (iii) day of rest allowed in every period of seven days;
- (iv) wage paid and receipts given therefor;
- (v) leave, leave wages, overtime work, attendance and dangerous occurrences; and
- (vi) employment of adolescent;

(b) display notices at the work place of the workers in such manner and form as may be prescribed by the appropriate Government;

(c) issue wage slips to the workers, in electronic forms or otherwise; and

(d) file such return electronically or otherwise to the Inspector-cum-Facilitator in such manner and during such periods as may be prescribed by the appropriate Government.

Maintenance of registers, records and filing of returns.

CHAPTER IX

INSPECTOR-CUM-FACILITATORS AND OTHER AUTHORITY

34. (1) The appropriate Government may, by notification, appoint Inspector-cum-Facilitators for the purposes of this Code who shall exercise the powers conferred on them under this Code throughout their respective jurisdiction specified in the notification.

Appointment of Inspector-cum-Facilitators.

(2) The Inspector-cum-Facilitators appointed under sub-section (1) shall, apart from other duties to be discharged by them under this Code, conduct such inspections as specified in sub-section (3).

(3) The appropriate Government may—

(i) for the purposes of inspection referred to in sub-section (2), by notification, lay down an inspection scheme which may provide for the generation of web-based

inspection and calling of information under this Code, electronically and such scheme shall, *inter alia*, have provisions to cater to special circumstances for assigning inspection and calling for information from establishment or any other person besides web-based inspections; and

(ii) without prejudice to the provisions of sub-section (2), by notification, under the scheme, provide for the randomised selection of establishment and the Inspector-cum-Facilitator for inspection.

(4) Without prejudice to the powers of the appropriate Government under this section, the inspection scheme referred to in sub-section (3) may be designed taking into account, *inter alia*, the following factors, namely:—

(a) assignment of unique number, to each establishment (which will be same as the registration number allotted to the establishment registered under section 3), unique number to each Inspector-cum-Facilitator and to each inspection in such manner as may be notified by the appropriate Government;

(b) timely uploading of inspection reports in such manner and subject to such conditions as may be notified in the scheme;

(c) provisions for special inspections based on such parameters as may be notified by the appropriate Government; and

(d) the characteristics of employment, the nature of work, and characteristics of the workplaces based on such parameters as may be notified by the appropriate Government.

(5) The appropriate Government may, by notification, appoint any person or persons possessing the prescribed qualifications and experience to be Chief Inspector-cum-Facilitator for the purposes of such establishments or class of establishments and for such local limits of jurisdiction as may be specified in the notification:

Provided that a Chief Inspector-cum-Facilitator may be appointed for the purposes of a State or more than one States or for the purposes of the whole of the Country.

(6) The appropriate Government may, by notification, appoint for the purposes of establishments as may be notified by that Government, as many Additional Chief Inspector-cum-Facilitators, Joint Chief Inspector-cum-Facilitators and Deputy Chief Inspector-cum-Facilitators or any other officer of any designation as it thinks appropriate, to exercise such powers of the Chief Inspector-cum-Facilitator within his jurisdiction, as may be specified in the notification.

(7) Every Additional Chief Inspector-cum-Facilitator, Joint Chief Inspector-cum-Facilitator, Deputy Chief Inspector-cum-Facilitator and every other officer appointed under sub-section (6) shall, in addition to the powers of a Chief Inspector-cum-Facilitator specified in the notification by which the officer is appointed, exercise the powers of an Inspector-cum-Facilitator within such local limits as may be specified in the notification.

(8) No person shall be appointed under this section or having been so appointed, shall continue to hold office, who is, or who becomes, directly or indirectly interested in a workplace or work activity or in any process or business carried on in any workplace or in any plant or machinery connected therewith.

(9) The appropriate Government may also, by notification, appoint such public officers as it thinks fit to be Inspector-cum-Facilitators in addition to existing Inspector-cum-Facilitator for exercising the powers and discharging the duties of Inspector-cum-Facilitator for all or any of the purposes of this Code within such local limits as may be specified in such notification.

(10) Without prejudice to the other functions of the Inspector-cum-Facilitator under this Code, an Inspector-cum-Facilitator may in respect of any establishment or class of establishments in local area or areas of his jurisdiction where the Chief Inspector-cum-Facilitator with the approval of the appropriate Government and subject to such restrictions or conditions as he may think fit to impose, by order in writing authorise the Inspector-cum-Facilitator to exercise such of the powers of the Chief Inspector-cum-Facilitator as may be specified in such order:

Provided that the Chief Inspector-cum-Facilitator, with the approval of the appropriate Government, may by order in writing, prohibit the exercise, by any Inspector-cum-Facilitator or any class of Inspector-cum-Facilitators specified in such order, of any such power by such Inspector-cum-Facilitator or class of Inspector-cum-Facilitators.

(11) Every Chief Inspector-cum-Facilitator, Additional Chief Inspector-cum-Facilitator, Joint Chief Inspector-cum-Facilitator, Deputy Chief Inspector-cum-Facilitator, Inspector-cum-Facilitator and every other officer appointed under this section shall be deemed to be a public servant within the meaning of section 21 of the Indian Penal Code, and shall be officially subordinate to such authority as the appropriate Government may specify in this behalf.

45 of 1860.

35. (1) Subject to any rules made in this behalf, an Inspector-cum-Facilitator may—

Powers of
Inspector-
cum-
Facilitators.

(i) enter, with such assistance of persons, being persons in the service of the Government, or any local or other public authority, or with an expert, as he thinks fit, any place which is used, or which he has reason to believe, is used as a work place;

(ii) inspect and examine the establishment, any premises, plant, machinery, article, or any other relevant material;

(iii) inquire into any accident or dangerous occurrence, whether resulting in bodily injury, disability or death or not and take on the spot or otherwise statement of any person which he may consider necessary for such inquiry;

(iv) subject to any rules made by the State Government in this behalf, within his jurisdiction, examine the crops grown in any plantation or any worker employed therein or require the production of any register or other document maintained in pursuance of this Code, and take on the spot or otherwise statement of any person which he may consider necessary for carrying out the purposes of this Code relating to plantation;

(v) supply information and sensitise the employers and workers regarding the provisions of this Code and compliance thereof;

(vi) require the production of any register or any other document relating to the workplace or work activity;

(vii) search or seize, or take copies of, any register, record or other document or any portion thereof, as he may consider necessary in respect of any offence under this Code, which he has reason to believe, has been committed;

(viii) direct the concerned occupier or employer that any premises or any part thereof, or anything lying therein, shall be left undisturbed (whether generally or in particular respects) for so long as is necessary for the purpose of any inspection or inquiry;

(ix) take measurements, photographs and videographs and make such recordings as he considers necessary for the purpose of any examination or inquiry;

(x) take samples of any articles or substances found in any establishment or premises into which he has power to enter and of the air of the atmosphere in or in the vicinity of any such establishment or premises in such manner as may be prescribed by the appropriate Government;

(xi) in case of any article or substance found in any establishment or premises, being an article or substance which appears to him as having caused or is likely to cause danger to the health and safety of the employees, direct it to be dismantled or subject it to any process or test (but not so as to damage or destroy it unless the same is, in the circumstances necessary, for carrying out the purposes of any provision of this Code) and take possession of any such article or substance or a part thereof, and detain it for so long as is necessary for such examination;

(xii) issue show cause notice relating to safety, health and welfare provisions arising under this Code, rules, regulations and bye-laws made thereunder;

(xiii) prosecute, conduct or defend before any court any complaint or other proceeding arising under this Code, the rules and regulations made thereunder; and

(xiv) exercise such other powers and perform such other duties as may be prescribed by the appropriate Government.

(2) Any person required to produce any document or to give any information required by an Inspector-cum-Facilitator under sub-section (1) shall be deemed to be legally bound to do so within the meaning of section 175 and section 176 of the Indian Penal Code. 45 of 1860.

(3) The provisions of the Code of Criminal Procedure, 1973, shall, so far as may be, apply to such search or seizure under sub-section (1) as they apply to any search or seizure made under the authority of a warrant issued under section 94 of the said Code. 2 of 1974.

Powers and duties of District Magistrate.

36. The District Magistrate shall, within the local limits of his jurisdiction, exercise such powers and duties of the Inspector-cum-Facilitator in respect of mines as may be prescribed by the Central Government.

Third party audit and certification.

37. (1) The appropriate Government may, by notification, formulate a scheme to empanel experts possessing such qualifications and experience as may be prescribed for the purpose of such start-up establishments or class of establishments, as may be specified in the notification.

(2) The experts empanelled under sub-section (1), shall,—

(a) be assigned the third party audit and certification in a randomised manner, by the appropriate Government through a web-based scheme;

(b) carry out the audit and certification in the manner and for the purpose specified in the scheme referred to in sub-section (1);

(c) perform such duties as may be specified in such scheme and submit his report to the concerned employer and to the Inspector-cum-Facilitator.

Special powers of Inspector-cum-Facilitator in respect of factory, mines, dock work and building or other construction work.

38. (1) Without prejudice to the other powers of an Inspector-cum-Facilitator in this Code, an Inspector-cum-Facilitator,—

(A) shall have the following special powers in respect of a factory, namely:—

(a) where it appears to the Inspector-cum-Facilitator that conditions in a factory or part thereof are such that they may cause serious hazard or imminent danger by way of injury or death to the persons employed therein or to the general public in the vicinity, he may, by order in writing to the occupier of the factory, state the particulars in respect of which he considers the factory or part thereof to be the cause of such serious hazard or imminent danger and prohibit such occupier from employing any person in the factory or any part thereof other than the minimum number of persons necessary to attend to the minimum tasks till the hazard or danger is removed;

(b) any order issued by the Inspector-cum-Facilitator under sub-clause (a) shall have effect for a period of three days until extended by the Chief Inspector-cum-Facilitator by a subsequent order;

(c) any person aggrieved by an order of the Inspector-cum-Facilitator under sub-clause (a), and the Chief Inspector-cum-Facilitator under sub-clause (b), shall have the right to appeal to the High Court;

14 of 1947.

(d) any person whose employment has been affected by an order issued under sub-clause (a), shall, without prejudice to the rights of the parties under the Industrial Disputes Act, 1947, be entitled to wages and other benefits and it shall be the duty of the occupier to provide alternative employment to him wherever possible in such manner as may be prescribed by the appropriate Government;

(B) shall have the following special powers in respect of mines, namely:—

(a) if, in respect of any matter for which no express provision is made by or under this Code, it appears to the Chief Inspector-cum-Facilitator or an Inspector-cum-Facilitator that any mine or part thereof or any matter, thing or practice in or connected with the mine, or with the control, supervision, management or direction thereof, is dangerous to human life or safety or is defective so as to threaten or tend to cause, the bodily injury of any person, he may give notice in writing thereof to the employer of the mine stating therein the particulars in respect of which he considers the mine or part thereof or the matter, thing or practice to be dangerous or defective and require the same to be remedied within such time and in such manner as he may specify in the notice;

(b) where the employer of a mine fails to comply with the terms of a notice given under sub-clause (a) within the period specified therein, the Chief Inspector-cum-Facilitator or the Inspector-cum-Facilitator may, by order in writing, prohibit the employment in or about the mine or any part thereof of any person whose employment is not in his opinion reasonably necessary for securing compliance with the terms of the notice;

(c) without prejudice to the provisions contained in sub-clause (a), the Chief Inspector-cum-Facilitator or the Inspector-cum-Facilitator may, by order in writing addressed to the employer of a mine, prohibit the extraction or reduction of pillars or blocks of minerals in the mine or part thereof, if, in his opinion, such operation is likely to cause the crushing of pillars or blocks of minerals or the premature collapse of any part of the workings or otherwise endanger the mine or the life or safety of persons employed therein or if, in his opinion, adequate provision against the outbreak of fire or flooding has not been made by providing for the sealing off and isolation of the part of the mine in which such operation is contemplated and for restricting the area that might be affected by fire or flooding;

(d) if the Chief Inspector-cum-Facilitator or an Inspector-cum-Facilitator authorised, by general or special order in writing by the Chief Inspector-cum-Facilitator, is of opinion that there is urgent and immediate danger to the life or safety of any person employed in any mine or part thereof, he may, by order in writing containing a statement of the grounds of his opinion, prohibit until he is satisfied that the danger is removed, the employment in or about the mine or any part thereof of any person whose employment is not in his opinion reasonably necessary for the purpose of removing the danger;

(e) every person whose employment is prohibited under sub-clause (b) or sub-clause (d) shall be entitled to payment of full wages for the period for which he would have been, but for the prohibition, in employment and the employer shall be liable for payment of such full wages of that person;

Provided that the employer may instead of paying such full wages provide such person with an alternative employment at the same wages which such person was receiving in the employment which was prohibited;

(f) where a notice has been given under sub-clause (a) or an order is made under sub-clause (b) or sub-clause (c) or sub-clause (d) by an Inspector-cum-Facilitator, the employer of the mine may, within ten days after the receipt of the notice or order, as the case may be, appeal against the same to the Chief Inspector-cum-Facilitator who may confirm, modify or cancel the notice or order;

(g) the Chief Inspector-cum-Facilitator or the Inspector-cum-Facilitator sending a notice under sub-clause (a) or making an order under sub-clause (b) or sub-clause (c) or sub-clause (d) and the Chief Inspector-cum-Facilitator making an order (other than an order of cancellation in appeal) under sub-clause (f) shall forthwith report the same to the Central Government;

(h) if the employer of the mine objects to a notice sent under sub-clause (a) by the Chief Inspector-cum-Facilitator or the Inspector-cum-Facilitator or to an order made by the Chief Inspector-cum-Facilitator or the Inspector-cum-Facilitator under sub-clause (b) or sub-clause (c) or sub-clause (d) or sub-clause (f), as the case may be, he may, within twenty days after the receipt of the notice containing the requisition or of the order or after the date of the decision on appeal, as the case may be, send his objection in writing stating the grounds thereof to the Central Government which shall, ordinarily within a period of one month from the date of receipt of the objection, decide the matter;

(i) every notice under sub-clause (a), or order under sub-clause (b) or sub-clause (c) or sub-clause (d) or sub-clause (f), to which objection is made under sub-clause (h), shall be complied with, pending the objection with the concerned Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator of the mine, for the decision of the Central Government.

Provided that the Central Government may, on the application of the employer, suspend the operation of a notice under sub-clause (a), pending its decision on the objection;

(j) nothing in this section shall affect the powers of a magistrate under section 144 of the Code of Criminal Procedure, 1973;

2 of 1974.

(k) where in respect of any matter relating to safety of mine for which express provision is made by or under this Code, the employer of a mine fails to comply with such provisions, the Chief Inspector-cum-Facilitator may give notice in writing requiring the same to be complied with within such time as he may specify in the notice or within such extended period of time as he may, from time to time, specify thereafter;

(l) where the employer fails to comply with the terms of a notice given under sub-clause (k) within the period specified in such notice or within the extended period of time specified under that sub-clause, the Chief Inspector-cum-Facilitator may, by order in writing, prohibit the employment, in or about the mine or any part thereof, of any person whose employment is not, in his opinion, reasonably necessary for securing compliance with the terms of the notice;

(m) every person whose employment is prohibited under sub-clause (l), shall be entitled to payment of full wages for the period for which he would have been, but for the prohibition, in employment, and the owner, agent or manager referred to in section 67 shall be liable for payment of such full wages of that person:

Provided that the employer may, instead of paying such full wages, provide such person with an alternative employment at the same wages which such person was receiving in the employment which was prohibited under sub-clause (l);

(n) the provisions of sub-clauses (g), (h) and (i) shall apply in relation to a notice issued under sub-clause (k) or an order made under sub-clause (l) as they apply in relation to a notice or an order under sub-clause (b);

(o) the Chief Inspector-cum-Facilitator may, for reasons to be recorded in writing, reverse or modify any order passed by him under this Code or under any regulation, rule or bye-law made thereunder in relation to mine;

(p) no order prejudicial to the owner, agent or manager of a mine shall be made under this section unless such owner, agent or manager has been given a reasonable opportunity of making representation;

(q) the Central Government may reverse or modify any order passed by Chief Inspector-cum-Facilitator under this Code or under any regulation, rule or bye-laws thereunder in relation to mine;

(C) shall have the following special powers in respect of dock work namely:—

(a) if it appears to an Inspector-cum-Facilitator that any place where any dock work is being carried on is in such a condition that it is dangerous to life, safety or health, of workers employed in dock work, he may, in writing, serve on the employer, an order prohibiting any dock work, in such place, until measures have been taken to remove the cause of the danger to his satisfaction;

(b) an Inspector-cum-Facilitator after serving an order under clause (a) shall endorse a copy thereof to the Chief Inspector-cum-Facilitator who may modify or cancel the order without waiting for an appeal;

(c) any person aggrieved by an order under clause (a) or clause (b) may, within fifteen days from the date on which the order is communicated to him, prefer an appeal to the Chief Inspector-cum-Facilitator or where such order is by the Chief Inspector-cum-Facilitator, to the Central Government and the Chief Inspector-cum-Facilitator or the Central Government shall, after giving the appellant an opportunity of being heard, dispose of the appeal within sixty days:

Provided that the Chief Inspector-cum-Facilitator or the Central Government may entertain the appeal after the expiry of the said period of fifteen days, if he or it is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time:

Provided further that an order under clause (a) or an order modified under clause (b) shall be complied with, pending the decision of the Chief Inspector-cum-Facilitator or the Central Government.

(2) Without prejudice to the other powers of an Inspector-cum-Facilitator elsewhere in this Code,—

(a) if it appears to the Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator that any site or place at which any building or other construction work is being carried on, is in such condition that it is dangerous to life, safety or health of building workers or the general public, he may, in writing serve, on the employer of building workers working at such site or place or on the employer of the establishment in which such site or place is situated or on the person in charge of such site or place, an order prohibiting any building or other construction work at such site or place until measures have been taken to remove the cause of the danger to his satisfaction;

(b) an Inspector-cum-Facilitator serving an order under clause (a) shall endorse a copy of the order to the Chief Inspector-cum-Facilitator;

(c) such prohibition order made by the Inspector-cum-Facilitator shall be complied with by the employer forthwith.

(3) Any person aggrieved by an order under clause (a) of sub-section (2), may, within fifteen days from the date on which the order is communicated to him, prefer an appeal to the Chief Inspector-cum-Facilitator or where such order is by the Chief Inspector-cum-Facilitator, to the appropriate Government and the Chief Inspector-cum-Facilitator or the appropriate Government, as the case may be, shall, after giving the appellant an opportunity of being heard, dispose of the appeal within sixty days:

Provided that the Chief Inspector-cum-Facilitator or the appropriate Government may, entertain the appeal after the expiry of the said period of fifteen days if it is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time:

Provided further that the order under clause (a) of sub-section (2), shall be complied with, subject to the decision of the Chief Inspector-cum-Facilitator or the appropriate Government as the case may be.

Secrecy of information by Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator, etc.

39. (1) All copies of, and extracts from, registers or other records pertaining to any establishment and all other information relating to any manufacturing or commercial business or any working process acquired by the Chief Inspector-cum-Facilitator or an Inspector-cum-Facilitator or by any one assisting him, in the course of the inspection or survey of any establishment under this Code or acquired by any officer authorised under section 20 in the exercise of his duties thereunder, shall be regarded as confidential and shall not, while in service or after leaving the service, be disclosed to any person or authority unless the Chief Inspector-cum-Facilitator or the Inspector-cum-Facilitator considers disclosure necessary to ensure the health, safety or welfare of any person employed in establishment.

(2) Nothing in sub-section (1) shall apply to the disclosure of any such information to—

- (a) any court;
- (b) any Committee or Board constituted under this Code;
- (c) an official superior or the employer of the establishment concerned;
- (d) a Commissioner for employees' compensation appointed under the Employees' Compensation Act, 1923;
- (e) the Controller, Indian Bureau of Mines; and
- (f) any such officer, authority or authorised person as may be specified in this behalf by the appropriate Government.

8 of 1923.

(3) Notwithstanding anything contained in the Right to Information Act, 2005, no Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator shall disclose the source of any complaint, made to him regarding the contravention of the provisions of this Code without the consent of the complainant and shall also not while making an inspection under this Code in pursuance of such complaint, disclose to the employer concerned or any of his representative that the inspection is being made in pursuance of such complaint.

22 of 2005.

Facilities to be afforded to Inspector-cum-Facilitator.

40. Every employer of an establishment shall afford the Chief Inspector-cum-Facilitator and every Inspector-cum-Facilitator having jurisdiction or every person authorised by the Chief Inspector-cum-Facilitator all reasonable facilities for making any entry, inspection, survey, measurement, examination or inquiry under this Code.

Powers of special officer to enter, measure, etc., in relation to mine.

41. Any person in the service of the Government duly authorised in this behalf by a special order in writing of the Chief Inspector-cum-Facilitator or of an Inspector-cum-Facilitator may, for the purpose of surveying, leveling or measuring any mine or any output therefrom, after giving not less than three days' notice to the manager of such mine, enter the mine and may survey, level or measure the mine or any part thereof or any output therefrom at any time by day or night:

Provided that, where in the opinion of the Chief Inspector-cum-Facilitator or of an

Inspector-cum-Facilitator an emergency exists, he may, by order in writing, authorise any such person to enter the mine for any of the aforesaid purposes without giving any such notice.

42. (1) The appropriate Government may appoint medical practitioners having prescribed qualification to be medical officers for the purposes of this Code in relation to factory, mines, plantation, motor transport undertakings and in any other establishment as may be prescribed: Medical officer.

Provided that the medical officers so appointed shall before entering into their office shall disclose to the appropriate Government their interest in the concerned establishment.

(2) The medical officer shall perform the following duties, namely:—

(a) the examination and certification of workers in a mine or factory or in such other establishment engaged in such dangerous occupations or processes as may be prescribed;

(b) the exercise of such medical supervision for any factory, mines, plantation, motor transport undertaking and for such other establishment as may be prescribed by the appropriate Government where cases of illness have occurred which it is reasonable to believe are due to the nature of any process carried on or other conditions of work prevailing in such establishments;

(c) the examination and certification of adolescent for the purpose of ascertaining his fitness for employment in factory, plantation, motor transport undertakings and in any other establishment as may be prescribed by the appropriate Government in any work which is likely to cause injury to their health.

CHAPTER X

SPECIAL PROVISION RELATING TO EMPLOYMENT OF WOMEN

43. Women shall be entitled to be employed in all establishments for all types of work under this Code and they may also be employed, with their consent before 6 a.m. and beyond 7 p.m. subject to such conditions relating to safety, holidays and working hours or any other condition to be observed by the employer as may be prescribed by the appropriate Government. Employment of women.

44. Where the appropriate Government considers that the employment of women is dangerous for their health and safety, in an establishment or class of establishments or in any particular hazardous or dangerous processes in such establishment or class of establishments, due to the operation carried out therein, such Government may in the prescribed manner, require the employer to provide adequate safeguards prior to the employment of women for such operation. Adequate safety of employment of women in dangerous operation.

CHAPTER XI

SPECIAL PROVISIONS FOR CONTRACT LABOUR AND INTER-STATE MIGRANT WORKER, ETC.

PART I

CONTRACT LABOUR

45. (1) This Part shall apply to— Applicability of this Part.

(i) every establishment in which fifty or more contract labour are employed or were employed on any day of the preceding twelve months through contract;

(ii) every manpower supply contractor who has employed, on any day of the preceding twelve months, fifty or more contract labour.

(2) This Part shall not apply to the establishment in which work only of an intermittent or casual nature is performed:

Provided that if a question arises as to whether work performed in an establishment is of an intermittent or casual nature, the appropriate Government shall decide that question after consultation with the National Board or a State Advisory Board and its decision thereon shall be final.

Explanation.—For the purpose of this sub-section, work performed in an establishment shall not be deemed to be of an intermittent nature—

(i) if it was performed for more than one hundred and twenty days in the preceding twelve months; or

(ii) if it is of seasonal character and is performed for more than sixty days in a year.

Appointment
of designated
authority.

46. The appropriate Government may, by an order, appoint such persons, being Gazetted officers of the Government, as it thinks fit to be designated as authority under sub-section (1) of section 119 and specify the limits of their jurisdiction and vest with such powers and duties including dealing with issuance and revocation of licences electronically as may be specified therein.

Licensing of
contractors.

47. (1) No contractor to whom this Part applies shall—

(a) supply or engage contract labour in any establishment; or

(b) undertake or execute the work through contract labour,

except under and in accordance with a licence issued to him by the authority referred to in sub-section (1) of section 119 in accordance with the provisions of that section after satisfying that the contractor fulfills such requisite qualifications or criteria as may be prescribed by the Central Government and such licence shall, in addition to the requisite particulars and conditions specified in sub-section (3), specify the number of such contract labour who can be supplied or engaged and the amount of security to be deposited by the contractor.

(2) Where the contractor does not fulfil the requisite qualifications or criteria referred to in sub-section (1), the authority referred to in sub-section (1) of section 119 may issue him a "work specific licence" electronically renewable within such period as may be prescribed by the Central Government to supply or engage the contract labour, or execute the work through contract labour, only for the concerned work order as may be specified in such licence and subject to such conditions as may be specified in such licence.

(3) Subject to the provisions of this Part,—

(a) a licence under sub-section (1) may contain such conditions including, in particular, conditions as to hours of work, fixation of wages and other essential amenities in respect of contract labour as may be prescribed by the appropriate Government;

(b) the licence referred to in sub-section (1) or sub-section (2), shall be obtained from, if for such establishment the appropriate Government is—

(i) the Central Government, the authority referred to in sub-section (1) of section 119 designated by that Government; and

(ii) the State Government, the authority referred to in sub-section (1) of section 119 designated by that Government.

Provided that where the contractor is desirous of obtaining licence for supplying or engaging contract labour or undertaking or executing the contract works under sub-section (1) or sub-section (2) in more than one States or for the whole of India, then, he

may obtain the licence from the authority referred to in sub-section (1) of section 119 designated by the Central Government for such purpose and the provisions of that section shall apply:

Provided further that before issuing such licence the authority referred to in the first proviso shall consult the concerned State or States authorities designated under sub-section (1) of section 119, electronically before issuing licence for the establishments for which the appropriate Government is the State Government.

48. (1) Subject to the provisions of section 119, every application for issuing a licence under section 119 for the purposes of sub-section (1) or sub-section (2) of section 47 shall be made electronically in such form and manner and shall contain such particulars regarding the number of contract labour, nature of work for which contract labour is to be employed and such other particulars including the information relating to the employment of inter-State migrant workers as may be prescribed by the appropriate Government.

Procedure for
issue or
renewal of
licence.

(2) Subject to the provisions of section 119, the authority referred to in sub-section (1) thereof shall follow such procedure as may be prescribed by the appropriate Government.

(3) Subject to the provisions of section 119, the licence issued for the purposes of sub-section (1) of section 47 shall be valid for a period of five years in respect of the number of contract labour specified therein and in case the contractor wants to increase the number of the contract labour, he shall apply in the prescribed manner for the amendment to the licence for such purpose to the authority referred to in sub-section (1) of section 119 and if the licence is so amended, the number of contract labour shall be increased to such extent by depositing such security deposit as specified in the amended licence for the balance period.

(4) Subject to the provisions of section 119, the licence issued for the purposes of sub-section (1) of section 47 shall contain responsibility of the contractor as may be prescribed by the appropriate Government.

49. The contractor shall not charge directly or indirectly, in whole or in part, any fee or commission from the contract labour.

No fees or
commission or
any cost to
workers.

50. (1) When a contractor receives work order from an establishment either to supply contract labour in the establishment or to execute the contract through contract labour in the establishment he shall, within such time and in such manner as may be prescribed, intimate to the authority referred to in section 119:

Information
regarding work
order to be
given to the
appropriate
Government.

(2) Where the contractor fails to give intimation under sub-section (1), the designated authority may, after giving the holder of the licence an opportunity of showing cause, suspend or cancel the licence in such manner as may be prescribed by the appropriate Government.

51. (1) If the authority referred to in sub-section (1) of section 119 is satisfied, either on a reference made to him in this behalf or otherwise, that—

Revocation,
suspension
and
amendment
of licence.

(a) a licence granted for the purposes of this Part has been obtained by misrepresentation or suppression of any material fact, or

(b) the holder of a licence has, failed to comply with the conditions subject to which the licence has been granted or has contravened any of the provisions of this Part or the rules made thereunder, then,

without prejudice to any other penalty to which the contractor may be liable under this Code, the authority referred to in sub-section (1) of section 119 may, after giving the contractor an opportunity of showing cause, revoke or suspend the licence in accordance with the procedure as may be prescribed by the Central Government.

(2) Subject to any rules that may be made in this behalf, the authority referred to in sub-section (1) of section 119 may amend a licence granted for the purposes of this Part.

Appeal.

52. (1) Any person aggrieved by an order made under section 47, section 48 or section 51 may, within thirty days from the date on which the order is communicated to him, prefer an appeal to an appellate authority prescribed by the appropriate Government under sub-section (6) of section 119:

Provided that the appellate authority 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 authority shall, after giving the appellant an opportunity of being heard, dispose of the appeal within thirty days from the date on which the appeal is preferred.

Liability of principal employer for welfare facilities.

53. Welfare facilities specified under section 23 and section 24 shall be provided by the principal employer of the establishment to the contract labour who are employed in such establishment.

Effect of employing contract labour from a non-licensed contractor.

54. Where any principal employer of an establishment is employing contract labour through a contractor who is required to obtain a licence under this Part, but he has not obtained such licence, then, such employment shall be deemed to be in contravention of the provision of this Code.

Responsibility for payment of wages.

55. (1) A contractor shall be responsible for payment of wages to each contract labour employed by him and such wages shall be paid before the expiry of such period as may be prescribed by the appropriate Government.

(2) Every contractor shall, make the disbursement of wages referred to in sub-section (1) through bank transfer or electronic mode and inform the principal employer electronically the amount so paid by such mode:

Provided that where it is not practicable to disburse payment in the mode specified in this section, then, the payment shall be made in such manner as may be prescribed by the appropriate Government.

(3) In case the contractor fails to make payment of wages referred to in sub-section (1) within the prescribed period or makes short payment, then, the principal employer shall be liable to make payment of the wages in full or the unpaid balance due, as the case may be, to the concerned contract labour employed by the contractor and recover the amount so paid from the contractor either by deduction from any amount payable to the contractor under any contract or as a debt payable by the contractor.

(4) The appropriate Government, in the event the contractor does not pay the wages to the contract labour employed by him, shall pass the orders of making payment of such wages from the amount deposited by such contractor as security deposit under the licence issued by the licensing officer to the contractor, in such manner as may be prescribed by such Government.

Experience certificate.

56. Every concerned contractor shall issue, on demand, experience certificate, in such form as may be prescribed by the appropriate Government, to the contract labour giving details of the work performed by such contract labour.

Prohibition of employment of contract labour.

57. (1) Notwithstanding anything contained in this Part, employment of contract labour in core activities of any establishment is prohibited:

Provided that the principal employer may engage contract labour through a contractor to any core activity, if—

(a) the normal functioning of the establishment is such that the activity is ordinarily done through contractor; or

(b) the activities are such that they do not require full time workers for the major portion of the working hours in a day or for longer periods, as the case may be;

(c) any sudden increase of volume of work in the core activity which needs to be accomplished in a specified time.

(2) (a) The appropriate Government may, by notification, appoint a designated authority to advise that Government on the question whether any activity of an establishment is a core activity or otherwise;

(b) if a question arises as to whether any activity of an establishment is a core activity or otherwise, the aggrieved party may make an application in such form and manner as may be prescribed, to the appropriate Government for decision;

(c) the appropriate Government may refer any such question *suo motu* or refer the application to the designated authority, which on the basis of relevant material in its possession, or after making such an enquiry as it deems fit, shall report to the appropriate Government, within such period and thereafter the appropriate Government shall decide the question within such period as may be prescribed.

58. The appropriate Government may, in the case of an emergency, direct, by notification, that subject to such conditions and restrictions, if any, and for such period, as may be specified in the notification, all or any of the provisions of this Code or the rules made thereunder shall not apply to any establishment or class of establishments or any class of contractors.

Power to exempt in special cases.

PART II

INTER-STATE MIGRANT WORKERS

59. This Part shall apply to every establishment in which ten or more inter-State migrant workers are employed or were employed on any day of the preceding twelve months.

Applicability of Part II.

60. It shall be the duty of every contractor or the employer, of an establishment employing inter-State migrant workers in connection with the work of that establishment—

Facilities to inter-State migrant workers.

(i) to ensure suitable conditions of work to such worker having regard to the fact that he is required to work in a State different from his own State;

(ii) in case of fatal accident or serious bodily injury to any such worker, to report to the specified authorities of both the States and also the next of kin of the worker;

(iii) to extend all benefits to such worker which are available to a worker of that establishment including benefits under the Employees' State Insurance Act, 1948 or the Employees' Provident Funds and Miscellaneous Provisions Act, 1952 or any other law for the time being in force and the facility of medical check-up as available to a worker under clause (c) of sub-section (1) of section 6.

34 of 1948.
19 of 1952.

61. The employer shall pay, to every inter-State migrant worker employed in his establishment, in a year a lump sum amount of fare for to and fro journey to his native place from the place of his employment, in the manner taking into account the minimum service for entitlement, periodicity and class of travel and such other matters as may be prescribed by the appropriate Government.

Journey allowance.

62. The appropriate Government shall make schemes to provide—

(a) option to an inter-State migrant worker for availing benefits of public distribution system either in his native State or the destination State where he is employed; and

Benefits of public distribution system, etc.

(b) for portability of the benefits of the inter-State migrant worker working for building or other construction work out of the building and other construction cess fund in the destination State where such inter-State migrant worker is employed.

Toll free helpline.

63. The appropriate Government may provide facility of toll free helpline to the inter-State migrant workers in such manner as may be prescribed by that Government.

Study of inter-State migrant workers.

64. The appropriate Government may provide for study of inter-State migrant workers in such manner as may be prescribed by that Government.

Past liabilities.

65. No suit or other proceeding shall lie in any court or before any authority for the recovery of debt or any part thereof relating to an inter-State migrant worker after the completion of his employment where it remains unsettled obligation to the contractor or the principal employer and such debt or part thereof shall, on the completion of the period of employment of such worker, be deemed to have been extinguished.

PART III

AUDIO-VISUAL WORKERS

Prohibition of employment of audio-visual worker without agreement.

66. (1) No person shall be employed as an audio-visual worker in or in connection with production of any audio-visual programme unless,—

(a) an agreement in writing is entered into—

(i) with such person by the producer of such audio-visual programme; or

(ii) with such person by the producer of such audio-visual programme with the contractor, where such person is employed through such contractor; or

(iii) with such person by the contractor or other person through whom such person is employed; and

(b) such agreement is registered with the competent authority, to be notified by the appropriate Government, by the producer of such audio-visual programme.

(2) Every agreement, referred to in sub-section (1) shall,—

(a) be in the prescribed form;

(b) specify the name and such other particulars as may be prescribed by the appropriate Government with respect to, such person to be employed under the agreement as audio-visual worker;

(c) include, where such audio-visual worker is employed through a contractor, a specific condition to the effect that in the event of the contractor failing to discharge his obligations under the agreement to the audio-visual worker with respect to payment of wages or any other matter, the producer of the audio-visual programme shall also be liable to discharge such obligations and shall be entitled to be reimbursed with respect thereto by the contractor.

(3) A copy of the agreement referred to in sub-section (1) with respect to the employment of the audio-visual worker shall, if such audio-visual worker is covered under the provision of an enactment for the time being in force for providing the benefit of provident fund to him, also be forwarded by the producer of the audio-visual programme to such authority as may be prescribed by the appropriate Government.

(4) Notwithstanding anything contained in Chapters V, VI and VII, the agreement referred to in sub-section (1) shall include,—

(i) nature of assignment;

- 19 of 1952. (ii) wages and other benefits (including provident fund, if covered under the Employees' Provident Fund and Miscellaneous Provisions Act, 1952);
- (iii) health and working conditions;
- (iv) safety;
- (v) hours of work;
- (vi) welfare facilities; and
- (vii) dispute resolution process or mechanism, the constitution and other details of which shall be prescribed by the appropriate Government:

14 of 1947. Provided that in case of failure of the resolution of the dispute in such dispute resolution process or mechanism, either party in the dispute may invoke the jurisdiction of the Industrial Tribunal established by the appropriate Government under section 7A of the Industrial Disputes Act, 1947 and for such purpose such dispute shall be deemed to be industrial dispute within the meaning of that Act and it shall be the responsibility of the producer of the audio-visual programme to provide the facilities specified in the agreement to the audio-visual worker and the payment of wages shall be through electronic mode.

PART IV

MINES

67. (1) Save as may be otherwise prescribed, every mine shall be under a sole manager who shall have such qualifications as may be prescribed by the Central Government and the owner or agent of every mine shall appoint a person having such qualifications to be the manager. Managers.

Provided that the owner or agent may appoint himself as manager if he possesses the prescribed qualifications.

(2) Subject to any instructions given to him by or on behalf of the owner or agent of the mine, the manager shall be responsible for the overall management, control, supervision and direction of the mine and all such instructions when given by the owner or agent shall be confirmed in writing forthwith.

(3) Except in case of an emergency, the owner or agent of a mine or anyone on his behalf shall not give, otherwise than through the manager, instructions affecting the fulfilment of his statutory duties, to a person, employed in a mine, who is responsible to the manager.

68. (1) The provisions of this Code, except those contained in sections 35, 38, 40, 41 and 44, shall not apply to— Code not to apply in certain cases.

(a) any mine or part thereof in which excavation is being made for prospecting purposes only and not for the purpose of obtaining minerals for use or sale subject to such conditions relating to number of employees, depth of excavation and other matters as may be prescribed by the Central Government;

(b) any mine engaged in the extraction of kankar, murrum, laterite, boulder, gravel, shingle, ordinary sand (excluding mouldings and glass sand and other mineral sands), ordinary clay (excluding kaolin, china clay, white clay or fire clay), building stone, slate, road metal, earth, fullers earth (marl, chalk) and lime stone subject to such conditions relating to workings, open cast workings and explosives as may be prescribed by the Central Government.

(2) Notwithstanding anything contained in sub-section (1), the Central Government may declare that the provisions of this Code shall apply to such mine or part thereof as may be prescribed by the Central Government.

(3) Without prejudice to the provisions contained in sub-section (2), if at any time any of the conditions specified in clause (a) or clause (b) of sub-section (1) is not fulfilled in relation to any mine referred to in that sub-section, the provisions of this Code not set out in sub-section (1), shall become immediately applicable, and it shall be the duty of the employer of the mine to inform about such non-fulfilment to such authority in such manner and within such time as may be prescribed by the Central Government.

Exemption from provision regarding employment.

69. (1) In case of an emergency involving serious risk to the safety of the mine or of persons employed therein, or in case of an accident, whether actual or apprehended, or in case of any act of God or in case of any urgent work to be done to machinery, plant or equipment of the mine as a result of breakdown of such machinery plant or equipment, the manager may, subject to the provision of clause (B) of sub-section (1) of section 38 and in accordance with the provisions of section 25 relating to exemption from hours of work above ground, hours of work below ground and notification regarding hours of work and weekly day of rest relating to mines under section 26, permit persons to be employed in contravention of sections 25 and 30 and sub-section (1) of section 31 on such work as may be necessary to protect the safety of the mine or of the persons employed therein:

Provided that in case of any urgent work to be done to machinery, plant or equipment under this section, the manager may take the action permitted by this section, although the production of mineral would thereby be incidentally affected, but any action so taken shall not exceed the limits necessary for the purpose of avoiding serious interference with the ordinary working of the mine.

(2) Every case in which action has been taken by the manager under sub-section (1), shall be recorded together with the circumstances relating thereto and a report thereof shall also be made to the Chief Inspector-cum-Facilitator or the Inspector-cum-Facilitator.

Employment of persons below eighteen years of age.

70. (1) No person below eighteen years of age shall be allowed to work in any mine or part thereof.

(2) Notwithstanding anything contained in sub-section (1), apprentices and other trainees, not below sixteen years of age, may be allowed to work, under proper supervision, in a mine or part thereof by the manager as referred to in section 67:

Provided that in the case of trainees, other than apprentices, prior approval of the Chief Inspector-cum-Facilitator or an Inspector-cum-Facilitator shall be obtained before they are allowed to work.

(3) The Central Government may prescribe the provisions for medical examination of apprentice, other trainee and employee in the mine to ensure their fitness to work and to prevent the persons below sixteen years of age to work as apprentice or trainee and those who are not adults to work as such employee.

Explanation.—In this section, "apprentice" means an apprentice as defined in clause (a) of section 2 of the Apprentices Act, 1961.

52 of 1961.

Exemption to certain persons.

71. The Central Government may make rules to provide for exemption to certain persons or category of persons employed in mines from the provisions of sub-section (1) of section 25, sub-section (1) of section 26, section 30 and sub-section (1) of section 31.

Establishment, maintenance of rescue services and vocational training.

72. The Central Government may prescribe vocational training and rescue and recovery services for persons employed in a mine.

73. If any question arises as to whether any excavation or working or premises in or adjacent to and belonging to a mine, on which any process ancillary to the getting, dressing or preparation for sale of minerals or of coke is being carried on in a mine within the meaning of this Code, the Central Government may decide the question, and a certificate signed by a Secretary to the Government of India in the Ministry of Labour and Employment shall be conclusive proof thereof.

Decision of question whether a mine is covered under this Code.

PART V

BEEDI AND CIGAR WORKERS

74. (1) Save as otherwise provided in this Part, no employer shall use or allow to use any place or premises as an industrial premises unless he holds a valid licence issued under section 119 for the purposes of this Part and no such premises shall be used except in accordance with the terms and conditions of such licence.

Licence to industrial premises and person.

(2) Subject to the provisions of section 119, any person who intends to use or allows to use any place or premises specified in sub-section (1) shall make an application to the authority referred to in sub-section (1) of section 119, in such form and on payment of such fees as may be prescribed by the State Government, for a licence to use, or allow to use, such premises as an industrial premises.

(3) Subject to the provisions of section 119, the application shall specify the maximum number of employees proposed to be employed at any time of the day in the place or premises and shall be accompanied by a plan of the place or premises prepared in such manner as may be prescribed by the State Government.

(4) Subject to the provisions of section 119, the authority referred to in sub-section (1) thereof shall, in deciding whether to grant or refuse to grant a licence, have regard to the following matters, namely:—

(a) the suitability of the place or premises which is proposed to be used for the manufacture of beedi or cigar or both;

(b) previous experience of the applicant or he has employed experienced person or has entered into agreement with the experienced person for employment for the period of licence;

(c) the financial resources of the applicant including his financial capacity to meet the demands arising out of the provisions of the laws for the time being in force relating to welfare of labour;

(d) whether the application is made *bona fide* on behalf of the applicant himself or in *benami* of any other person;

(e) welfare of the labour in the locality, the interest of the public generally and such other matters as may be prescribed by the State Government.

(5) Subject to the provisions of section 119, a licence granted under the said section for the purposes of this section shall be valid for five years and may be renewed thereafter.

(6) Subject to the provisions of section 119, an application for the renewal of a licence for the purposes of this Part shall be made at least thirty days before the expiry of the period thereof, on payment of such fees as may be prescribed by the State Government, and where such an application has been made, the licence shall be deemed to continue, notwithstanding the expiry of the period thereof, until the renewal of the licence, or, as the case may be, the rejection of the application for the renewal thereof.

Provided that the authority referred to in sub-section (1) of section 119 shall not grant or renew a licence unless it is satisfied that the provisions of this Part and the rules made thereunder have been complied with:

Provided further that the authority referred to in sub-section (1) of section 119 shall renew or refuse to renew the licence within such period as may be prescribed by the State Government and in deciding whether to renew a licence or to refuse a renewal thereof shall have regard to the matters specified in sub-section (4).

(7) Subject to the provisions of section 119, the authority referred to in sub-section (1) thereof may, after giving the holder of a licence an opportunity of being heard, cancel or suspend any licence granted or renewed under section 119 for the purposes of this Part, if it appears to it that such licence has been obtained by misrepresentation or fraud or that the licence has contravened or failed to comply with any of the provisions of this Part or the rules made thereunder or any of the terms or conditions of the licence.

(8) The State Government may issue in writing to an authority referred to in sub-section (1) of section 119 such directions of a general character as that Government may consider necessary in respect of any matter relating to the grant or renewal of licence under section 119 relating to this section.

(9) Subject to section 119 and the foregoing provisions of this section, the authority referred to in sub-section (1) of section 119 may grant or renew licence relating to this Part on such terms and conditions as it may determine and where such authority refuses to grant or renew any licence, it shall do so by an order communicated to the applicant, giving the reasons in writing for such refusal.

Appeals:

75. Any person aggrieved by the decision of the authority referred to in sub-section (1) of section 119 refusing to grant or renew a licence, or cancelling or suspending a licence, relating to this Part may, within such time and on payment of such fees as may be prescribed, appeal to the appellate authority referred to in sub-section (6) of section 119, and such authority may by order confirm, modify or reverse any order refusing to grant or renew a licence, or cancelling or suspending a licence, relating to this Part.

Permission to work by employees outside industrial premises.

76. (1) The State Government may permit the wetting or cutting of beedi or tobacco leaves by employees outside the industrial premises on an application made to it by the employer on behalf of such employees, subject to such conditions as may be prescribed.

(2) The employer shall maintain the record of the work permitted under sub-section (1), to be carried on outside the industrial premises, in such form as may be prescribed.

(3) Save as otherwise provided in this section, no employer shall require or allow any manufacturing process connected with the making of beedi or cigar or both to be carried on outside the industrial premises:

Provided that nothing in this sub-section shall apply to any worker who is given raw material by an employer or a contractor to make beedi or cigar or both at home.

Part not to apply to self-employed persons in private dwelling houses.

77. Nothing contained in this Part shall apply to the owner or occupier of a private dwelling house, not being an employee of an employer to whom this Part applies, who carries on any manufacturing process in such private dwelling house with the assistance of the members of his family living with him in such dwelling house and dependent on him.

Explanation.—For the purposes of this section,—

(i) "family" does not include child, as defined in the Child and Adolescent (Prohibition and Regulation) Act, 1986, for this section;

(ii) "private dwelling house" means a house in which persons engaged in the manufacture of beedi or cigar or both reside.

61 of 1986.

PART VI

BUILDING OR OTHER CONSTRUCTION WORKERS

78. No person, about whom the employer knows or has reasons to believe that he is a deaf or he has a defective vision or he has a tendency to giddiness, shall be required or allowed to work in any such operation of building or other construction work which is likely to involve a risk of any accident either to the building worker himself or to any other person.

Prohibition of employment of certain persons in certain building or other construction work.

PART VII

FACTORIES

79. (1) The appropriate Government may make rules in respect of factory or class or description of factories for—

Approval and licensing of factories.

(a) the submission of plans including specifications, nature and certification thereof;

(b) the previous permission for the site on which the factory is to be situated and for the construction or extension thereof; and

(c) subject to the provision of sub-section 119, licensing and renewal thereof including fees to be payable for such, licensing and renewal, if required, as the case may be.

(2) If on an application for permission referred to in clause (b) of sub-section (1) accompanied by the plans and specifications required by the rules made under clause (a) of that sub-section, sent to the State Government or Chief Inspector-cum-Facilitator in the electronic mode, no order is communicated to the applicant within such period not exceeding thirty days, the permission applied for in the said application shall be deemed to have been granted.

(3) Where a State Government or a Chief Inspector-cum-Facilitator refuses to grant permission to the site, construction or extension of a factory and licensing of a factory, the applicant may within thirty days of the date of such refusal appeal to the Central Government if the decision appealed from was of the State Government and to the State Government in any other case.

Explanation.—A factory shall not be deemed to be extended within the meaning of this section by reason only of the replacement of any plant or machinery or within such limits as may be prescribed, of the addition of any plant or machinery if such replacement or addition does not reduce the minimum clear space required for safe working around the plant or machinery or adversely affect the environmental conditions from the evolution or emission of steam, heat or dust or fumes injurious to health.

80. Where any premises or separate buildings are leased to different occupiers for use as separate factories, the owner of the premises and occupiers of the factories utilising such common facilities which include safety and fire prevention and protection, access, hygiene, occupational health, ventilation, temperature, emergency preparedness and response, canteens, shelter, rest rooms and crèches shall jointly and severally be responsible for provision and maintenance of such common facilities and services as may be prescribed by the appropriate Government.

Liability of owner of premises in certain circumstances.

81. (1) The appropriate Government may, by notification, declare that all or any of the provisions of this Part shall apply to any place wherein a manufacturing process is carried on with or without the aid of power or is ordinarily carried on irrespective of the number of workers working in the factory.

Power to apply Code to certain premises.

(2) After a place is so declared, it shall be deemed to be a factory for the purposes of this Code, and the owner shall be deemed to be the occupier, and any person working therein, a worker.

Explanation.—For the purposes of this section, "owner" shall include a lessee or mortgagee with possession of the premises.

Dangerous operations.

82. The appropriate Government may by rules make the provisions relating to any factory or class or description of factories in which manufacturing process or operation is carried on which exposes any of the persons employed in it to a serious risk of bodily injury, poisoning or disease, for—

(a) specifying the manufacturing process or operation and declaring it to be dangerous;

(b) prohibiting or restricting the employment of pregnant women in the manufacturing process or operation;

(c) the periodical medical examination before, or at any time during the employment to ascertain the fitness of a worker or employee for such employment on the cost of the occupier; and

(d) welfare amenities, sanitary facilities, protective equipment and clothing, and any other requirement necessary for dangerous operations.

Constitution of site appraisal committee.

83. (1) The appropriate Government may, constitute one or more site appraisal committees consisting of a chairman and other members, for such purpose as may be prescribed including to consider and to give recommendations on an application for grant of permission for the initial location of a factory involving a hazardous process or for the expansion of such factory.

(2) The site appraisal committee referred to in sub-section (1) shall make its recommendation within a period of thirty days of the receipt of the application for any of the purpose referred to in the said sub-section in such form, as may be prescribed.

Compulsory disclosure of information by occupier.

84. (1) The occupier of every factory involving a hazardous process shall disclose in the manner prescribed by the State Government all information regarding dangers, including health hazards and the measures to overcome such hazards arising from the exposure to or handling of the materials or substances in the manufacture, transportation, storage and other processes, to the workers employed in the factory, the Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator, the local authority within whose jurisdiction the factory is situate and the general public in the vicinity.

(2) The occupier shall, at the time of registering the factory involving a hazardous process, lay down a detailed policy with respect to the health and safety of the workers employed therein and intimate such policy to the Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator and the local authority and, thereafter, at such intervals as may be prescribed by the State Government, inform the Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator and the local authority of any change made in the said policy.

(3) The information furnished under sub-section (1) shall include accurate information as to the quantity, specifications and other characteristics of wastes and the manner of their disposal.

(4) Every occupier shall, with the approval of the Chief Inspector-cum-Facilitator, draw up an on-site emergency plan and detailed disaster control measures for his factory and make known to the workers employed therein and to the general public living in the vicinity of the factory the safety measures required to be taken in the event of an accident taking place.

(5) Every occupier of a factory shall, if such factory proposes to engage in a hazardous process at any time after the commencement of this Code, within a period of thirty days before the commencement of such process, inform the Chief Inspector-cum-Facilitator about the nature and details of the process in such form and in such manner as may be prescribed by the State Government.

(6) Where any occupier of a factory contravenes the provisions of sub-section (5), the licence issued under section 79 to such factory shall, notwithstanding any penalty to which the occupier of factory shall be subjected to under the provisions of this Code, be liable for cancellation.

(7) The occupier of a factory involving a hazardous process shall, with the previous approval of the Chief Inspector-cum-Facilitator, lay down measures for the handling, usage, transportation and storage of hazardous substances inside the factory premises and the disposal of such substances outside the factory premises and publicise them in the manner prescribed by the State Government among the workers and the general public living in the vicinity.

85. Every occupier of a factory involving any hazardous process shall—

(a) maintain accurate and up-to-date health records or, as the case may be, medical records, of the workers in the factory who are exposed to any chemical, toxic or any other harmful substances which are manufactured, stored, handled or transported and such records shall be accessible to the workers subject to such conditions as may be prescribed by the State Government;

(b) appoint persons who possess prescribed qualifications and experience in handling hazardous substances and are competent to supervise such handling within the factory and to provide at the working place all the necessary facilities for protecting the workers in the manner prescribed by the State Government.

Provided that where any question arises as to the qualifications and experience of a person so appointed, the decision of the Chief Inspector-cum-Facilitator shall be final;

(c) provide for medical examination of every worker—

(i) before such worker is assigned to a job involving the handling of, or working with, a hazardous substance; and

(ii) while continuing in such job, and after he has ceased to work in such job, at intervals not exceeding twelve months, in such manner as may be prescribed by the State Government.

86. (1) The Central Government may, in the event of the occurrence of an extraordinary situation involving a factory engaged in a hazardous process, direct the National Board to inquire into the standards of health and safety observed in the factory with a view to finding out the causes of any failure or neglect in the adoption of any measures or standards prescribed by the State Government for the health and safety of the workers employed in the factory or the general public affected, or likely to be affected due to such failure or neglect and for the prevention of recurrence of such extraordinary situations in future in such factory or elsewhere.

(2) The recommendations of the National Board shall be advisory in the nature.

87. (1) Where the Central Government is satisfied that no standards of safety have been prescribed in respect of a hazardous process or class of hazardous processes, or where the standards so prescribed are inadequate, it may direct the Directorate General Occupational Safety and Health formerly known as the Directorate General of Factory Advice Service and Labour Institutes or any Institution authorised in matters relating to standards of safety in hazardous processes, to lay down emergency standards for enforcement of suitable standards in respect of such hazardous processes.

(2) The emergency standards laid down under sub-section (1) shall, until they are incorporated in the rules made under this Code, be enforceable and have the same effect as if they had been incorporated in the rules made under this Code.

Specific responsibility of the occupier in relation to hazardous processes.

National Board to inquire into certain situations.

Emergency standards.

Permissible limits of exposure of chemicals and toxic substances.

88. The maximum permissible limits of exposure of chemical and toxic substances in manufacturing process in any factory shall be of the value as may be prescribed by the State Government.

Right of workers to warn about imminent danger.

89. (1) Where the workers employed in any factory engaged in a hazardous process have reasonable apprehension that there is a likelihood of imminent danger to their lives or health due to any accident, they may, bring the same to the notice of the occupier, agent, manager or any other person who is in-charge of the factory or the process concerned directly or through their representatives in the Safety Committee and simultaneously bring the same to the notice of the Inspector-cum-Facilitator.

(2) It shall be the duty of such occupier, agent, manager or the person in-charge of the factory or process to take immediate remedial action if he is satisfied about the existence of such imminent danger and send a report forthwith of the action taken to the Inspector-cum-Facilitator.

(3) If the occupier, agent, manager or the person in-charge referred to in sub-section (2) is not satisfied about the existence of any imminent danger as apprehended by the workers, he shall, nevertheless, refer the matter forthwith to the Inspector-cum-Facilitator whose decision on the question of the existence of such imminent danger shall be final.

Appeal against the order of Inspector-cum-Facilitator in case of factory.

90. The appropriate Government may prescribe provisions providing the manner in which and the appropriate authority to whom the manager or occupier of the factory may make appeal against the order of the Inspector-cum-Facilitator and the procedure for disposing of such appeals.

Power to make rules to exempt.

91. (1) The appropriate Government may make rules,—

(a) specifying the persons who hold positions of supervision or management or are employed in a confidential position in a factory or empowering the Chief Inspector-cum-Facilitator to declare any person, other than a person so specified, as a person holding position of supervision or management or employed in a confidential position in a factory if, in the opinion of the Chief Inspector-cum-Facilitator, such person holds such position or is so employed, and the provisions of this Code, shall not apply to any person so defined or declared;

(b) in respect of any worker or class of workers in any establishment or class of establishment, for providing the exemption, extent of exemption and conditions subject to which such exemption may be given.

(2) The appropriate Government or the Chief Inspector-cum-Facilitator may, by order in writing, exempt subject to such conditions as it may deem expedient, any or all of the adult workers in any establishment or class of establishments.

PART VIII

PLANTATION

Facilities for workers in plantation.

92. (1) Without prejudice to the generality of sections 23 and 24, the State Government may prescribe requiring every employer to make provisions in his plantation for—

(a) necessary housing accommodation including drinking water, kitchen and toilet to every worker employed in the plantation (including his family);

(b) crèches facilities where in the plantation fifty or more workers (including workers employed by any contractor) are employed or were employed on any day of the preceding twelve months:

Provided that,—

(i) an establishment may avail common crèche facility of the Central Government, State Government, municipality or private entity or provided by non-Governmental organisation or by any other organisation; or

(ii) a group of establishments may agree to pool their resources for setting up of common crèche;

(c) educational facilities for the children of the workers employed in the plantation where the children between the ages of six to twelve of the workers exceed twenty-five in number;

(d) health facilities to every worker employed in the plantation (including his family) or provide coverage under the Employees State Insurance Act, 1948; and

(e) recreational facilities for the workers employed in the plantation.

34 of 1948.

(2) An employer of a plantation shall be responsible to provide and maintain welfare facilities for which the workers in the plantation are entitled under this Code either from his own resources or through the schemes of the Central Government or State Government, Municipality or Panchayat for the locality in which the plantation is situated.

Explanation.—For the purposes of this sub-section—

(i) the expression "Municipality" has the same meaning as assigned to it in clause (e) of article 243 of the Constitution; and

(ii) the expression "Panchayat" has the same meaning as assigned to it in clause (d) of article 243 of the Constitution.

93. (1) In every plantation, arrangement shall be made by the employer to provide for the safety of a worker in connection with the use, handling, storage and transport of insecticides, pesticides and chemicals and toxic substances. Safety.

(2) The State Government may prescribe for special safeguards for employment of women or adolescents in using or handling hazardous chemicals.

(3) The employer of a plantation shall appoint persons possessing the prescribed qualifications to supervise the use, handling, storage and transportation of insecticides, chemicals and toxic substances in his plantation.

(4) Every employer of a plantation shall ensure that every worker in plantation employed for handling, mixing, blending and applying insecticides, chemicals and toxic substances, is trained about the hazards involved in different operations in which he is engaged, the various safety measures and safe work practices to be adopted in emergencies arising from spillage of such insecticides, chemicals and toxic substances and such other matters as may be prescribed by the State Government.

(5) Every worker in a plantation who is exposed to insecticides, pesticides, chemicals and toxic substances shall be medically examined periodically, in such manner as may be prescribed by the State Government.

(6) Every employer of a plantation shall maintain health record of every worker in plantation who is exposed to insecticides, pesticides, chemicals and toxic substances which are used, handled, stored or transported in a plantation, and every such worker shall have access to such record.

(7) Every employer of a plantation shall provide—

(a) washing, bathing and clock room facilities; and

(b) protective clothing and equipment,

to every worker engaged in the handling insecticides, pesticides, chemicals and toxic substances in such manner as may be prescribed by the State Government.

(8) Every employer of a plantation shall display in the plantation, a list of permissible concentrations of insecticides, pesticides, chemicals and toxic substances in the breathing zone of the workers engaged in the handling and application of insecticides, pesticides, chemicals and toxic substances in the plantation.

(9) Every employer of a plantation shall exhibit such precautionary notices in the plantation as may be prescribed by the State Government indicating the hazards of insecticides, pesticides, chemicals and toxic substances.

CHAPTER XII

OFFENCES AND PENALTIES

General
penalty for
offences.

94. Save as otherwise expressly provided in this Code, if in, or in respect of, any establishment, there is any contravention of the provisions of this Code or regulations or rules, or bye-laws or any of standards, made thereunder or of any order in writing given under this Code or such regulations or rules or bye-laws or standards, the employer or the principal employer of the establishment, as the case may be, shall be liable to penalty which shall not be less than two lakhs rupees but which may extend up to three lakh rupees, and if the contravention is continued after the conviction, then, with further penalty which may extend to two thousand rupees for each day till such contravention continues.

Punishment
for causing
obstruction to
Chief
Inspector-
cum-
Facilitator or
Inspector-cum-
Facilitator,
etc.

95. (1) Whoever wilfully—

(i) prevents or causes obstruction to a Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator or an officer of the appropriate Government or a person authorised to discharge any duty or to exercise any powers under this Code or the rules or the regulations or the bye-laws made thereunder, from discharging such duty or exercising such power; or

(ii) refuses entry to the Chief Inspector-cum-Facilitator or the Inspector-cum-Facilitator or person or public authority referred to in clause (i) of sub-section (1) of section 35 or expert referred to in section 37, to any place where such Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator or such person or authority or expert is entitled to enter; or

(iii) fails or refuses to produce any document which he is required to produce; or

(iv) fails to comply with any requisition or order issued to him,

under this Code or the rules, regulations or bye-laws made thereunder he shall be punishable with imprisonment for a term which may extend to three months, or with fine which may extend to one lakh rupees, or with both.

(2) Where any person convicted of an offence punishable under sub-section (1) is again convicted of an offence under the same provision, then, he shall be punishable with imprisonment for a term which may extend to six months, or with fine which shall not be less than one lakh rupees but which may extend to two lakh rupees, or with both.

Penalty for
non-
maintenance
of register,
records and
non-filing of
returns, etc.

96. (1) Any person, who is required under this Code or the rules or regulations or bye-laws or order made thereunder, to—

(i) maintain any register or other document or to file returns, omits or fails to maintain such register or document or to file such returns; or

(ii) produce any register or plan or record or report or any other document, omits or fails to produce such register or plan or record or report or such other document.

he shall be liable to penalty which shall not be less than fifty thousand rupees but which may extend to one lakh rupees.

(2) Where any person convicted of an offence punishable under sub-section (1) is again convicted of an offence under the same provision, then, he shall be liable to penalty which shall not be less than fifty thousand rupees but which may extend to two lakh rupees.

97. (1) Any person, who, save as permitted by or under this Code, contravenes any—

(i) provision of this Code or of any rule, regulation or bye-laws; or

(ii) order made under this Code prohibiting, restricting or regulating the employment of workers including women, audio-visual worker and contract labour and employee below eighteen years of age in case of mines.

he shall be liable to penalty which shall not be less than fifty thousand rupees but which may extend to one lakh rupees.

(2) Where any person convicted of an offence punishable under sub-section (1) is again convicted of an offence under the same provision, then, he shall be punishable with imprisonment for a term which may extend to three months, or with fine which may extend to two lakh rupees, or with both.

98. (1) Whoever—

(a) produces false records or counterfeits or knowingly makes or produces or uses a false statement, declaration or evidence regarding any document in connection with compliance of any of the provisions of this Code or any rules, regulations or bye-laws or any order made thereunder; or

(b) falsifies any plan or section, the maintenance of which is required by or under this Code or produces before any authority such plan or section, knowing the same to be false; or

(c) makes, gives or delivers knowingly a false plan, section, return, notice, record or report containing a statement, entry or detail,

he shall be punishable with imprisonment for a term which may extend to three months, or with fine which may extend to one lakh rupees, or with both.

(2) Where any person convicted of an offence punishable under sub-section (1) is again convicted of an offence under the same provision, then, he shall be punishable with imprisonment for a term which may extend to six months, or with fine which shall not be less than one lakh rupees but which may extend to two lakh rupees, or with both.

99. Any person who, without reasonable excuse the burden of proving which shall lie upon him, omits to make or furnish in the prescribed form or manner or at, or within, the prescribed time any plan, section, return, notice, register, record or report required by or under any provision of this Code to be made or furnished, he shall be liable to penalty which shall not be less than one lakh rupees but which may extend to two lakh rupees.

100. (1) Whoever being the Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator or any other person referred to in section 39 or section 121 discloses, contrary to the provisions of that section, any such information as is referred to in that section without the consent of the appropriate Government, he shall be punishable with imprisonment for a term which may extend to three months, or with fine which may extend to one lakh rupees, or with both.

Punishment for contravention of certain provisions.

Punishment for falsification of records, etc.

Penalty for omission to furnish plans, etc.

Punishment for disclosure of information.

(2) No court shall proceed with the trial of any offence under this section except with the previous sanction of the appropriate Government.

Punishment for wrongfully disclosing results of analysis.

101. Whoever, except in so far as it may be necessary for the purposes of a prosecution for any offence punishable under this Code, publishes or discloses to any person the results of an analysis, of a sample of substance used or intended to be used in any process under this Code, shall be punishable with imprisonment for a term, which may extend to six months, or with fine, which may extend to fifty thousand rupees, or with both.

Punishment for contravention of provisions of duties relating to hazardous processes.

102. (1) Whoever fails to comply with or contravenes any of his duties specified under—

(i) clauses (a) to (h) of sub-section (1) or sub-section (2) of section 6 or clause (d) of section 13 in so far as such duty relates to hazardous processes; or

(ii) section 80,

shall, in respect of such failure or contravention, be punishable with an imprisonment for a term which may extend to two years and with fine which may extend to five lakh rupees, and in case the failure or contravention continues, with additional fine which may extend to twenty-five thousand rupees for every day during which such failure or contravention continues, after the conviction for the first such failure or contravention.

(2) If the failure or contravention referred to in sub-section (1) continues beyond a period of one year after the date of conviction, the offender shall be punishable with imprisonment for a term which may extend to three years or with a fine of twenty lakh rupees, or with both.

Punishment for contravention of provisions of duties relating to safety provisions resulting in an accident.

103. (1) If a person fails to comply with or contravenes any duties under this Code or the regulations, rules, bye-laws or orders made thereunder and such non-compliance or contravention has resulted in an accident or dangerous occurrences causing—

(a) death, he shall be punishable with imprisonment for a term which may extend to two years, or with a fine which shall not be less than five lakh rupees, or with both; or

(b) serious bodily injury to any person within the establishment, he shall be punishable with imprisonment for a term which may extend to one year, or with a fine which shall not be less than two lakh rupees but not exceeding four lakh rupees, or with both:

Provided that while imposing the fine under this section, the court may direct that a portion of the fine, which shall not be less than fifty per cent. thereof, shall be given as compensation to the victim or to the legal heirs of the victim, in the case of his death.

(2) Where a person having been convicted under sub-section (1) is again convicted thereunder, shall be punishable with double the punishment provided under that sub-section for first conviction.

Special provision for contravention of order under section 38.

104. Whoever continues to work in contravention of any general or special order issued under the provisions of section 38, shall be punishable with imprisonment for a term which may extend to two years and shall also be liable to fine which may extend to five lakh rupees:

Provided that the court shall not impose a fine under this section which shall be less than two lakh rupees without recording in the judgment the reasons for imposing such fine.

Failure to appoint manager in mine.

105. Whoever in compliance of the provisions of section 67, fails to appoint a manager shall be punishable with imprisonment for a term which may extend to three months, or with fine which may extend to one lakh rupees, or with both.

106. (1) Subject to the provisions of section 13, except clause (d) thereof, if any employee employed in a workplace contravenes any provision of this Code or any rules or orders made thereunder, imposing any duty or liability on employee, he shall be punishable with penalty which may extend to ten thousand rupees.

Offences by employees.

(2) Where an employee is convicted of an offence punishable under sub-section (1), the employer of the establishment shall not be deemed to be guilty of an offence in respect of that contravention, unless it is proved that he failed to take all reasonable measures for its prevention.

107. No prosecution shall be instituted against any owner, agent or manager of a mine for any offence under this Code except at the instance of the Chief Inspector-cum-Facilitator or of the District Magistrate or of Inspector-cum-Facilitator authorised in this behalf by general or special order in writing by the Chief Inspector-cum-Facilitator:

Prosecution of owner, agent or manager of mine.

Provided that the Chief Inspector-cum-Facilitator or the District Magistrate or the Inspector-cum-Facilitator as so authorised shall before instituting such prosecution satisfy himself that the owner, agent or manager of a mine had failed to exercise due diligence to prevent the commission of such offence.

Provided further that in respect of an offence committed in the course of the technical direction and management of a mine, the District Magistrate shall not institute any prosecution against an owner, agent or manager of a mine without the previous approval of the Chief Inspector-cum-Facilitator.

108. Where the owner, agent or manager of the mine or employer or occupier of the factory is charged with an offence punishable under this Code he shall be entitled, upon complaint duly made by him and on giving to the prosecutor not less than three clear days' notice in writing of his intention so to do, to have any other person whom he charges as the actual offender brought before the Court at the time appointed for hearing the charge; and if, after the commission of the offence has been proved, the owner, agent or manager of the mine or occupier or manager of the factory, as the case may be, proves to the satisfaction of the Court—

Exemption of owner, agent or manager of mine or occupier of factory from liability in certain cases.

(a) that he has exercised due diligence to enforce the execution of this Code, or

(b) that the said other person committed the offence in question without his knowledge, consent or connivance,

that other person shall be convicted of the offence and shall be liable to the like punishment as if he was the owner, agent or manager of the mine or occupier or manager of the factory, as the case may be, and the owner, agent or manager of a mine or the occupier or the manager of the factory shall be, discharged from any liability under this Code in respect of such offence:

Provided that in seeking to prove as aforesaid the owner, agent or manager of a mine or the occupier or manager of the factory, as the case may be, may be examined on oath, and his evidence and that of any witness whom he calls in his support, shall be subject to cross-examination on behalf of the person he charges as the actual offender and by the prosecutor:

Provided further that, if the person charged as the actual offender by the owner, agent or manager of the mine or occupier or manager of the factory, as the case may be, cannot be brought before the court at the time appointed for hearing the charge, the court shall adjourn the hearing from time to time for a period not exceeding three months and if by the end of the said period the person charged as the actual offender cannot still be brought before the court, the court shall proceed to hear the charge against the owner, agent or manager of the mine or occupier or manager of the factory, as the case may be, and shall, if the offence be proved, convict him.

Offences by
companies,
etc.

109. (1) Where an offence under this Code has been committed by a company, 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 offence and shall be liable to be proceeded against and punished accordingly:

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

(2) Notwithstanding anything contained in sub-section (1) where any offence under this Code has been committed by a company 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 director, manager, company secretary or other officer of the company, such director, manager, company secretary or other officer shall be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

Explanation.—For the purposes of this section,—

(a) "company" means any body corporate and includes a firm or other association of individuals; and

(b) "director" means,—

(i) in relation to a firm a partner thereof; or

(ii) the owner of a mine being a firm or other association of individuals or a company; or

(iii) in case of association of individuals other than specified in sub-clause (ii), any of its members.

Limitation of
prosecution
and
cognizance of
offences.

110. (1) Notwithstanding anything contained in this Chapter, the Inspector-cum-Facilitator shall, not initiate prosecution proceeding against an employer for any offence under this Chapter, give an opportunity to comply with relevant provisions of this Act within a period of thirty days from the date of notice giving opportunity, and, if the employer complies with such provisions within such period, then, no such proceeding shall be initiated against such employer.

Provided that no such opportunity shall be accorded to an employer in case of an accident and if the violation of the same nature of the provisions under this Code is repeated within a period of three years from the date on which such first violation was committed and in such case the prosecution shall be initiated in accordance with provisions of sub-section (2).

(2) No court shall take cognizance of any offence punishable under this Code, unless a complaint in respect thereof is made within six months of the date on which the alleged commission of the offence came to the knowledge of the Inspector-cum-Facilitator and a complaint is filed in that regard by him.

(3) No court inferior to that of a Metropolitan Magistrate or a Judicial Magistrate of the First Class shall try any offence punishable under this Code.

Explanation.—For the purposes of this section,—

(a) in the case of a continuing offence, the period of limitation shall be computed with reference to every point of time during which the offence continues;

(b) where for the performance of any act, time is granted or extended on an application made by the employer of an establishment, the period of limitation shall be computed from the date on which the time so granted or extended expired.

111. (1) Notwithstanding anything contained in section 110, for the purpose of imposing penalty under sub-section (3) of section 12 or sections 94, 96, 97, 99, 106 and sub-section (3) of section 114, the appropriate Government may appoint any officer not below the rank of Under Secretary to the Government of India or an officer of equivalent rank in the State Government, as the case may be, for holding enquiry in such manner, as may be prescribed by the Central Government.

Power of officers of appropriate Government to impose penalty in certain cases.

(2) While holding the enquiry, the officer referred to in sub-section (1) shall have the power to summon and enforce attendance of any person acquainted with the facts and circumstances of the case to give evidence or to produce any document, which in the opinion of such officer, may be useful for or relevant to the subject-matter of the enquiry and if, on such enquiry, he is satisfied that the person has committed any offence under the provisions referred to in sub-section (1), he may impose such penalty as he thinks fit in accordance with the provisions of that sub-section.

(3) Any person aggrieved by an order made by the officer under sub-section (2) may prefer an appeal, in such form and manner and accompanied by such fee as may be prescribed, to the appellate authority to be appointed by the appropriate Government from amongst officers not below the rank of Deputy Secretary to the Government of India or an officer of equivalent rank in the State Government, as the case may be, within sixty days from the date on which the copy of the order made by the officer referred in sub-section (1) is received by the aggrieved person.

(4) The appellate authority may, after giving the parties to the appeal an opportunity of being heard, pass such order as he thinks fit, confirming, modifying or setting aside the order appealed against, within a period of sixty days from the date of receipt of appeal.

(5) Where a person fails to pay the penalty so imposed within a period of ninety days from the date of receipt of the copy of the order, he shall be punishable with fine which shall not be less than twenty-five thousand rupees but which may extend up to two lakh rupees.

(6) The amount of penalty imposed and received under this section shall be credited to the fund established under sub-section (1) of section 115.

112. For the purposes of conferring jurisdiction on any court in relation to an offence under this Code or the rules, regulation or bye-laws made thereunder in connection with an establishment, the place where the establishment is for the time being situated, shall be deemed to be the place where such offence has been committed.

Jurisdiction of court for entertaining proceedings, etc., for offence.

113. (1) Where the employer of a mine or a factory or a dock is convicted of an offence punishable under this Code, the court may, in addition to awarding him any punishment, by order in writing, require him within the period specified in the order (which may be extended by the court from time to time on application made in this behalf) to take such measures as may be specified in the order for remedying the matters in respect of which the offence was committed.

Power of court to make orders.

(2) Where an order is made under sub-section (1), the employer of the mine or the factory shall not be liable under this Code in respect of the continuance of the offence during the period or extended period, if any, but if on the expiry of such period or extended period the order of the court has not been fully complied with, employer shall be deemed to have committed a further offence and shall be punishable with imprisonment for a term which may extend to six months, or with fine which may extend to one hundred rupees for every day after such expiry on which the order has not been complied with, or with both.

114. (1) Notwithstanding anything contained in the Code of Criminal Procedure, 1973, any penalty under sub-section (3) of section 12 or section 94 or section 96 or sub-section (1) of section 97 or section 99 or section 106 or sub-section (3) or any offence

Composition of certain offences.

under sub-section (2) of section 97 or sub-section (1) of section 100 or section 101 or clause (b) of sub-section (1) of section 103 or section 105 or sub-section (2) of section 113 may either before or after the holding the enquiry or, as the case may be, of institution of prosecution may be compounded by such officer of the appropriate Government as may be notified by that Government in the manner as may be prescribed by it—

(a) in a case of penalty for a sum of fifty per cent. of the maximum penalty provided for such penalty; and

(b) in a case of offence for a sum of seventy-five per cent. of the maximum fine provided for such offence.

(2) Where a penalty or an offence has been compounded under sub-section (1), the person liable for penalty or the offender, as the case may be, shall be discharged of the penalty or offence and there shall be no further proceedings against him in respect of such penalty or offence.

(3) Any person who fails to comply with an order made by the officer referred to in sub-section (1), shall be liable to pay a penalty equivalent to twenty per cent. of the maximum penalty or fine provided for the penalty or the offence, as the case may be, in addition to the penalty or fine.

(4) The amount of composition received under sub-section (1) shall be credited to the fund established under sub-section (1) of section 115 for the unorganised workers.

(5) Nothing contained in sub-section (1) shall apply to a penalty or an offence committed by a person for a second or subsequent time within a period of three years from the date of penalty or offence, as the case may be,—

(a) which was earlier compounded; or

(b) for which such person was earlier convicted.

CHAPTER XIII

SOCIAL SECURITY FUND

Social security fund.

115. (1) There shall be established by the appropriate Government a social security fund for the welfare of the unorganised workers to which there shall be credited the amount received from composition of the offence as specified in sub-section (4) of section 114 and the amount of the penalty as specified in sub-section (6) of section 111.

(2) The fund may also be funded by such other sources as may be prescribed by the appropriate Government.

(3) The fund shall be administered and expended for welfare of the unorganised workers in such manner as may be prescribed by the appropriate Government including the transfer of the amount in the fund to any fund established under any other law for the time being in force for the welfare of the unorganised workers.

Explanation.—For the purpose of this section the expression "unorganised worker" shall have the same meaning as is assigned to it under clause (m) of section 2 of the Unorganised Workers Social Security Act, 2008.

33 of 2008.

CHAPTER XIV

MISCELLANEOUS

Delegation of powers.

116. The Central Government may, by notification, direct that any power exercisable by it under this Code or rules made thereunder shall, in relation to such matters and subject to such conditions, if any, as may be specified in the notification, be exercisable also by the State Government or by such officer or authority subordinate to the State Government as may be specified in the said notification.

117. (1) When any offence is committed under this Code involving an issue of a certain age of a person and such person is in the opinion of the court *prima facie* under such age, the burden shall be on the accused to prove that such person is not under such age. Onus as to age.

(2) The medical authority prescribed by the Central Government shall, while examining a worker for issuing the certificate of age for the purposes of this Code, take into account the Aadhaar card of the worker, and in the absence thereof, the date of birth certificate from school or the matriculation or equivalent certificate from the concerned examination Board of the worker, if available, and in the absence thereof, the birth certificate of the worker given by a corporation or a municipal authority or a Panchayat, and only in the absence of any of the methods specified in this sub-section, the age shall be determined by such medical authority through an ossification test or any other latest medical age determination test.

118. In any proceeding for an offence for the contravention of any provision of this Code or regulations or bye-laws or rules made thereunder consisting of a failure to comply with a duty or requirement to do something, it shall be for the person who is alleged to have failed to comply with such duty or requirement, to prove that it was not reasonably practicable or all practicable measures were taken to satisfy the duty or requirement. Onus of proving limits of what is practicable, etc.

119. (1) Notwithstanding anything contained in this Code, any person desirous of obtaining common licence in respect of a factory, industrial premises for *beedi* and cigar work and for engaging contract workers or any combination thereof or single licence for any one of them under this Code shall make an application electronically or otherwise to such authority as may be designated, by notification, by the appropriate Government. Common licence for contractor, factories and to industrial premises, etc.

(2) The application under sub-section (1),—

(a) shall be in such form and filed in such manner and accompanied by such fee and contain such information as may be prescribed by the appropriate Government;

(b) shall, in so far as it relates to the licence for engaging contract labours, contain the number of inter-State migrant workers employed.

(3) On receipt of an application under sub-section (1), the authority referred to in that sub-section shall take such actions in such manner and make such inquiry as may be prescribed by the appropriate Government.

(4) Where the authority referred to in sub-section (1) is satisfied that the common licence may be issued in respect of a factory, industrial premises for *beedi* and cigar work and for engaging contract workers or any combination thereof or single licence for any one of them under this Code, such authority shall issue a licence electronically within forty-five days of the receipt of application failing which the licence shall be deemed to be issued and shall be auto generated and the responsibility of such failure shall be on such authority.

Provided that where the licence is deemed to be issued, no further inquiry shall be made.

Provided further that the form of licence shall, as far as practicable, be similar throughout India:

Provided also that where such authority rejects the application he shall assign the reason for such rejection.

(5) Notwithstanding anything contained in this Code, any licence in respect of a factory, industrial premises for *beedi* and cigar work and for engaging contract labour has been obtained under any Central labour law before the commencement of this Code, in respect of any establishment shall be deemed to have been obtained under the provisions of this Code and shall be valid for the period for which it was issued and shall have to be obtained afresh after its expiration.

(6) Any person aggrieved by an order passed under this section by the authority referred to in sub-section (1) may file, within thirty days from the date of the order, an appeal in such form, accompanied with such fee to such appellate authority as may be prescribed by the appropriate Government and the appeal shall be disposed of electronically within thirty days of the filing of the appeal.

Effect of law and agreements inconsistent with Code.

120. (1) The provisions of this Code shall have effect notwithstanding anything inconsistent therewith contained in any other law for the time being in force or in the terms of any award, agreement or contract of service whether made before or after the commencement of this Code:

Provided that where under any such award, agreement, contract of service or otherwise an employee is entitled to benefits in respect of any matters which are more favourable to him than those to which he will be entitled to under this Code, the employee shall continue to get the former notwithstanding that he receives benefits in respect of other matters under this Code.

(2) Nothing contained in this Code shall be construed as precluding any employee from entering into an agreement with an employer for granting him rights or privileges in respect of any matter which are more favourable to him than those to which he would be entitled under this Code.

Power of appropriate Government to direct inquiry in certain cases.

121. (1) The appropriate Government may, in the event of the occurrence of an accident in an establishment which has caused or had the potentiality to cause serious danger to employees and other persons within, and in the vicinity of the workplace or whether immediate or delayed, or any occupational disease as specified in the Third Schedule, which has been or is suspected to have been contracted, in epidemic proportions, appoint one or more persons possessing legal or special knowledge to act as assessors or competent persons in such inquiry in order to inquire into the causes of the accident and disease, fix responsibilities and suggest a plan of action for the future to prevent such accidents or diseases and submit the report to the appropriate Government.

(2) The appropriate Government may direct a Chief Inspector-cum-Facilitator or any other officer under the control of the Government concerned or appoint a committee to undertake a survey in such manner as may be prescribed by the appropriate Government on the situation relating to safety or health at work at any workplace or class of workplaces or into the effect of work activity on the health of the employees and other persons within and in the vicinity of the workplace.

(3) The officer directed or committee appointed, under sub-section (1) or sub-section (2), to hold an inquiry, shall have the powers of a civil court under the Code of Civil Procedure, 1908, for the purposes of enforcing the attendance of witnesses and compelling the production of documents and material objects, and may also so far as may be necessary for the purposes of the inquiry, exercise such powers of an Inspector-cum-Facilitator under this Code as may be necessary. 5 of 1908.

(4) The Central Government may make rules for regulating the procedure of inquiry and survey and other related matters under this section.

Publication of reports.

122. The appropriate Government may, if it thinks fit, cause to be published any report submitted to it by the National Board or State Advisory Board or any extracts from any report submitted to it under this Code.

Powers of Central Government to give directions.

123. The Central Government may give directions to a State Government for the implementation of the provisions of this Code.

General restriction on disclosure of information.

124. (1) No person shall in respect of the establishment, disclose any information relating to any manufacturing or commercial business or any working process which may come to his knowledge in the course of his official duties.

(2) Nothing in sub-section (1) shall apply to any disclosure of information made with the previous consent in writing of the owner of the business or process or for the purposes of any legal proceeding (including adjudication or arbitration), pursuant to any of the relevant statutory provisions or of any criminal proceeding under this Code which may be taken, whether pursuant to any of the relevant statutory provisions or otherwise, or for the purposes of any report of any such proceedings.

125. No civil court shall have jurisdiction in respect of any matter to which any provision of this Code applies and no injunction shall be granted by any civil court in respect of anything which is done or intended to be done by or under this Code.

Jurisdiction of civil courts barred.

126. (1) No suit, prosecution or other legal proceeding shall lie against any person for anything which is in good faith done or intended to be done in pursuance of this Code or any rule or regulation or bye-laws or order made thereunder.

Protection of action taken in good faith.

(2) No prosecution or other legal proceeding shall lie against the Government, any Board or committees constituted under this Code or any member of such Board or any officer or employee of the Government or the Board or any other person authorised by the Government or any Board or committee, for any damage caused or likely to be caused by anything which is in good faith done or intended to be done in pursuance of this Code or any rule or regulation or bye-laws or order made or issued thereunder.

127. (1) The appropriate Government may, by notification and subject to such conditions and restrictions, if any, and for such period or periods as may be specified in the notification, direct that all or any of the provisions of this Code or the rules or the regulations made thereunder shall not apply to or in relation to any establishment or class of establishments.

Power to exempt in special cases.

(2) Without prejudice to the generality of sub-section (1), where the State Government is satisfied in the public interest that it is necessary to create more economic activities and employment opportunities, it may, by notification, exempt, subject to such conditions as it may think fit, any new factory or class or description of new factories from all or any of the provisions of this Code for such period from the date on which such commercial production starts, as may be specified in the notification:

63 of 1948. Provided that any notification issued by a State Government under the Factories Act, 1948 for the time being in force in the State prior to the commencement of this Code to achieve the same purpose as is specified in this sub-section, shall remain in force after such commencement for its remaining period as if the provisions of this Code, to the extent they defeat any purpose to be achieved by such notification issued by the State Government, were not in force.

Explanation.—For the purpose of this sub-section, the expression "new factory or class or description of new factories" means such factory or class or description of factories which are established and whose commercial production start within such period as may be specified in the notification.

128. In case of a public emergency or disaster or pandemic in whole of India or part thereof, the appropriate Government may, by notification, exempt any workplace or work activity or class thereof from all or any of the provisions of this Code for such period and subject to such conditions as it may think fit:

Power to exempt during public emergency.

Provided that no such notification shall be made for a period exceeding one year at a time.

Explanation.—For the purposes of this section "public emergency" means a grave emergency whereby the security of India or any part of the territory thereof is threatened, whether by war or external aggression or internal disturbance.

Power to exempt public institution.

129. The appropriate Government may exempt, subject to such conditions as it may consider necessary, any workshop or workplace where a manufacturing process is carried on and which is attached to a public institution maintained for the purposes of education, training, research or information, from all or any of the provisions of this Code:

Provided that no such exemption shall be granted from the provisions relating to hours of work and holidays unless the persons having the control of the institution submit, for the approval of the appropriate Government, a scheme of the regulation of the hours of employment, intervals for meals, and holidays of the persons employed in or attending the institution or who are inmates for the institution, and the appropriate Government is satisfied that the provisions of the scheme are not less favourable than the corresponding provisions of this Code.

Persons required to give notice, etc., legally bound to do so.

130. Every person required to give any notice or to furnish any information to any authority in relation to the provisions of this Code shall be legally bound to do so within the meaning of section 176 of the Indian Penal Code.

45 of 1860.

Power of Central Government to amend Schedule.

131. The Central Government may, by notification, amend any Schedule by way of addition, alteration or omission therein and on any such notification being issued, the Schedule shall be deemed to be amended accordingly.

Power to remove difficulties.

132. (1) If any difficulty arises in giving effect to the provisions of this Code, the Central Government may, by order published in the Official Gazette, make such provisions not inconsistent with the provisions of this Code, as appears to it to be necessary or expedient for removing the difficulty:

Provided that no such order shall be made after the expiry of two years from the date on which this Code comes into force.

(2) Every order made under this section shall, as soon as may be after it is made, be laid before each House of Parliament.

Power of appropriate Government to make rules.

133. (1) The appropriate Government may, subject to the condition of previous publication and by notification, make rules for carrying out the purposes of this Code.

(2) In particular and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:—

(a) income from the sources under *Explanation* to clause (x) of sub-section (1) of section 2;

(b) substance or quantity of substance under clause (zb) of sub-section (1) of section 2;

(c) the late fee under the proviso to sub-section (1) of section 3;

(d) the manner of submitting application under sub-section (2) of section 3 and the form of such application and the particulars to be contained therein and the fees to be accompanied therewith;

(e) the form and manner of sending the notice and the authority to whom the notice shall be sent and the manner of intimating the authority under sub-section (1) of section 5;

(f) annual health examination or test free of costs, age of employees or class of employees or establishment or class of establishments under clause (c) of sub-section (1) of section 6;

(g) the information to be included in the letter of appointment and the form of such letter under clause (f) of sub-section (1) of section 6;

(h) the nature of bodily injury and the manner of notice and the time within which the notice shall be sent and the authority to which notice shall be sent under sub-section (1) of section 10;

(i) nature of dangerous occurrence and the form of notice, the time within which and the authority to which notice shall be sent under section 11;

(j) the form of notice related to certain diseases and the time within which the notice shall be sent and the authority to which the notice shall be sent under sub-section (1) of section 12;

(k) the form and manner of the report and the time within which such report shall be sent to the office of the Chief Inspector-cum-Facilitator under sub-section (2) of section 12;

(l) manner of making report by employee under clause (d) and other duties of employees under clause (g) of section 13;

(m) manner of sending report of action taken under sub-section (3) of section 14;

(n) the manner of constituting a safety committee and the manner and the purpose for choosing the representative of the workers in the Safety Committee under sub-section (1) of section 22;

(o) the qualifications, duties and number of safety officers under sub-section (2) of section 22;

(p) conditions for exemption of workers from weekly and compensatory holidays under sub-section (2) of section 26;

(q) the total number of overtime under second proviso to section 27;

(r) circumstances for exemption from restriction on double employment in factory and mine under section 30;

(s) the form of notice and manner of display of such notice and the manner in which such notice shall be sent to the Inspector-cum-Facilitator under sub-section (2) of section 31;

(t) the form of register and particulars of workers under clause (a) of section 33;

(u) the manner and form of displaying notices under clause (b) of section 33;

(v) return, manner of filing the return and periods of filing return to the Inspector-cum-Facilitator under clause (d) of section 33;

(w) the qualification and experience of Chief Inspector-cum-Facilitator under sub-section (5) of section 34;

(x) the manner of taking samples of any article or substance found in any premises and air of atmosphere under clause (x) of sub-section (1) of section 35;

(y) the other powers and duties under clause (xiv) of sub-section (1) of section 35;

(z) the specialised qualification and experience, duties and responsibilities of experts to be empanelled under section 37;

(za) the manner of providing alternative employment under sub-clause (d) of clause (A) of sub-section (1) of section 38;

(zb) the qualification for the appointment of medical practitioner and other establishment under sub-section (1) of section 42;

(zc) other establishment engaged in the dangerous occupation or processes under clause (a) of sub-section (2) of section 42;

(zd) medical supervision and other establishment under clause (b) of sub-section (2) of section 42;

(ze) other establishment under clause (c) of sub-section (2) of section 42;

(zf) conditions relating to safety, holidays and working hours or any other condition to be observed by the employer under section 43;

(zg) the manner of requiring the employer to provide the adequate safeguards under section 44;

(zh) conditions including, in particular, conditions as to hours of work, fixation of wages and other essential amenities in respect of contract labour under clause (a) of sub-section (3) of section 47;

(zi) the form and manner of application and the particulars which such application shall contain regarding the number of contract labour, nature of work for which contract labour is to be employed and other particulars including the information relating to the employment of inter-State migrant workers under sub-section (1) of section 48;

(zj) the procedure under sub-section (2) of section 48;

(zk) manner of applying for the renewal of licence and the manner of renewal of licence under sub-section (3) of section 48;

(zl) responsibility of the contractor under sub-section (4) of section 48;

(zm) the manner of intimation of work order and time-limit for such intimation under sub-section (1) of section 50;

(zn) the manner of suspending or cancelling the licence under sub-section (2) of section 50;

(zo) the period before which the wages shall be paid under sub-section (1) of section 55;

(zp) the mode of payment of wages under proviso to sub-section (2) of section 55;

(zq) the manner of payment of wages from security deposit under sub-section (4) of section 55;

(zr) the form of issuing experience certificate under section 56;

(zs) the form and manner of making application under clause (b) of sub-section (2) of section 57;

(zt) period of making report and the period of deciding the question under clause (c) of sub-section (2) of section 57;

(zu) minimum service for entitlement, class of travel and other matters under section 61;

(zv) manner of providing facility of toll free helpline under section 63;

(zw) manner of providing for study on inter-State migrant workers under section 64;

(zx) authority to whom a copy of the agreement shall be forwarded by the producer under sub-section (3) of section 66;

(zy) details under clause (vii) of sub-section (4) of section 66;

(zz) rules in respect of factory or class or description of factories under sub-section (1) of section 79;

(zza) mode of submission of application under sub-section (2) of section 79;

(zzb) common facilities and services for joint liability of owner of premises and occupiers of the factories under section 80;

(zzc) rules under section 82;

(zzd) purposes under sub-section (1) of section 83;

(zze) form of application under sub-section (2) of section 83;

(zzf) the appellate authority for appeal against the order of Inspector-cum-Facilitator of factory and the manner of appeal under section 90;

(zzg) rules under section 91;

(zzh) manner of holding enquiry under sub-section (1) of section 111;

(zzi) form and manner of preferring appeal and the fee to accompany such appeal under sub-section (3) of section 111;

(zzj) manner of compounding under sub-section (1) of section 114;

(zzk) other sources of fund under sub-section (2) of section 115;

(zzl) the manner of administering and expending the Fund under sub-section (3) of section 115;

(zzm) the form of application, manner of filing the application and the fee to be accompanied therewith including the information relating to the employment of inter-State migrant workers under sub-section (2) of section 119;

(zzn) actions, manner of taking actions and inquiry under sub-section (3) of section 119;

(zzo) the form of appeal, the fee to be accompanied therewith and the appellate authority under sub-section (6) of section 119;

(zzp) the manner of survey under sub-section (2) of section 121;

(zzq) any other matter which is required to be, or may be, prescribed under this Code.

134. (1) The Central Government may, subject to the condition of previous publication and by notification, make rules for carrying out the purposes of this Code.

Power of
Central
Government
to make rules.

(2) In particular, and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:—

(a) the other authority under sub-clause (iii) of clause (zs) of sub-section (1) of section 2;

(b) the matters which are directly related to the condition of ship under the proviso to sub-clause (iii) of clause (zs) of sub-section (1) of section 2;

(c) other period under clause (a) of sub-section (1) of section 3;

(d) the form of certificate of registration, the time within which and the conditions subject to which such certificate shall be issued under sub-section (3) of section 3;

(e) the form of intimation by the employer electronically and the manner of amendment in the certificate electronically under sub-section (4) of section 3;

(f) the manner of informing closing of establishment and certifying payment to the registering officer under sub-section (5) of section 3;

(g) procedure for nomination and discharge of functions of Members of National Board under sub-section (3) of section 16;

(h) the terms and conditions of service of officers and employees of the National Board under sub-section (4) of section 16;

(i) the number of members of technical committees or advisory committees and their qualifications under sub-section (5) of section 16;

(j) the form and manner of collecting, compiling and analyzing occupational safety and health statistics under sub-section (1) of section 21;

(k) the form and manner of maintaining database electronically or otherwise and the documents to be produced under sub-section (2) of section 21;

(l) health and working conditions under sub-section (1) of section 23;

(m) regarding matters specified in sub-section (2) of section 23;

(n) welfare facilities for the employees under sub-section (1) of section 24;

(o) regarding matters specified in sub-section (2) of section 24;

(p) facility of crèche under sub-section (3) of section 24;

(q) definition of "running time" in relation to a working day under clause (a) of the *Explanation* to sub-section (1) of section 25;

(r) the hours of work for working journalist under sub-section (2) of section 25;

(s) other kinds of leave under clause (i) of sub-section (3) of section 25;

(t) the maximum period of accumulating leave under clause (ii) of sub-section (3) of section 25;

(u) the limit up to which the earned leave may be availed of at a time and the reasons for which such leave may be exceeding under clause (iii) of sub-section (3) of section 25;

(v) conditions and restrictions for entitlement of cash compensation under clause (iv) of sub-section (3) of section 25;

(w) powers and duties of District Magistrate under section 36;

(x) requisite qualifications or criteria under sub-section (1) of section 47;

(y) period of renewal of licence under sub-section (2) of section 47;

(z) procedure under clause (b) of sub-section (1) of section 51;

(za) form of agreement under clause (a), and the name and other particulars under clause (b) of sub-section (2) of section 66;

(zb) the matter which may be saved and the qualifications of sole manager under sub-section (1) of section 67;

(zc) the conditions relating to number of employees, depth of excavation and other matters under clause (a) of sub-section (1) of section 68;

(zd) conditions relating to workings, opencast workings and explosives under clause (b) of sub-section (1) of section 68;

(ze) to declare the mines and part thereof for the purpose of applicability of the provisions of this Code under sub-section (2) of section 68;

(zf) the authority, the manner of informing such authority and the time limit for making such information under sub-section (3) of section 68;

(zg) to provide for medical examination of apprentice, other trainee or employee under sub-section (3) of section 70;

(zh) to exempt certain persons or category of persons holding positions of supervision or management and the persons employed in mine and the persons employed therein under section 71;

(zi) to provide for vocational training and rescue and recovery services to the persons employed in a mine under section 72;

(zj) medical authority under sub-section (2) of section 117;

(zk) rules under sub-section (4) of section 121;

(zl) the language of the bye-laws under sub-section (7) of section 139;

(zm) any other matter which is required to be, or may be prescribed.

135. (1) The State Government may, subject to the condition of previous publication and by notification, make rules for the carrying out the provisions of this Code.

Power of State Government to make rules.

(2) In particular and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:—

(a) the constitution, procedure and other matters relating to State Advisory Board under sub-section (2) of section 17;

(b) the number of members and their qualifications under sub-section (3) of section 17;

(c) the form of application and the payment of fees under sub-section (2) of section 74;

(d) the manner of preparing the plan of the place or premises under sub-section (3) of section 74;

(e) other matters under clause (e) of sub-section (4) of section 74;

(f) fees under sub-section (6) of section 74;

(g) period under the second proviso to sub-section (6) of section 74;

(h) the time of filing appeal and fees under section 75;

(i) the form of application by the employee and conditions under sub-section (1) of section 76;

(j) form of maintaining the record of the work under sub-section (2) of section 76;

(k) the manner of disclosing information by occupier of a factory under sub-section (1) of section 84;

(l) the interval of informing Chief Inspector-cum-Facilitator and the local authority about the policy with respect to the health and safety of the workers under sub-section (2) of section 84;

(m) the form and manner of informing Chief Inspector-cum-Facilitator under sub-section (5) of section 84;

(n) the manner of publicising among the workers and the general public living in the vicinity of the factory the measures and disposal laid down under sub-section (7) of section 84;

(o) the conditions for accessibility to the record by the workers under clause (a) of section 85;

(p) the qualification and experience of persons handling hazardous substance and manner of providing necessary facilities for protecting the workers under clause (b) of section 85;

(q) the manner of providing for medical examination of a worker under sub-clause (ii) of clause (c) of section 85;

(r) the measures or standards under sub-section (I) of section 86;

(s) the value of the maximum permissible limit of exposure of chemical and toxic substances in manufacturing process in any factory under section 88;

(t) requiring every employer to make in his plantation provisions in respect of as specified in clauses (a) to (d) of sub-section (I) of section 92;

(u) for prohibiting or, restricting employment of women or adolescents under sub-section (2) of section 93;

(v) qualifications under sub-section (3) of section 93;

(w) other matters under sub-section (4) of section 93;

(x) manner of periodical medical examination of worker under sub-section (5) of section 93;

(y) the manner of providing facilities, clothing and equipment under sub-section (7) of section 93;

(z) precautionary notices under sub-section (9) of section 93;

(za) any other matter which is required to be, or may be, prescribed.

(3) The Central Government may, by notification and in consultation with the State Government, make rules for the purposes of bringing uniformity, throughout the country, in occupational safety, health or such other matters as it considers necessary in respect of factories.

Power of
Central
Government
to make
regulations in
relation to
mines and
dock work.

136. The Central Government may, by notification, make regulations consistent with this Code for all or any of the following purposes, namely:—

(a) for specifying the qualifications required for appointment as Inspector-cum-Facilitator;

(b) for specifying and regulating the duties and powers of the Chief Inspector-cum-Facilitator and of Inspector-cum-Facilitators in regard to the inspection of mines under this Code;

(c) for specifying the duties of owners, agents and managers of mines and of persons acting under them, and for specifying the qualifications (including age) of agents and managers of mines and of persons acting under them;

(d) for requiring facilities to be provided for enabling managers of mines and other persons acting under them to efficiently discharge their duties;

(e) for regulating the manner of ascertaining, by examination or otherwise, the qualifications of managers of mines and persons acting under them, and the granting and renewal of certificates of competency;

(f) for fixing the fees, if any, to be paid in respect of such examinations and of the grant and renewal of such certificates;

(g) for determining the circumstances in which and the conditions subject to which it shall be lawful for more mines than one to be under a single manager, or for any mines to be under a manager not having the specified qualifications;

- 5 of 1908. (h) for providing for inquiries to be made under this Code, including any inquiry relating to misconduct or incompetence on the part of any person holding a certificate under this Code and for the suspension or cancellation of any such certificate and for providing, wherever necessary, that the person appointed to hold an inquiry shall have all the powers of a civil court under the Code of Civil Procedure, 1908, for the purpose of enforcing the attendance of witnesses and compelling the production of documents and material objects;
- 4 of 1884. (i) for regulating, subject to the provisions of the Indian Explosives Act, 1884, and of any rules made thereunder, the storage, conveyance and use of explosives;
- (j) for prohibiting, restricting or regulating the employment of women in mines or in any class of mines or on particular kinds of labour which are attended by danger to the life, safety or health of such persons and for limiting the weight of any single load that may be carried by any such person;
- (k) for providing for the safety of the persons employed in a mine, their means of entrance there into and exit therefrom, the number of shafts or outlets to be furnished, and the fencing of shafts, pits, outlets, pathways and subsidences;
- (l) for prohibiting the employment in a mine either as manager or in any other specified capacity of any person except persons paid by the owner of the mine and directly answerable to the owner or manager of the mine;
- (m) for providing for the safety of the roads and working places in mines, including the siting, maintenance and extraction or reduction of pillars or blocks of minerals and the maintenance of sufficient barriers between mine and mine;
- (n) for the inspection of workings and sealed off fire- areas in a mine, and for the restriction of workings in the vicinity of the sea or any lake or river or any other body of surface water, whether natural or artificial, or of any public road or building, and for requiring due precaution to be taken against the irruption or inrush of water or other liquid matter into, outbreak of fire in or premature collapse of, any workings;
- (o) for providing for the ventilation of mines and the action to be taken in respect of dust, fire, and inflammable and noxious gases, including precautions against spontaneous combustion, underground fire and coal dust;
- 36 of 2003. (p) for regulating, subject to the provisions of the Electricity Act, 2003, and of any rules made thereunder, the generation, storage, transformation, transmission and use of electricity in mines and for providing for the care and the regulation of the use of all electrical apparatus and electrical cables in mines and of all other machinery and plant therein;
- (q) "for regulating the use of machinery in mines, for providing for the safety of persons employed on or near such machinery and on haulage roads and for restricting the use of certain classes of locomotives underground;
- (r) for providing for proper lighting of mines and regulating the use of safety lamps therein and for the search of persons entering a mine in which safety lamps are in use;
- (s) for providing against explosions or ignitions of inflammable gas or dust or irruptions of or accumulations of water in mines and against danger arising therefrom and for prohibiting, restricting or regulating the extraction of minerals in circumstances likely to result in the premature collapse of workings or to result in or to aggravate the collapse of workings or irruptions of water or ignitions in mines;
- (t) for specifying type of accidents for the purposes of notice under section 10 and for specifying the notices of accidents and dangerous occurrences, and the notices, reports and returns of mineral output, persons employed and other matters

provided for by regulations, to be furnished by owners, agents and managers of mines, and for specifying the forms of such notices, returns and reports, the persons and authorities to whom they are to be furnished, the particulars to be contained in them, and the time within which they are to be submitted;

(u) for requiring owners, agents and managers of mines to have fixed boundaries for the mines, for specifying the plans and sections and field notes connected therewith to be kept by them and the manner and places in which such plans, sections and field notes are to be kept for purposes of record and for the submission of copies thereof to the Chief Inspector-cum-Facilitator, and for requiring the making of fresh surveys and plans by them, and in the event of non-compliance, for having the survey made and plans prepared through any other agency and for the recovery of expenses thereof in the same manner as an arrear of land revenue;

(v) for regulating the procedure on the occurrence of accidents or accidental explosions or ignitions in or about, mines; for dealing effectively with the situation;

(w) for specifying the form of, and the particulars to be contained in, the notice to be given by the owner, agent or manager of a mine under section 5;

(x) for specifying the notice to be given by the owner, agent or manager of a mine before mining operations are commenced at or extended to any point within forty-five meters of any railway subject to the provisions of the Indian Railways Act, 1989 or of any public roads or other works as the case may be, which are maintained by the Government or any local authority; 24 of 1989.

(y) for the protection from injury, in respect of any mine when the workings are discontinued, of property vested in the Government or any local authority or railway company as defined in the Indian Railways Act, 1989; 24 of 1989.

(z) for requiring protective works to be constructed by the owner, agent or manager of a mine before the mine is closed, and in the event of non-compliance, for getting such works executed by any other agency and for recovering the expenses thereof from such owner in the same manner as an arrear of land revenue;

(za) for requiring the fencing of any mine or part of a mine or any quarry, incline, shaft, pit or outlet, whether the same is being worked or not, or any dangerous or prohibited area, subsidence, haulage, tramline or pathway, where such fencing is necessary for the protection of the public;

(zb) for specifying the number of officials to be appointed;

(zc) for specifying the qualifications of the officials to be appointed;

(zd) for specifying the qualifications and experience of the agents;

(ze) for specifying the period during which the agent shall be resident in India;

(zf) for specifying duties and responsibilities of suppliers, designers, importer and contractors for safety in mines;

(zg) for requiring the owners, agents and managers of mines to formulate, maintain and enforce safety management plan in their mines;

(zh) for requiring the managers of mines to formulate and implement codes of practice or standard operating procedure in respect of any machinery or operation used in the mines;

(zi) for providing for the safety in opencast mines and associated operations and machineries used therein;

(zj) for regulating the extraction of methane from working or abandoned coal mines or from virgin coal seam;

(zk) for specifying the forms of returns which shall be filed by the establishments or the class of establishments under this Code;

(zl) for the general requirement relating to the construction, equipping and maintenance for the safety of working places on shore, ship, dock, structure and other places at which any dock work is carried on;

(zm) for the safety of any regular approaches over a dock, wharf, quay or other places which dock workers have to use for going for work and for fencing of such places and projects;

(zn) for the efficient lighting of all areas of dock, ship, any other vessel, dock structure or working places where any dock work is carried on and of all approaches to such places to which dock workers are required to go in the course of their employment;

(zo) providing and maintaining adequate ventilation and suitable temperature in every building or an enclosure on ship where dock workers are employed;

(zp) providing for the fire and explosion prevention and protection;

(zq) providing for safe means of access to ships, holds, stagings, equipment, lifting appliances and other working places;

(zr) providing for the safety of workers engaged in the opening and closing of hatches, protection of ways and other openings in the docks which may be dangerous to them;

(zs) providing for the safety of workers on docks from the risk of falling overboard being struck by cargo during loading or unloading operations;

(zt) providing for the construction, maintenance and use of lifting and other cargo handling appliances and services, such as, pallets containing or supporting loads and provision of safety appliances on them, if necessary;

(zu) providing for the safety of workers employed in freight container terminals or other terminals for handling unitised cargo;

(zv) providing for the fencing of machinery, live electrical conductors, steam pipes and hazardous openings;

(zw) providing for the construction, maintenance and use of staging;

(zx) providing for the rigging and use of ship's derricks;

(zy) providing for the testing, examination, inspection and certification as appropriate of loose gears including chains and ropes and of slings and other lifting devices used in the dock work;

(zz) providing for the precautions to be taken to facilitate escape of workers when employed in a hold, bin, hopper or the like or between decks of a hold while handling coal or other bulk cargo;

(zza) providing for the measures to be taken in order to prevent dangerous methods of working in the stacking, unstacking, stowing and unstowing of cargo or handling in connection therewith;

(zzb) providing for the handling of dangerous substances and working in dangerous or harmful environments and the precautions to be taken in connection with such handling;

(zzc) providing for the work in connection with cleaning, chipping, painting, operations and precautions to be taken in connection with such work;

(zzd) providing for the employment of persons for handling cargo, handling appliances, power operated hatch covers or other power operated ship's equipment, such as, door in the hull of a ship, ramp, retraceable car deck or similar equipment or to give signals to the drivers of such machinery;

(zze) providing for the transport of dock workers;

(zzf) providing for the precautions to be taken to protect dock workers against harmful effects of excessive noise, vibrations and air pollution at the workplace;

(zzg) providing for protective equipment or protective clothing;

(zzh) providing for the sanitary, washing and welfare facilities;

(zzi) providing for—

(i) the medical supervision;

(ii) the ambulance rooms, first aid and rescue facilities and arrangements for the removal of dock workers to the nearest place of treatment;

(iii) the safety and health organisation; and

(iv) the training of dock workers and for the obligations and rights of the dock workers for their safety and health at the workplace;

(zzj) providing for the investigation of occupational accidents, dangerous occurrences and diseases, specifying such diseases and the forms of notices, the persons and authorities to whom, they are to be furnished, the particulars to be contained in them and the time within which they are to be submitted;

(zzk) providing for the submission of statement of accidents, man-days lost, volume of cargo handled and particulars of dock workers; and

(zll) any other matter which is required to be or may be specified by regulation.

Prior
publication of
rules, etc.

137. The power to make rules, regulations, and bye-laws under this Code shall be subject to the condition of the previous publication of the same being made, in the following manner, namely:—

(a) the date to be specified after a draft of rule, regulation, and bye-laws proposed to be made will be taken under consideration, shall not be less than forty-five days from the date on which the draft of the proposed rule, regulation and bye-laws is published for general information;

(b) rule, regulation and bye-laws shall be published in the Official Gazette and on such publication, shall have effect as if enacted in this Code.

Power to
make
regulation
without
previous
publication.

138. Notwithstanding anything contained in section 137, regulations under section 136 may be made without previous publication and without reference to the National Occupational Safety Health Advisory Board constituted under sub-section (1) of section 16, if the Central Government is satisfied that for the prevention of apprehended danger or the speedy remedy of conditions likely to cause danger and to avoid delay it is necessary to dispense with from such publication and reference.

Bye-laws.

139. (1) The employer of a mine may, and shall, if called upon to do so by the Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator, frame and submit to the Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator a draft of such bye-laws, not being inconsistent with this Code or any rules or regulations or standards for the time being in force, governing the use of any particular machinery or the adoption of a particular method of working in the mine, as the employer may deem necessary to prevent accidents and provide for the safety, convenience and discipline of the persons employed in the mine.

(2) If any such employer—

(a) fails to submit within two months a draft of bye-laws after being called upon to do so by the Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator; or

(b) submits a draft of bye-laws which is not in the opinion of the Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator sufficient, the Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator may—

(i) propose a draft of such bye-laws as appear to him to be sufficient; or

(ii) propose such amendments in any draft submitted to him by the employer as will, in his opinion, render it sufficient, and shall send such draft bye-laws or draft amendments to the employer for consideration.

(3) If within a period of two months from the date on which any draft bye-laws or draft amendments are sent by the Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator to the employer under the provisions of sub-section (2), the Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator and the employer are unable to agree as to the terms of the bye-laws to be made under sub-section (1), the Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator shall refer the draft bye-laws for settlement to the technical committee constituted under sub-section (5) of section 16 in respect of mines.

(4) When such draft bye-laws have been agreed to by the employer and the Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator, or, when they are unable to agree, have been settled by the technical Committee constituted under sub-section (3) of section 16 in respect of mines, a copy of the draft bye-laws shall be sent by the Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator to the Central Government for approval:

Provided that the Central Government may make such modification of the draft bye-laws as it thinks fit:

Provided further that before the Central Government approves the draft bye-laws, whether with or without modifications, there shall be published, in such manner as the Central Government may think best adapted for informing the persons affected, a notice of the proposal to make the bye-laws and of the place where copies of the draft bye-laws may be obtained, and of the time (which shall not be less than thirty days) within which any objections with reference to the draft bye-laws, made by or on behalf of persons affected should be sent to the Central Government.

(5) Every objection under second proviso to sub-section (4) shall be in writing and shall state—

(i) the specific grounds of objections, and

(ii) the omissions, additions or modifications asked for.

(6) The Central Government shall consider any objection made within the required time by or on behalf of persons appearing to it to be affected, and may approve the bye-laws either in the form in which they were published or after making such amendments thereto as it thinks fit.

(7) The employer shall cause a copy of the bye-laws, in English and in such other language or languages as may be prescribed by the Central Government, to be pasted up in some conspicuous place at or near the mine, where the bye-laws may be conveniently read or seen by the persons employed; and, as and when the same become defaced, obliterated or destroyed, shall cause them to be pasted again.

(8) The Central Government may, by order in writing rescind, in whole or in part, any bye-law so made, and thereupon such bye-law shall cease to have effect accordingly.

Powers to regulate general safety and health.

140. Notwithstanding any law for the time being in force, the Central Government may make rules to regulate general safety and health of the persons residing in whole or part of India, in the event of declaration of an epidemic, pandemic or disaster, for such period as may be notified by the Central Government.

Laying of regulations, rules, bye-laws, etc., before Parliament.

141. Every rule, regulation, standard and bye-laws notified or made by the Central Government under this Code shall be laid, as soon as may be after it is notified or made, before each House of Parliament, while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule, regulation, standard or bye-law or both Houses agree that the rule, regulation, standard or bye-law should not be made, the rule, regulation, standard or bye-law shall thereafter have effect only in such modified form or be of no effect, as the case may be; so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule, regulation, standard or bye-law, as the case may be.

Laying of rules made by State Government.

142. Every rule made by the State Government under this Code shall be laid, as soon as may be, after it is made, before the State Legislature.

Repeal and Savings.

143. (1) The following enactments shall stand repealed on and from the dates the notification referred to in sub-section (2) of section 1 is issued, namely:—

(a) The Factories Act, 1948;	63 of 1948.
(b) The Plantations Labour Act, 1951;	69 of 1951.
(c) The Mines Act, 1952;	35 of 1952.
(d) The Working Journalists and other Newspaper Employees (Conditions of Service) and Miscellaneous Provisions Act, 1955;	45 of 1955.
(e) The Working Journalists (Fixation of Rates of Wages) Act, 1958;	29 of 1958.
(f) The Motor Transport Workers Act, 1961;	27 of 1961.
(g) The Beedi and Cigar Workers (Conditions of Employment) Act, 1966;	32 of 1966.
(h) The Contract Labour (Regulation and Abolition) Act, 1970;	37 of 1970.
(i) The Sales Promotion Employees (Conditions of Service) Act, 1976;	11 of 1976.
(j) The Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979;	30 of 1979.
(k) The Cine-Workers and Cinema Theatre Workers (Regulation of Employment) Act, 1981;	50 of 1981.
(l) The Dock Workers (Safety, Health and Welfare) Act, 1986;	54 of 1986.
(m) The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996.	27 of 1996.

(2) Every Chief Inspector, Additional Chief Inspector, Joint Chief Inspector, Deputy Chief Inspector, Inspector and every other officer appointed for the purposes under any of the provisions of the enactments repealed by this Code, shall be deemed to have been appointed under this Code for such purposes under this Code.

(3) Notwithstanding repeal under sub-section (1), anything done or any action taken under the enactments so repealed (including any rule, regulation, bye-laws, notification, nomination, appointment, order or direction made thereunder) shall be deemed to have been done or taken under the corresponding provisions of this Code and shall remain in force to the extent they are not contrary to the provisions of this Code till they are repealed by the Central Government.

(4) Without prejudice to the provisions of sub-section (2), provisions of section 6 of 10 of 1897. the General Clauses Act, 1897 shall apply to the repeal of such enactments.

THE FIRST SCHEDULE

[See section 2(a)]

List of Industries involving hazardous processes:

1. Ferrous Metallurgical Industries
 - Integrated Iron and Steel
 - Ferro-alloys
 - Special Steels.
2. Non-ferrous metallurgical Industries
 - Primary Metallurgical Industries, namely, zinc, lead, copper, manganese and aluminium.
3. Foundries (ferrous and non-ferrous)
 - Castings and forgings including cleaning or smoothening/roughening by sand and shot blasting.
4. Coal (including coke) industries
 - Coal, Lignite, Coke and like other substances
 - Fuel Gases (including Coal Gas, Producer Gas, Water Gas).
5. Power Generating Industries.
6. Pulp and paper (including paper products) industries.
7. Fertiliser Industries
 - Nitrogenous
 - Phosphatic
 - Mixed.
8. Cement Industries
 - Portland Cement (including slag cement, puzzolona cement and their products).
9. Petroleum Industries
 - Oil Refining
 - Lubricating Oils and Greases.
10. Petro-chemical Industries.
11. Drugs and Pharmaceutical Industries
 - Narcotics, Drugs and Pharmaceuticals.
12. Fermentation Industries (Distilleries and Breweries).
13. Rubber (Synthetic) Industries.
14. Paints and Pigment Industries.
15. Leather Tanning Industries.
16. Electro-plating Industries.
17. Chemical Industries.
 - (a) Coke Oven by-products and Coaltar Distillation products:

(b) Industrial Gases (nitrogen, oxygen, acetylene, argon, carbon dioxide, hydrogen, sulphur dioxide, nitrous oxide, halogenated hydrocarbon, ozone, or any like gases);

(c) Industrial Carbon;

(d) Alkalies and Acids;

(e) Chromates and dichromates;

(f) Lead and its compounds;

(g) Electrochemicals (metallic sodium, potassium and magnesium, chlorates, perchlorates and peroxides);

(h) Electrothermal produces (artificial abrasive, calcium carbide);

(i) Nitrogenous compounds (cyanides, cyanamides and other nitrogenous compounds);

(j) Phosphorous and its compounds;

(k) Halogens and Halogenated compounds (Chlorine, Fluorine, Bromine and Iodine);

(l) Explosives (including industrial explosives and detonators and fuses).

18. Insecticides, Fungicides, Herbicides and other Pesticides Industries.

19. Synthetic Resin and plastics.

20. Man made Fibre (Cellulosic and non-cellulosic) industry.

21. Manufacture and repair of electrical accumulators.

22. Glass and Ceramics.

23. Grinding or glazing of metals.

24. Manufacture, handling and processing of asbestos and its products.

25. Extraction of oils and fats from vegetable and animal sources.

26. Manufacture, handling and use of benzene and substances containing benzene.

27. Manufacturing processes and operations involving carbon disulphide.

28. Dyes and Dyestuff including their intermediates.

29. Highly flammable liquids and gases.

30. Printing and dyeing on fabrics in textiles and plywood and laminate manufacturing process.

31. Process involving usage of radium or Radioactive Substances.

32. Stone Crushing industry.

33. Extraction of Oil and Raw material from the scrap tyres.

34. Cigarette manufacturing industry.

35. Ship breaking industry.

36. Hazardous waste and e-waste processing plants.

37. Semiconductor manufacturing industry.

38. Styrene manufacturing, handling and processing industry.

39. Nano-particles utilising industry.

40. Manufacturing, processing, preparation and utilisation of Mercury or Compounds of Mercury, Lead Tetra-ethyl, Manganese, Arsenic, Chrome, Aliphatic series, Beryllium, Phosgene and Isocyanates.

THE SECOND SCHEDULE

[See section 18(2)(f)]

List of matters:

- (1) fencing of machinery;
- (2) work on or near machinery in motion;
- (3) employment of adolescents on dangerous machines;
- (4) striking gear and devices for cutting off power;
- (5) self acting machines;
- (6) casing of new machinery;
- (7) prohibition of employment of women, children and adolescent near cotton openers;
- (8) hoists and lifts;
- (9) lifting machines, chains, ropes and lifting tackles;
- (10) revolving machinery;
- (11) pressure plant;
- (12) floors, stairs and means of access;
- (13) pits, sumps, openings in floors and other similar indentation of area;
- (14) safety officers;
- (15) protection of eyes;
- (16) precautions against dangerous fumes, gases, etc.;
- (17) precautions regarding the use of portable electric light;
- (18) explosive or inflammable dust, gas, and other like dusts or gases;
- (19) safety committee;
- (20) power to require specifications of defective parts or tests of stability;
- (21) safety of buildings and machinery;
- (22) maintenance of buildings;
- (23) prohibition in certain cases of danger;
- (24) notice in respect of accidents;
- (25) court of inquiry in case of accidents;
- (26) safety management in plantation;
- (27) the general requirement relating to the construction, equipments and maintenance for the safety of working places on shore, ship, dock, structure and other places at which any dock work is carried on;
- (28) the safety of any regular approaches over a dock, wharf, quay or other places which dock worker have to use for going for work and for fencing of such places and projects;
- (29) the efficient lighting of all areas of dock, ship, any other vessel, dock structure or working places where any dock work is carried on and of all approaches to such places to which dock workers are required to go in the course of their employment;

(30) adequate ventilation and suitable temperature in every building or an enclosure on ship where dock workers are employed;

(31) the fire and explosion preventions and protection;

(32) safe means of access to ships, holds, stagings, equipment, appliances and other working places;

(33) the construction, maintenance and use of lifting and other cargo handling appliances and services, such as, pallets containing or supporting loads and provision of safety appliances on them, if necessary;

(34) the safety of workers employed in freight container terminals of other terminals for handling unitized cargo;

(35) the fencing of machinery, live electrical conductors, steam pipes and hazardous openings;

(36) the construction, maintenance and use of staging;

(37) the rigging and use of ship's derricks;

(38) the testing, examination, inspection and certification as appropriate of loose gears including chains and ropes and of slings and other lifting devices used in the dock work;

(39) the precautions to be taken to facilitate escape of workers when employed in a hold, bin, hopper or the like or between decks of a hold while handling coal or other bulk cargo;

(40) the measures to be taken in order to prevent dangerous methods of working in the stacking, unstacking, stowing and unstowing of cargo or handling in connection therewith;

(41) the handling of dangerous substances and working, in dangerous or harmful environments and the precautions to be taken in connection with such handling;

(42) the work in connection with cleaning, chipping, painting, operations and precautions to be taken in connection with such work;

(43) the employment of persons for handling cargo, handling appliances, power operated batch covers or other power operated ship's equipment such as, door in the hull of a ship, ramp, retraceable car deck or similar equipment or to give signals to the drivers of such machinery;

(44) the transport of dock workers;

(45) the precautions to be taken to protect dock workers against harmful effects of excessive noise, vibration and air pollution at the work place;

(46) protective equipment and protective clothing;

(47) the sanitary, washing and welfare facilities;

(48) the medical supervision;

(49) the ambulance rooms, first aid and rescue facilities and arrangements for the removal of dock workers to the nearest place of treatment;

(50) the investigation of occupational accidents, dangerous occurrences and diseases, specifying such diseases and the forms of notices, the persons and authorities to whom, they are to be furnished, the particulars to be contained in them and the time within which they are to be submitted;

(51) the submission of statement of accidents, man-days lost, volume of cargo handled and particulars of dock workers.

(52) the safe means of access to, and the safety of, any working place, including the provision of suitable and sufficient scaffolding at various stages when work cannot be safely done from the ground or from any part of a building or from a ladder or such other means of support;

(53) the precautions to be taken in connection with the demolition of the whole or any substantial part of a building or other structure under the supervision of a competent person for the avoidance of danger from collapse of any building or other structure while removing any part of the framed building or other structure by shoring or otherwise;

(54) the handling or use of explosive under the control of competent persons so that there is no exposure to the risk of injury from explosion or from flying material;

(55) the erection, installation, use and maintenance of transporting equipment, such as locomotives, trucks, wagons and other vehicles and trailers and appointment of competent persons to drive or operate such equipment;

(56) the erection, installation, use and maintenance of hoists, lifting appliances and lifting gear including periodical testing and examination and heat treatment where necessary, precautions to be taken while raising or lowering loads, restrictions on carriage of persons and appointment of competent persons on hoists or other lifting appliances;

(57) the adequate and suitable lighting of every workplace and approach thereto, of every place where raising or lowering operations with the use of hoists, lifting appliances or lifting gears are in progress and of all openings dangerous to building workers employed;

(58) the precautions to be taken to prevent inhalation of dust, fumes, gases or vapours during any grinding, cleaning, spraying or manipulation of any material and steps to be taken to secure and maintain adequate ventilation of every working place or confined space;

(59) the measures to be taken during stacking or unstacking, stowing or unstowing of materials or goods or handling in connection therewith;

(60) the safeguarding of machinery including the fencing of every fly-wheel and every moving part of prime mover and every part of transmission or other machinery, unless it is in such a position or of such construction as to be safe to every worker working only of the operations and as if it were securely fenced;

(61) the safe handling and use of plant, including tools and equipment operated by compressed air;

(62) the precaution to be taken in case of fire;

(63) the limits of weight to be lifted or moved by workers;

(64) the safe transport of workers to or from any workplace by water and provision of means for rescue from drowning;

(65) the steps to be taken to prevent danger to workers from live electric wires or apparatus including electrical machinery and tools and from overhead wires;

(66) the keeping of safety nets, safety sheets and safety belts where the special nature or the circumstances of work render them necessary for the safety of the workers;

(67) the standards to be complied with regard to scaffolding, ladders and stairs, lifting appliances, ropes, chains and accessories, earth moving equipment and floating operational equipments;

(68) the precautions to be taken with regard to pile driving, concrete work, work with hot asphalt, tar or other similar things, insulation work, demolition operations, excavation, underground construction and handling materials;

(69) the safety policy, that is to say, a policy relating to steps to be taken to ensure the safety and health of the building workers, the administrative arrangements therefore and the

matters connected therewith, to be framed by the employers and contractors for tile operations to be carried on in a building or other construction work;

(70) emergency standards for enforcement of suitable standards in respect of hazardous processes in a factory;

(71) the maximum permissible threshold limits of exposure of chemical and toxic substances in manufacturing processes (whether hazardous or otherwise) in any factory;

(72) lightning; and

(73) any other matter which the Central Government considers under the circumstance for better working condition for safety at the workplace.

THE THIRD SCHEDULE

[See section 12(1)]

List of Notifiable Diseases:

1. Lead poisoning, including poisoning by any preparation or compound of lead or their sequelae.
2. Lead-tetra-ethyle poisoning.
3. Phosphorus poisoning or its sequelae.
4. Mercury poisoning or its sequelae.
5. Manganese poisoning or its sequelae.
6. Arsenic poisoning or its sequelae.
7. Poisoning by nitrous fumes.
8. Carbon bisulphide poisoning.
9. Benzene poisoning, including poisoning by any of its homologues, their nitro or amido derivatives or its sequelae.
10. Chrome ulceration or its sequelae.
11. Anthrax.
12. Silicosis.
13. Poisoning by halogens or halogen derivatives of the hydrocarbons of the aliphatic series.
14. Pathological manifestations due to—
 - (a) radium or other radio-active substances;
 - (b) X-rays.
15. Primary epitheliomatous cancer of the skin.
16. Toxic anaemia.
17. Toxic jaundice due to poisonous substances.
18. Oil acne or dermatitis due to mineral oils and compounds containing mineral oil base.
19. Byssonosis.
20. Asbestosis.
21. Occupational or contact dermatitis caused by direct contact with chemicals and paints. These are of two types, that is, primary irritants and allergic sensitizers.
22. Noise induced hearing loss (exposure to high noise levels).
23. Beryllium poisoning.
24. Carbon monoxide poisoning.

25. Coal miners' pneumoconiosis.
26. Phosgene poisoning.
27. Occupational cancer.
28. Isocyanates poisoning.
29. Toxic nephritis.

DR. G NARAYANARAJU,
Secretary to the Govt. of India.

Office Memorandum

Subject : Forwarding of MeitY's communications regarding CCTVs.

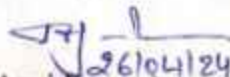
- (i) Notification dated 06 March, 2024 on the amendments to Public Procurement Order (PPO)-2017 for CCTV/Video Surveillance Systems,**
- (ii) Amendment notification dated 09 April, 2024 to the "Electronics and information Technology Goods (Requirement of Compulsory Registration) Order, 2021**
- (iii) Advisory dated 11 March, 2024 on the Threat of Information through CCTV/Video Surveillance system."**

The undersigned is directed to say that Ministry of Electronics and Information Technology has notified amendment to Public Procurement (Preference to Make in India) Order 2017 for CCTV/Video Surveillance System for Security and furtherance of the order vide Gazette Notification dated 6th March, 2024 (copy enclosed). MeitY has also issued amendment notification dated 09 April, 2024 to the "Electronics and Information Technology Goods (Requirement of Compulsory Registration) Order, 2021" for the security of a CCTV system (copy enclosed).

2. All Government agencies are advised that henceforth they may procure their CCTVs and allied solutions and hardware on the basis of the Public Procurement Order-2017 and ensure the security of CCTV systems as mentioned in the above said notifications.

3. Further, MeitY has issued Advisory vide O.M. dated W-43/11/2021-IPHW dated 11 Mar, 2024 (copy enclosed) on the Threat of Information through CCTV/Video Surveillance System (VSS)/Digital Video Recorders/Network Video Recorders. All Government agencies are advised to adhere to the guidelines outlined within the ambit of the Public Procurement Orders to safeguard the overall security and integrity of CCTV Cameras and IoT Devices.

Encl:A/a


(Anuj Kumar)
2IC (Prov.)
Tel: 23386034
e-mail ID: anuj-kumar38@nic.in

To:

1. Chief Secretaries of all States.
2. Administrators of all UTs.
3. Commissioner of Police, Delhi.
4. Directors : CBI, IB, SVP NPA-Hyderabad, NEPA-Shillong, NCRB, NICFS.
5. DsG : AR, BSF, BPR&D, CISF, CRPF, ITBP, NDRF, NSG, SSB & NIA

Internal:

1. All Divisional Heads, MHA.
2. SO(IT) with the request to upload the OM on MHA's website.
3. Director (Procurement)/Director (PM-I & II).
4. US (Prov-I)/US(Prov-II).



भारत का राजपत्र The Gazette of India

सी.जी.-डी.एल.-अ.-08032024-252738
CG-DL-E-08032024-252738

असाधारण
EXTRAORDINARY

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

प्राधिकार से प्रकाशित
PUBLISHED BY AUTHORITY

सं. 1062]

नई दिल्ली, ब्रह्मस्पतिवार, मार्च 7, 2024/फाल्गुन 17, 1945

No. 1062]

NEW DELHI, THURSDAY, MARCH 7, 2024/PHALGUNA 17, 1945

इलेक्ट्रॉनिकी और सूचना प्रौद्योगिकी मंत्रालय

(आईपीएचडब्ल्यू प्रभाग)

अधिसूचना

नई दिल्ली, 6 मार्च, 2024

विषय: सार्वजनिक क्रय (मेक इन इंडिया को वरीयता) आदेश 2017 के अनुक्रम में सुरक्षा के लिए क्लोज्ड सर्किट टेलीविजन (सीसीटीवी)/वीडियो निगरानी प्रणाली को अधिसूचित करना

सन्दर्भ:

(i) उद्योग और आंतरिक व्यापार संवर्धन विभाग (डीपीआईआईटी) के दिनांक 28.05.2018, 29.05.2019 और 04.06.2020 के आदेशों के जरिए यथासंशोधित आदेश संख्या पी-45021/2/2017-बीई-II दिनांक 15.06.2017

(ii) इलेक्ट्रॉनिकी और सूचना प्रौद्योगिकी मंत्रालय (एमईआईटीवाई) की दिनांक 07.09.2020 की इलेक्ट्रॉनिक उत्पाद अधिसूचना सं. डब्ल्यू-43/4/2019-आईपीएचडब्ल्यू-एमईआईटीवाई

का.आ. 1119(अ).—सरकार ने 'मेक इन इंडिया' को प्रोत्साहित करने और आय और रोजगार बढ़ाने के उद्देश्य से भारत में वस्तुओं और सेवाओं के विनिर्माण और उत्पादन को बढ़ावा देने के लिए उद्योग और आंतरिक व्यापार संवर्धन विभाग (डीपीआईआईटी) के दिनांक 28.05.2018, 29.05.2019 और 04.06.2020 के आदेशों के जरिए यथासंशोधित आदेश संख्या पी-45021/2/2017-बीई-II दिनांक 15.06.2017 के तहत सार्वजनिक क्रय (मेक इन इंडिया वरीयता) आदेश, 2017 जारी किया है।

2. उपर्युक्त संदर्भ के जरिये अधिसूचित सार्वजनिक क्रय (मेक इन इंडिया को बरीयता) आदेश 2017 [पीपीपी-एमआईआई आदेश 2017] के अनुक्रम में इलेक्ट्रॉनिकी और सूचना प्रौद्योगिकी मंत्रालय (एमआईआईटीवाई) एतद्वारा अधिसूचित करता है कि समय-समय पर संशोधित पूर्वोक्त आदेश के अनुसार स्थानीय रूप से विनिर्मित इलेक्ट्रॉनिक उत्पादों को सभी क्रय संस्थाओं द्वारा बरीयता प्रदान की जाएगी।

3. इस अधिसूचना के उद्देश्य से :

3.1 श्रेणी-I स्थानीय आपूर्तिकर्ता, श्रेणी-II स्थानीय आपूर्तिकर्ता और गैर-स्थानीय आपूर्तिकर्ता की परिभाषा दिनांक 16.09.2020 के डीपीआईआईटी पीपीपी-एमआईआई आदेश 2017 संख्या समय-समय पर यथा संशोधित पी-45021/2/2017-पीपी(बीई-II) के पैराग्राफ 2 के अनुसार होगी। इस अधिसूचना में प्रत्येक अधिसूचित इलेक्ट्रॉनिक उत्पाद के लिए स्थानीय सामग्री की गणना के लिए तंत्र निर्धारित किया गया है।

3.2 समय-समय पर यथासंशोधित दिनांक 16.09.2020 के डीपीआईआईटी पीपीपी-एमआईआई आदेश 2017 सं. पी-45021/2/2017-पीपी(बीई-II) के पैराग्राफ 3 क को खरीद के प्रतिशत के लिए संदर्भित किया जाएगा, जिसके लिए घरेलू रूप से निर्मित इलेक्ट्रॉनिक उत्पादों को बरीयता प्रदान की जानी है (मूल्य के संदर्भ में)।

4. वीडियो निगरानी प्रणाली के निम्नलिखित इलेक्ट्रॉनिक उत्पादों को सार्वजनिक खरीद (मेक इन इंडिया को बरीयता) आदेश 2017 के तहत अधिसूचित किया गया है:

4.1 वीडियो निगरानी प्रणाली

परिभाषा:

इस अधिसूचना के प्रयोजन के लिए, वीडियो निगरानी प्रणाली आमतौर पर एक प्रणाली है जिसमें अन्य बातों के साथ-साथ निम्नलिखित शामिल हैं: (i) क्लोज्ड सर्किट टेलीविजन (सीसीटीवी) कैमरा (एनालॉग/आईपी/एनालॉग स्पीड डोम/आईपी स्पीड डोम), (ii) डिजिटल वीडियो रिकॉर्डर (डीवीआर)/नेटवर्क वीडियो रिकॉर्डर (एनवीआर)। सुरक्षा और वीडियो निगरानी प्रणाली के कुछ अनुप्रयोग शहरों, स्कूलों, बैंकों, सरकारी कार्यालयों, सार्वजनिक स्थानों, यातायात निगरानी और गृह सुरक्षा आदि की निगरानी हैं।

4.2 सीसीटीवी कैमरा (एनालॉग) की स्थानीय सामग्री की गणना के लिए तंत्र:

सीसीटीवी कैमरा (एनालॉग) का घरेलू बीओएम निम्नलिखित तालिका के कॉलम 1 में यथा निर्दिष्ट मुख्य इनपुट की लागत का योग होगा, बशर्ते इनपुट व्यक्तिगत रूप से तालिका के कॉलम 2 में निर्दिष्ट मूल्य संवर्धन आवश्यकता को पूरा करते हों:

क्रम सं.	बीओएम में मुख्य इनपुट / सीसीटीवी कैमरा (एनालॉग) के निर्माण के लिए चरण	इनपुट को घरेलू बीओएम के रूप में वर्गीकृत करने के लिए अपेक्षित मूल्य संवर्धन/स्थानीय सामग्री
	(1)	(2)
1.0	मुख्य पीसीबी*	सेमीकंडक्टर के मूल्य सहित ** और बेयर पीसीबी के मूल्य को छोड़कर घरेलू पीसीबी असेम्बली * और आयातित / घरेलू रूप से निर्मित कलपुर्जों और संघटकों से परीक्षण, हालांकि, वैकल्पिक बोर्डों के साथ/इसके बिना मुख्य पीसीबी के कुल मूल्य का बेटेज सीसीटीवी कैमरा (एनालॉग) के कुल बीओएम के 10% से अधिक नहीं होगा
(i)	आई/ओ बोर्ड (वैकल्पिक)	
(ii)	इन्फ्रारेड (आईआर) बोर्ड (वैकल्पिक)	
(iii)	नियंत्रण बोर्ड (वैकल्पिक)	
2.0	बेयर पीसीबी	घरेलू रूप से निर्मित इनपुट से घरेलू रूप से निर्मित। बेयर पीसीबी के कुल मूल्य का बेटेज सीसीटीवी कैमरा (एनालॉग) के कुल बीओएम के 5% से अधिक नहीं होगा
3.0	ऑप्टिक्स	घरेलू रूप से निर्मित इनपुट से घरेलू रूप से निर्मित। बेयर पीसीबी के कुल मूल्य का बेटेज सीसीटीवी कैमरा (एनालॉग) के कुल बीओएम के 10% से अधिक नहीं होगा
4.0	इन-हाउस आर एंड डी #	घरेलू/इन हाउस आर एंड डी में स्वयं अपने संसाधन/विशेषज्ञता का उपयोग कर नये उत्पादों, प्रक्रियाओं, प्रौद्योगिकियों या समाधानों के विकास के लिए वैज्ञानिक अनुसंधान, प्रयोग, प्रोटोटाइपिंग और परीक्षण अथवा भारत में वैज्ञानिक और औद्योगिक अनुसंधान विभाग (डीएसआईआर) के साथ पंजीकृत आर एंड डी इकाई के साथ कानूनी अनुबंध शामिल है। इसके बेटेज की गणना संबंधित वित्तीय वर्ष में घरेलू बीओएम के प्रतिशत के आधार पर की जाएगी जैसा कि नीचे दी गई तालिका में उल्लिखित है।

		2023-24 & 2024-25	2025-26	2026-27 के बाद
		7%	10%	12%
5.0	इन-हाउस डिजाइन/आईपीआर #	घरेलू/इन हाउस डिजाइनिंग में संगठन के अपने संसाधन/विशेषज्ञता का प्रयोग कर अपनी फैसिलिटी में ही डिजाइन पद्धतियों सेवाओं या समाधानों की प्रक्रिया अथवा भारत में तृतीय पक्षकार के साथ कानूनी अनुबंध शामिल हैं। भारत में बौद्धिक संपदा अधिकार (आईपीआर) के तहत कोई भी पेटेंट, ट्रेडमार्क, कॉपीराइट और व्यापार रहस्य उनकी रचनाओं या आविष्कारों के डिजाइन के पक्ष में कानूनी स्वामित्व स्थापित करता है। इसके बेटेज की गणना संबंधित वित्तीय वर्ष में घरेलू बीओएम के प्रतिशत के आधार पर की जाएगी जैसा कि नीचे दी गई तालिका में उल्लिखित है।		
		2023-24 & 2024-25	2025-26	2026-27 के बाद
		7%	10%	12%
6.0	हाउसिंग (प्लास्टिक/एल्यूमीनियम/एमएस) और कैमरा माउंट	घरेलू रूप से निर्मित इनपुट से घरेलू रूप से विनिर्माण। हाउसिंग और कैमरा माउंट के लिए इनपुट के कुल मूल्य का बेटेज सीसीटीवी कैमरा (एनालॉग) के कुल बीओएम के 15% से अधिक नहीं होगा।		
7.0	कनेक्टिंग केबल्स और कनेक्टर्स	घरेलू रूप से निर्मित इनपुट से घरेलू रूप से निर्मित। कनेक्टिंग केबल्स और कनेक्टर्स के लिए इनपुट के कुल मूल्य का बेटेज सीसीटीवी कैमरा (एनालॉग) के कुल बीओएम के 5% से अधिक नहीं होगा।		
8.0	अंतिम असेम्बली और परीक्षण	समय-समय पर अधिसूचित भारतीय मानकों को पूरा करने वाले घरेलू रूप से असेम्बल / परीक्षित, अंतिम संयोजन और परीक्षण के कुल मूल्य का बेटेज सीसीटीवी कैमरे के कुल बीओएम के 10% से अधिक नहीं होगा।		

* यह आवश्यक है कि एसएमटी प्रक्रिया का उपयोग करके बेयर पीसीबी पर कलपुजों और संघटकों के मुद्रित सर्किट बोर्ड की असेंबली (पीसीबीए) अनिवार्य रूप से भारत में की जानी चाहिए।

** भारत में सेमीकंडक्टर एफएबी के चालू होने पर इसकी समीक्षा की जाएगी।

आवेदक संबंधित वित्तीय वर्ष के लिए नीचे दी गई तालिका में उल्लिखित न्यूनतम मूल्यवर्धन/स्थानीय सामग्री को पूरा करके मूल्य संवर्धन/स्थानीय सामग्री की गणना के लिए संबंधित वित्तीय वर्ष में क्रम संख्या 4.0 (इन-हाउस आर एंड डी) और क्रम संख्या 5.0 (इन-हाउस डिजाइन/आईपीआर) का लाभ उठाने के लिए पात्र होगा।

वित्तीय वर्ष	2023-24 & 2024-25	2025-26	2026-27 के बाद
आवश्यक के रूप में न्यूनतम मूल्य संवर्धन/स्थानीय सामग्री (क्रम सं. 1.0) मुख्य पीसीबी और (क्रम सं.8.0) अंतिम असेंबली और परीक्षण और अन्य वैकल्पिक के रूप में	25%	35%	45%

4.3 सीसीटीवी कैमरा (आईपी) की स्थानीय सामग्री की गणना के लिए तंत्र:

सीसीटीवी कैमरा (आईपी) का घरेलू बीओएम निम्नलिखित तालिका के कॉलम 1 में यथा निर्दिष्ट मुख्य इनपुट की लागत का योग होगा, बशर्ते इनपुट व्यक्तिगत रूप से तालिका के कॉलम 2 में निर्दिष्ट मूल्यवर्धन आवश्यकता को पूरा करते हों:

क्रम सं.	बीओएम में मुख्य इनपुट / सीसीटीवी कैमरा (आईपी) के निर्माण के लिए चरण	इनपुट को घरेलू बीओएम के रूप में बर्गीकृत करने के लिए आवश्यक मूल्य संवर्धन/स्थानीय सामग्री
	(1)	(2)
1.0	मुख्य पीसीबी* केचर और/या प्रोसेसर कार्ड के साथ	सेमीकंडक्टर के मूल्य सहित ** और बेयर पीसीबी के मूल्य को छोड़कर घरेलू पीसीबी असेम्बली * और आयातित / घरेलू रूप से निर्मित कलपुजों और संघटकों से परीक्षण.

(i)	नेटवर्क इंटरफेस कार्ड (वैकल्पिक)	हालांकि, वैकल्पिक बोर्डों के साथ/इनके बिना मुख्य पीसीबी के कुल मूल्य का वेटेज सीसीटीवी कैमरा (आईपी) के कुल बीओएम के 10% से अधिक नहीं होगा		
(ii)	इन्फ्रारेड (आईआर) बोर्ड (वैकल्पिक)			
(iii)	आई/ओ बोर्ड (वैकल्पिक)			
(iv)	पावर ओवर इधरनेट (पी ओ ई) कार्ड (वैकल्पिक)			
2.0	बेयर पीसीबी	घरेलू रूप से निर्मित इनपुट से घरेलू रूप से निर्मित। बेयर पीसीबी के कुल मूल्य का वेटेज सीसीटीवी कैमरा (आईपी) के कुल बीओएम के 5% से अधिक नहीं होगा		
3.0	ऑप्टिक्स	घरेलू रूप से निर्मित इनपुट से घरेलू रूप से निर्मित। प्रकाशिकी के कुल मूल्य का वेटेज सीसीटीवी कैमरा (आईपी) के कुल बीओएम के 10% से अधिक नहीं होगा		
4.0	इन-हाउस आर एंड डी #	घरेलू/इन हाउस आर एंड डी में स्वयं अपने संसाधन/विशेषज्ञता का उपयोग कर नये उत्पादों, प्रक्रियाओं, प्रौद्योगिकियों या समाधानों के विकास के लिए वैज्ञानिक अनुसंधान, प्रयोग, प्रोटोटाइपिंग और परीक्षण अथवा भारत में वैज्ञानिक और औद्योगिक अनुसंधान विभाग (डीएसआईआर) के साथ पंजीकृत आर एंड डी इकाई के साथ कानूनी अनुबंध शामिल है। इसके वेटेज की गणना संबंधित वित्तीय वर्ष में घरेलू बीओएम के प्रतिशत के आधार पर की जाएगी जैसा कि नीचे दी गई तालिका में उल्लिखित है।		
		2023-24 & 2024-25	2025-26	2026-27 के बाद
		7%	10%	12%
5.0	इन-हाउस डिजाइन/आईपीआर #	घरेलू/इन हाउस डिजाइनिंग में संगठन के अपने संसाधन/विशेषज्ञता का प्रयोग कर अपनी फैसिलिटी में ही डिजाइन पद्धतियों सेवाओं या समाधानों की प्रक्रिया अथवा भारत में तृतीय पक्षकार के साथ कानूनी अनुबंध शामिल है। भारत में बौद्धिक संपदा अधिकार (आईपीआर) के तहत कोई भी पेटेंट, ट्रेडमार्क, कॉपीराइट और व्यापार रहस्य उनकी रचनाओं या आविष्कारों के डिजाइन के पक्ष में कानूनी स्वामित्व स्थापित करता है। इसके वेटेज की गणना संबंधित वित्तीय वर्ष में घरेलू बीओएम के प्रतिशत के आधार पर की जाएगी जैसा कि नीचे दी गई तालिका में उल्लिखित है।		
		2023-24 & 2024-25	2025-26	2026-27 के बाद
		7%	10%	12%
6.0	हाउसिंग (प्लास्टिक / एल्यूमीनियम / एमएस) और	घरेलू रूप से निर्मित इनपुट से घरेलू रूप से निर्मित। हाउसिंग और कैमरा माउंट के लिए इनपुट के कुल मूल्य का वेटेज सीसीटीवी कैमरा (आईपी) के कुल बीओएम के 15% से अधिक नहीं होगा।		
7.0	कनेक्टिंग केबल्स और कनेक्टर्स	घरेलू रूप से निर्मित इनपुट से घरेलू रूप से निर्मित। कनेक्टिंग केबल्स और कनेक्टर्स के लिए इनपुट के कुल मूल्य का वेटेज सीसीटीवी कैमरा (आईपी) के कुल बीओएम के 5% से अधिक नहीं होगा।		
8.0	अंतिम असेम्बली और परीक्षण	समय-समय पर यथा अधिसूचित भारतीय मानकों को पूरा करने वाले घरेलू रूप से असेम्बल / परीक्षित फाइनल असेंबलिंग और टेस्टिंग के कुल मूल्य का वेटेज सीसीटीवी कैमरा (आईपी) के कुल बीओएम के 10% से अधिक नहीं होगा।		

* यह आवश्यक है कि एसएमटी प्रक्रिया का उपयोग करके बेयर पीसीबी पर क्लपजॉय और संघटकों की मुद्रित सर्किट बोर्ड असेंबली (पीसीबीए) अनिवार्य रूप से भारत में की जानी चाहिए।

** भारत में सेमीकंडक्टर एफएबी के चालू होने पर इसकी समीक्षा की जाएगी।# आवेदक संबंधित वित्तीय वर्ष के लिए नीचे दी गई तालिका में उल्लिखित न्यूनतम मूल्यवर्धन/स्थानीय सामग्री को पूरा करके मूल्य संबंधन/स्थानीय सामग्री की गणना के लिए संबंधित वित्तीय वर्ष में क्रम संख्या 4.0 (इन-हाउस आर एंड डी) और क्रम संख्या 5.0 (इन-हाउस डिजाइन/आईपीआर) का लाभ उठाने के लिए पात्र होगा।

वित्तीय वर्ष	2023-24 & 2024-25	2025-26	2026-27 के बाद
आवश्यक के रूप में न्यूनतम मूल्य संबंधन/स्थानीय सामग्री (क्रम सं. 1.0) मुख्य पीसीबी और (क्रम सं.8.0) अंतिम असेंबली और परीक्षण और अन्य वैकल्पिक के रूप में	25%	35%	45%

4.4 सीसीटीवी कैमरा (एनालॉग स्पीड डोम) की स्थानीय सामग्री की गणना के लिए तंत्र:

सीसीटीवी कैमरा (एनालॉग स्पीड डोम) का घरेलू बीओएम निम्नलिखित तालिका के कॉलम 1 में यथा निर्दिष्ट मुख्य इनपुट की जागत का योग होगा, बशर्ते इनपुट व्यक्तिगत रूप से तालिका के कॉलम 2 में निर्दिष्ट मूल्य संबंधन आवश्यकता को पूरा करते हों:

क्रम सं.	बीओएम में मुख्य इनपुट / सीसीटीवी कैमरा (एनालॉग स्पीड डोम) के निर्माण के लिए चरण	इनपुट को घरेलू बीओएम के रूप में वर्गीकृत करने के लिए आवश्यक मूल्य संबंधन						
	(1)	(2)						
1.0	मुख्य नियंत्रक बोर्ड*	सेमीकंडक्टर के मूल्य सहित ** और बेयर पीसीबी के मूल्य को छोड़कर घरेलू पीसीबी असेंबली * और आयातित / घरेलू रूप से निर्मित कलपुर्जा और संघटकों से परीक्षण, हालांकि, वैकल्पिक बोर्डों के साथ/के बिना मुख्य नियंत्रक बोर्ड/मुख्य पीसीबी के कुल मूल्य का बटेज सीसीटीवी कैमरा (एएसडी) के कुल बीओएम के 10% से अधिक नहीं होगा						
(i)	आई/ओ बोर्ड (वैकल्पिक)							
(ii)	इन्क्रारेड (आईआर) बोर्ड (वैकल्पिक)							
2.0	बेयर पीसीबी	घरेलू रूप से निर्मित इनपुट से घरेलू रूप से निर्मित। बेयर पीसीबी के कुल मूल्य का बटेज सीसीटीवी कैमरा (एएसडी) के कुल बीओएम के 5% से अधिक नहीं होगा						
3.0	इनहाउस आर एंड डी#	घरेलू/इन हाउस आर एंड डी में स्वयं अपने संसाधन/विशेषज्ञता का उपयोग कर नये उत्पादों, प्रक्रियाओं, प्रौद्योगिकियों या समाधानों के विकास के लिए वैज्ञानिक अनुसंधान, प्रयोग, प्रोटोटाइपिंग और परीक्षण अथवा भारत में वैज्ञानिक और औद्योगिक अनुसंधान विभाग (डीएसआईआर) के साथ पंजीकृत आर एंड डी इकाई के साथ कानूनी अनुबंध शामिल है। इसके बटेज की गणना संबंधित वित्तीय वर्ष में घरेलू बीओएम के प्रतिशत के आधार पर की जाएगी जैसा कि नीचे दी गई तालिका में उल्लिखित है।						
		<table border="1"> <thead> <tr> <th>2023-24 & 2024-25</th> <th>2025-26</th> <th>2026-27 के बाद</th> </tr> </thead> <tbody> <tr> <td>7%</td> <td>10%</td> <td>12%</td> </tr> </tbody> </table>	2023-24 & 2024-25	2025-26	2026-27 के बाद	7%	10%	12%
2023-24 & 2024-25	2025-26	2026-27 के बाद						
7%	10%	12%						
4.0	इन-हाउस डिजाइन/आईपीआर#	घरेलू/इन हाउस डिजाइनिंग में संगठन के अपने संसाधन/विशेषज्ञता का प्रयोग कर अपनी फैसिलिटी में ही डिजाइन पद्धतियों सेवाओं या समाधानों की प्रक्रिया अथवा भारत में तृतीय पक्षकार के साथ कानूनी अनुबंध शामिल हैं। भारत में बौद्धिक संपदा अधिकार (आईपीआर) के तहत कोई भी पेटेंट, ट्रेडमार्क, कॉपीराइट और व्यापार रहस्य उनकी रचनाओं या आविष्कारों के डिजाइन के पक्ष में कानूनी स्वामित्व स्थापित करता है। इसके बटेज की गणना संबंधित वित्तीय वर्ष में घरेलू बीओएम के प्रतिशत के आधार पर की जाएगी जैसा कि नीचे दी गई तालिका में उल्लिखित है।						
		<table border="1"> <thead> <tr> <th>2023-24 & 2024-25</th> <th>2025-26</th> <th>2026-27 के बाद</th> </tr> </thead> <tbody> <tr> <td>7%</td> <td>10%</td> <td>12%</td> </tr> </tbody> </table>	2023-24 & 2024-25	2025-26	2026-27 के बाद	7%	10%	12%
2023-24 & 2024-25	2025-26	2026-27 के बाद						
7%	10%	12%						
5.0	हाउसिंग (प्लास्टिक/एल्यूमीनियम/एमएस) और	घरेलू रूप से निर्मित इनपुट से घरेलू रूप से निर्मित। हाउसिंग और कैमरा माउंट के लिए इनपुट के कुल मूल्य का बटेज सीसीटीवी कैमरा (एएसडी) के कुल बीओएम के						

	कैमरा माउंट	5% से अधिक नहीं होगा।
6.0	कनेक्टिंग केबल्स और कनेक्टर्स	घरेलू रूप से निर्मित इनपुट से घरेलू रूप से निर्मित। कनेक्टिंग केबल्स और कनेक्टर्स के लिए इनपुट के कुल मूल्य का बेटेज सीसीटीवी कैमरा (एएसडी) के कुल बीओएम के 5% से अधिक नहीं होगा।
7.0	मोटर, हीटर और ब्लोअर, जूम मॉड्यूल, बेल्ट, प्लास्टिक तंत्र भागों, ग्लास आदि	घरेलू रूप से आयातित/घरेलू रूप से निर्मित इनपुट भागों और यांत्रिक घटकों से निर्मित। हालांकि, इन सभी भागों/घटकों के कुल मूल्य का बेटेज सीसीटीवी कैमरा (एएसडी) के कुल बीओएम के 5% से अधिक नहीं होगा।
8.0	पावर एडाप्टर	घरेलू पीसीवी असेम्बली * और आयातित / घरेलू रूप से निर्मित कलपुर्जों और संघटकों से अंतिम असेम्बली और परीक्षण, बशर्ते कि "पावर एडाप्टर" की असेम्बली में इस्तेमाल घरेलू रूप से निर्मित कलपुर्जों और संघटकों का मूल्य न्यूनतम 40% होगा ("पावर एडाप्टर" के निर्माण में इस्तेमाल कलपुर्जों और संघटकों के कुल मूल्य का)। हालांकि, "पावर एडाप्टर" के कुल मूल्य का बेटेज सीसीटीवी कैमरा (एएसडी) के कुल बीओएम के 5% से अधिक नहीं होगा।
9.0	अंतिम असेम्बली और परीक्षण	समय-समय पर अधिसूचित भारतीय मानकों को पूरा करने वाले घरेलू रूप से असेम्बल / परीक्षित. अंतिम संयोजन और परीक्षण के कुल मूल्य का बेटेज सीसीटीवी कैमरा (एएसडी) के कुल बीओएम के 10% से अधिक नहीं होगा।

* यह आवश्यक है कि एसएमटी प्रक्रिया का उपयोग करके बेयर पीसीवी पर कलपुर्जों और संघटकों के मुद्रित सर्किट बोर्ड की असेम्बली (पीसीवीए) अनिवार्य रूप से भारत में की जानी चाहिए।

** भारत में सेमीकंडक्टर एफएबी के बालू होने पर इसकी समीक्षा की जाएगी।

आवेदक संबंधित वित्तीय वर्ष के लिए नीचे दी गई तालिका में उल्लिखित न्यूनतम मूल्यवर्धन/स्थानीय सामग्री को पूरा करके मूल्य संवर्धन/स्थानीय सामग्री की गणना के लिए संबंधित वित्तीय वर्ष में क्रम संख्या 3.0 (इन-हाउस आर एंड डी) और क्रम संख्या 4.0 (इन-हाउस डिजाइन/आईपीआर) का लाभ उठाने के लिए पात्र होगा।

वित्तीय वर्ष	2023-24 & 2024-25	2025-26	2026-27 के बाद
आवश्यक के रूप में न्यूनतम मूल्य संवर्धन/स्थानीय सामग्री (क्रम सं. 1.0) मुख्य पीसीवी और (क्रम सं.8.0) अंतिम असेम्बली और परीक्षण और वैकल्पिक के रूप में अन्य	25%	35%	45%

4.5 सीसीटीवी कैमरा (आईपी स्पीड डोम) की स्थानीय सामग्री की गणना के लिए तंत्र:

सीसीटीवी कैमरा (आईपी स्पीड डोम) का घरेलू बीओएम निम्नलिखित तालिका के कॉलम 1 में निर्दिष्ट मुख्य इनपुट की लागत का योग होगा, बशर्ते इनपुट व्यक्तिगत रूप से तालिका के कॉलम 2 में निर्दिष्ट मूल्यवर्धन आवश्यकता को पूरा करते हों:

क्रम सं.	बीओएम में मुख्य इनपुट / सीसीटीवी कैमरा (आईपी स्पीड डोम) के निर्माण के लिए चरण	इनपुट को घरेलू बीओएम के रूप में वर्गीकृत करने के लिए आवश्यक मूल्य संवर्धन/स्थानीय सामग्री
	(1)	(2)
1.0	मुख्य नियंत्रक बोर्ड*	सेमीकंडक्टर के मूल्य सहित ** और बेयर पीसीवी के मूल्य को छोड़कर घरेलू पीसीवी असेम्बली * और आयातित / घरेलू रूप से निर्मित कलपुर्जों और संघटकों से परीक्षण. हालांकि, वैकल्पिक बोर्डों के साथ/के बिना मुख्य नियंत्रक बोर्ड के कुल मूल्य का बेटेज सीसीटीवी कैमरा (आईपीएसडी) के कुल बीओएम के 10% से अधिक नहीं होगा।
(i)	आई/ओ बोर्ड (वैकल्पिक)	
(ii)	इन्फारेड (आईआर) बोर्ड (वैकल्पिक)	

(iii)	प्रोसेसर कार्ड (वैकल्पिक)			
(iv)	नेटवर्क इंटरफेस कार्ड (वैकल्पिक)			
(v)	पावर ओवर इधरनेट (पी ओ ई) कार्ड (वैकल्पिक)			
2.0	बेयर पीसीबी	घरेलू रूप से निर्मित इनपुट से घरेलू रूप से निर्मित। बेयर पीसीबी के कुल मूल्य का वेटेज सीसीटीवी कैमरा (आईपीएसडी) के कुल बीओएम के 5% से अधिक नहीं होगा।		
3.0	इन-हाउस आर एंड डी #	घरेलू/इन हाउस आर एंड डी में स्वयं अपने संसाधन/विशेषज्ञता का उपयोग कर नये उत्पादों, प्रक्रियाओं, प्रौद्योगिकीयों या समाधानों के विकास के लिए वैज्ञानिक अनुसंधान, प्रयोग, प्रोटोटाइपिंग और परीक्षण अथवा भारत में वैज्ञानिक और औद्योगिक अनुसंधान विभाग (डीएसआईआर) के साथ पंजीकृत आर एंड डी इकाई के साथ कानूनी अनुबंध शामिल है। इसके वेटेज की गणना संबंधित वित्तीय वर्ष में घरेलू बीओएम के प्रतिशत के आधार पर की जाएगी जैसा कि नीचे दी गई तालिका में उल्लिखित है।		
			2023-24 & 2024-25	2025-26
			7%	10%
				2026-27 के बाद
				12%
4.0	इन-हाउस डिजाइन/आईपीआर #	घरेलू/इन हाउस डिजाइनिंग में संगठन के अपने संसाधन/विशेषज्ञता का प्रयोग कर अपनी फैसिलिटी में ही डिजाइन पद्धतियों सेवाओं या समाधानों की प्रक्रिया अथवा भारत में तृतीय पक्षकार के साथ कानूनी अनुबंध शामिल हैं। भारत में बौद्धिक संपदा अधिकार (आईपीआर) के तहत कोई भी पेटेंट, ट्रेडमार्क, कॉपीराइट और व्यापार रहस्य उनकी रचनाओं या आविष्कारों के डिजाइन के पक्ष में कानूनी स्वामित्व स्थापित करता है। इसके वेटेज की गणना संबंधित वित्तीय वर्ष में घरेलू बीओएम के प्रतिशत के आधार पर की जाएगी जैसा कि नीचे दी गई तालिका में उल्लिखित है।		
			2023-24 & 2024-25	2025-26
			7%	10%
				2026-27 के बाद
				12%
5.0	हाउसिंग (प्लास्टिक / एल्यूमीनियम / एमएस) और कैमरा माउंट	घरेलू रूप से निर्मित इनपुट से घरेलू रूप से निर्मित। हाउसिंग और कैमरा माउंट के लिए इनपुट के कुल मूल्य का वेटेज सीसीटीवी कैमरा (आईपीएसडी) के कुल बीओएम के 5% से अधिक नहीं होगा।		
6.0	कनेक्टिंग केबल्स और कनेक्टर	घरेलू रूप से निर्मित इनपुट से घरेलू रूप से निर्मित। कनेक्टिंग केबल्स और कनेक्टर के लिए इनपुट के कुल मूल्य का वेटेज सीसीटीवी कैमरा (आईपीएसडी) के कुल बीओएम के 5% से अधिक नहीं होगा।		
7.0	मोटर, हीटर और ब्लोअर, जूम मॉड्यूल, बेल्ट, प्लास्टिक तंत्र भागों, ग्लास आदि	घरेलू रूप से आयातित/घरेलू रूप से निर्मित इनपुट भागों और यांत्रिक घटकों से निर्मित। तथापि, इन सभी भागों/संघटकों के कुल मूल्य का वेटेज सीसीटीवी कैमरा (आईपीएसडी) के कुल बीओएम के 5% से अधिक नहीं होगा।		
8.0	पावर एडाप्टर	घरेलू पीसीबी असेम्बली * और आयातित / घरेलू रूप से निर्मित कलपुजों और संघटकों से अंतिम असेम्बली और परीक्षण, बशर्ते कि "पावर एडाप्टर" की असेम्बली में इस्तेमाल घरेलू रूप से निर्मित कलपुजों और संघटकों का मूल्य न्यूनतम 40% होगा ("पावर एडाप्टर" के निर्माण में इस्तेमाल कलपुजों और संघटकों के कुल मूल्य का)। हालांकि, "पावर एडाप्टर" के कुल मूल्य का वेटेज सीसीटीवी कैमरा (आईपीएसडी) के कुल बीओएम के 5% से अधिक नहीं होगा।		
9.0	अंतिम असेम्बली और परीक्षण	समय-समय पर यथाअधिसूचित भारतीय मानकों को पूरा करने वाले घरेलू रूप से असेम्बल /परीक्षित . अंतिम संयोजन और परीक्षण के कुल मूल्य का वेटेज सीसीटीवी कैमरा (आईपीएसडी) के कुल बीओएम के 10% से अधिक नहीं होगा।		

* यह आवश्यक है कि एसएमटी प्रक्रिया का उपयोग करके बेयर पीसीबी पर कलपुर्जों और संघटकों के मुद्रित सर्किट बोर्ड की असेंबली (पीसीबीए) अनिवार्य रूप से भारत में की जानी चाहिए।

** भारत में सेमीकंडक्टर एफएबी के चालू होने पर इसकी समीक्षा की जाएगी।

आवेदक संबंधित वित्तीय वर्ष के लिए नीचे दी गई तालिका में उल्लिखित न्यूनतम मूल्यवर्धन/स्थानीय सामग्री को पूरा करके मूल्य संवर्धन/स्थानीय सामग्री की गणना के लिए संबंधित वित्तीय वर्ष में क्रम संख्या 3.0 (इन-हाउस आर एंड डी) और क्रम संख्या 4.0 (इन-हाउस डिजाइन/आईपीआर) का लाभ उठाने के लिए पात्र होगा।

वित्तीय वर्ष	2023-24 & 2024-25	2025-26	2026-27 के बाद
आवश्यक के रूप में न्यूनतम मूल्य संवर्धन/स्थानीय सामग्री (क्रम सं. 1.0) मुख्य पीसीबी और (क्रम सं.9.0) अंतिम असेंबली और परीक्षण और अन्य वैकल्पिक के रूप में	25%	35%	45%

4.6 डीवीआर/एनवीआर की स्थानीय सामग्री की गणना के लिए तंत्र:

डीवीआर/एनवीआर का घरेलू बीओएम निम्नलिखित तालिका के कॉलम 1 में यथा निर्दिष्ट मुख्य इनपुट की लागत का योग होगा, बशर्ते इनपुट व्यक्तिगत रूप से तालिका के कॉलम 2 में निर्दिष्ट मूल्यवर्धन आवश्यकता को पूरा करते हों:

क्रम सं.	बीओएम में मुख्य इनपुट / डीवीआर/एनवीआर के निर्माण के लिए चरण	इनपुट को घरेलू बीओएम के रूप में वर्गीकृत करने के लिए आवश्यक मूल्य संवर्धन/स्थानीय सामग्री						
	(1)	(2)						
1.0	मुख्य पीसीबी*	सेमीकंडक्टर के मूल्य सहित ** और बेयर पीसीबी के मूल्य को छोड़कर घरेलू पीसीबी असेंबली * और आयातित / घरेलू रूप से निर्मित कलपुर्जों और संघटकों से परीक्षण, तथापि, वैकल्पिक बोर्डों के साथ/के बिना मुख्य पीसीबी के कुल मूल्य का बेटेज डीवीआर/एनवीआर के कुल बीओएम के 10 % से अधिक नहीं होगा।						
(i)	प्रिंट पैनल और एलईडी बोर्ड (वैकल्पिक)							
(ii)	आई/ओ बोर्ड (वैकल्पिक)							
2.0	बेयर पीसीबी	घरेलू रूप से विनिर्मित इनपुट से घरेलू रूप से निर्मित। बेयर पीसीबी के कुल मूल्य का बेटेज पीसीबी कैमरा (डीवीआर / एनवीआर) के कुल बीओएम के 5% से अधिक नहीं होगा।						
3.0	इन-हाउस आर एंड डी #	घरेलू/इन हाउस आर एंड डी में स्वयं अपने संसाधन/विशेषज्ञता का उपयोग कर नये उत्पादों, प्रक्रियाओं, प्रौद्योगिकियों या समाधानों के विकास के लिए वैज्ञानिक अनुसंधान, प्रयोग, प्रोटोटाइपिंग और परीक्षण अथवा भारत में वैज्ञानिक और औद्योगिक अनुसंधान विभाग (डीएसआईआर) के साथ पंजीकृत आर एंड डी इकाई के साथ कानूनी अनुबंध शामिल है। इसके बेटेज की गणना संबंधित वित्तीय वर्ष में घरेलू बीओएम के प्रतिशत के आधार पर की जाएगी जैसा कि नीचे दी गई तालिका में उल्लिखित है।						
		<table border="1"> <thead> <tr> <th>2023-24 & 2024-25</th> <th>2025-26</th> <th>2026-27 के बाद</th> </tr> </thead> <tbody> <tr> <td>7%</td> <td>10%</td> <td>12%</td> </tr> </tbody> </table>	2023-24 & 2024-25	2025-26	2026-27 के बाद	7%	10%	12%
2023-24 & 2024-25	2025-26	2026-27 के बाद						
7%	10%	12%						
4.0	इन-हाउस डिजाइन/आईपीआर #	घरेलू/इन हाउस डिजाइनिंग में संगठन के अपने संसाधन/विशेषज्ञता का प्रयोग कर अपनी फिसिलिटी में ही डिजाइन पद्धतियों सेवाओं या समाधानों की प्रक्रिया अथवा भारत में तृतीय पक्षकार के साथ कानूनी अनुबंध शामिल है। भारत में बौद्धिक संपदा अधिकार (आईपीआर) के तहत कोई भी पेटेंट, ट्रेडमार्क, कॉपीराइट और व्यापार रहस्य उनकी रचनाओं या आविष्कारों के डिजाइन के पक्ष में कानूनी स्वामित्व स्थापित करता है। इसके बेटेज की गणना संबंधित वित्तीय वर्ष में घरेलू बीओएम के प्रतिशत के आधार पर की जाएगी जैसा कि नीचे दी गई तालिका में उल्लिखित है।						
		<table border="1"> <thead> <tr> <th>2023-24 & 2024-25</th> <th>2025-26</th> <th>2026-27 के बाद</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>	2023-24 & 2024-25	2025-26	2026-27 के बाद			
2023-24 & 2024-25	2025-26	2026-27 के बाद						

		7%	10%	12%
5.0	हाउसिंग (प्लास्टिक / एल्यूमीनियम / एमएस) और कैमरा माउंट	घरेलू रूप से निर्मित इनपुट से घरेलू रूप से निर्मित। आवास और कैमरा माउंट के लिए इनपुट के कुल मूल्य का बेटेज डीवीआर/एनवीआर के कुल बीओएम के 5% से अधिक नहीं होगा।		
6.0	कनेक्टिंग केबल, कनेक्टर्स और यूएसबी माउस	घरेलू रूप से निर्मित इनपुट से घरेलू रूप से निर्मित। कनेक्टिंग केबल, कनेक्टर्स और यूएसबी माउस के लिए इनपुट के कुल मूल्य का बेटेज डीवीआर/एनवीआर के कुल बीओएम के 5% से अधिक नहीं होगा।		
7.0	रिमोट कंट्रोल	घरेलू असेंबली * और आयातित/घरेलू रूप से निर्मित कलपुर्जों और संघटकों से परीक्षण इस शर्त के अधीन है कि "रिमोट कंट्रोल" की असेंबली में उपयोग किए जाने वाले घरेलू रूप से निर्मित कलपुर्जों और संघटकों का मूल्य वर्ष 2 में न्यूनतम 20% होगा ("रिमोट कंट्रोल" के निर्माण में उपयोग किए जाने वाले कलपुर्जों और संघटकों के कुल मूल्य का), जो वित्तीय वर्ष 2025-26, 2026-27 और 2027-28 से आगे क्रमशः न्यूनतम 30%, 40% और 50% तक बढ़ जाएगा।		
8.0	पावर एडाप्टर	घरेलू पीसीबी असेम्बली * और आयातित / घरेलू रूप से निर्मित कलपुर्जों और संघटकों से अंतिम असेम्बली और परीक्षण, बशर्ते कि "पावर एडाप्टर" की असेम्बली में इस्तेमाल घरेलू रूप से निर्मित कलपुर्जों और संघटकों का मूल्य न्यूनतम 40% होगा ("पावर एडाप्टर" के निर्माण में इस्तेमाल कलपुर्जों और संघटकों के कुल मूल्य का). हालांकि, "पावर एडाप्टर" के कुल मूल्य का बेटेज डीवीआर/एनवीआर के कुल बीओएम के 5% से अधिक नहीं होगा।		
9.0	अंतिम असेम्बली और परीक्षण	समय-समय पर अधिसूचित बेटेज भारतीय मानकों को पूरा करने वाले घरेलू रूप से असेम्बल / परीक्षित. अंतिम संयोजन और परीक्षण के कुल मूल्य का बेटेज डीवीआर/एनवीआर के कुल बीओएम के 10% से अधिक नहीं होगा।		

* यह आवश्यक है कि एसएमटी प्रक्रिया का उपयोग करके बेयर पीसीबी पर कलपुर्जों और संघटकों के मुद्रित सर्किट बोर्ड असेंबली (पीसीबीए) अनिवार्य रूप से भारत में किया जाना चाहिए।

** भारत में सेमीकंडक्टर एफएबी के चालू होने पर इसकी समीक्षा की जाएगी।

आवेदक संबंधित वित्तीय वर्ष के लिए नीचे दी गई तालिका में उल्लिखित न्यूनतम मूल्यवर्धन/स्थानीय सामग्री को पूरा करके मूल्य संबंधित/स्थानीय सामग्री की गणना के लिए संबंधित वित्तीय वर्ष में क्रम संख्या 3.0 (इन-हाउस आर एंड डी) और क्रम संख्या 4.0 (इन-हाउस डिजाइन/आईपीआर) का लाभ उठाने के लिए पात्र होगा।

वित्तीय वर्ष	2023-24 & 2024-25	2025-26	2026-27 के बाद
आवश्यक के रूप में न्यूनतम मूल्य संबंधित/स्थानीय सामग्री (क्रम सं. 1.0) मुख्य पीसीबी और (क्रम सं.9.0) अंतिम असेंबली और परीक्षण और अन्य वैकल्पिक के रूप में	25%	35%	45%

5. निगरानी उपकरणों यानी सीसीटीवी कैमरों (एनालॉग/आईपी/एनालॉग स्पीड डोम/आईपी स्पीड डोम/आईपी स्पीड डोम) को समय-समय पर यथा संशोधित परिशिष्ट 'क' के अनुसार वीएसएस/सीसीटीवी सिस्टम की सुरक्षा सुनिश्चित करने के लिए एमईआईटीवाई द्वारा निर्धारित सुरक्षा के लिए आवश्यक आवश्यकताओं (ईआर) का अनुपालन करना चाहिए। सीसीटीवी/वीएसएस के लिए सुरक्षा परीक्षण प्रतिवेदन मानकीकरण परीक्षण और गुणवत्ता प्रमाणन (एसटीक्यूसी) प्रयोगशाला या एमईआईटीवाई द्वारा समय-समय पर अधिसूचित किसी अन्य एजेंसी द्वारा जारी किया जाएगा। एसटीक्यूसी लेब द्वारा जारी परीक्षण रिपोर्ट की वैधता रिपोर्ट के जारी होने की तारीख से तीन वर्ष होगी। सीसीटीवी कैमरों/वीएसएस प्रणाली की सुरक्षा के लिए इन अनिवार्य आवश्यकताओं (ईआर) को इस अधिसूचना के जारी होने की तारीख से 3 महीने के बाद लागू किया जाएगा। डीवीआर और एनवीआर के लिए सुरक्षा मानदंडों को बाद में अधिसूचित किया जाएगा।

6. अधिसूचना इस अधिसूचना के जारी होने की तारीख से 3 महीने के बाद प्रभावी होगी। यह अधिसूचना संशोधित अधिसूचना जारी होने तक वैध रहेगी। इस अधिसूचना के प्रयोजन के लिए 1 वर्ष 31.03.2025 तक होगा।

7. सार्वजनिक खरीद (मेक इन इंडिया को वरीयता) आदेश 2017 के तहत किसी भी इलेक्ट्रॉनिक उत्पाद अधिसूचना का पूर्वव्यापी प्रभाव नहीं होगा।

8. पूर्वोक्त इलेक्ट्रॉनिक्स उत्पादों की खरीद के लिए समय-समय पर यथा संशोधित दिनांक 16.09.2020 के सार्वजनिक खरीद (मेक इन इंडिया को वरीयता) आदेश 2017 में उद्धृत प्रावधानों के अनुसार खरीद वरीयता प्रदान की जाएगी।

9. यदि भारत सरकार द्वारा परियोजना या योजना पूरी तरह से या आंशिक रूप से वित्त पोषित होती है, तो राज्यों और स्थानीय निकायों द्वारा बनाए गए इलेक्ट्रॉनिक उत्पादों की क्रय के लिए अधिसूचना सभी केंद्रीय योजनाओं (सीएस)/केंद्रीय क्षेत्र की योजनाओं (सीएसएस) पर भी लागू होगी।

10. स्थानीय सामग्री/घरेलू मूल्यवर्धन की गणना करने हेतु प्रक्रिया

10.1 घरेलू विनिर्माताओं (डीओएम-बीओएम) से प्राप्त सामग्री के बिल की गणना उपलब्ध आंकड़ों के आधार पर निम्नलिखित में से किसी एक के आधार पर की जा सकती है।

क. सभी इनपुटों की लागतों का योग जो उस उत्पाद को बनाने के लिए आवश्यक है (इनपुटों की क्रय पर लगाए गए शुल्क और करों सहित, सिवाय उनको छोड़कर जिनके लिए क्रेडिट/सेट-ऑफ का लाभ लिया जा सकता है) और जिनका आयात प्रत्यक्ष रूप से या घरेलू व्यापारी या माध्यम के माध्यम से नहीं किया गया है।

ख. उत्पाद के फैक्ट्री बाह्य मूल्य से उत्पाद के उत्पादन में इनपुटों के रूप में उपयोग की गई सामग्री के आयातित बिल (प्रत्यक्ष या अप्रत्यक्ष रूप से) को घटाकर (इनपुटों की क्रय पर लगाए गए शुल्क और करों सहित, सिवाय उनको छोड़कर जिनके लिए क्रेडिट/सेट-ऑफ का लाभ लिया जा सकता है) और उसमें से वारंटी लागत को घटाकर।

ग. बाजार मूल्य से उत्पादन पश्चात मालभाड़ा, बीमा और अन्य हथालन लागतों को घटाकर, उसमें से कर पश्चात लाभ, वारंटी लागत को घटाया जाता है, उसमें से उत्पादों के उत्पादन (इनपुटों की क्रय पर लगाए गए शुल्क और करों सहित, सिवाय उनको छोड़कर जिनके लिए क्रेडिट/सेट-ऑफ लिया जा सकता है) में इनपुटों के रूप में उपयोग की गई सामग्री के आयातित बिल के योग को घटाया जाता है और बिक्री और विपणन खर्च को घटाया जाता है।

10.2 सामग्री के कुल बिल (कुल-बीओएम) की गणना उपलब्ध आंकड़ों पर आधारित निम्नलिखित में से किसी एक के आधार पर की जा सकती है।

क. सभी इनपुटों की लागतों का योग जो उस उत्पाद को बनाने के लिए आवश्यक है (इनपुटों की क्रय पर लगाए गए शुल्क और करों सहित, सिवाय उनको छोड़कर जिनके लिए क्रेडिट/सेट-ऑफ का लाभ लिया जा सकता है)।

ख. उत्पाद के फैक्ट्री बाह्य मूल्य से कर पश्चात लाभ और वारंटी लागतों को घटाया जाता है।

ग. बाजार मूल्य से उत्पादन पश्चात मालभाड़ा, बीमा और अन्य हथालन लागतों को घटाकर उसमें से कर पश्चात लाभ, वारंटी लागत, बिक्री और विपणन खर्च घटाया जाता है।

10.3 निम्नलिखित फॉर्मूला के अनुसार प्रस्तुत जानकारी के आधार पर घरेलू मूल्य-वृद्धि के प्रतिशत की गणना की जा सकती है:

$$\text{स्थानीय सामग्री/घरेलू मूल्य-वृद्धि का प्रतिशत} = \frac{\text{डीओएम-बीओएम}}{\text{कुल-बीओएम}} \times 100$$

11. स्थानीय सामग्री/घरेलू मूल्यवृद्धि का सत्यापन

11.1. निविदा, बोली प्रक्रिया या सिफारिश के समय स्थानीय आपूर्तिकर्ता स्व-प्रमाणन प्रदान करेगा कि प्रस्तावित की गई वस्तुएं न्यूनतम स्थानीय सामग्री की आवश्यकताओं को पूरा करती हैं और उस स्थान (स्थानों) का विवरण देगा, जिस पर स्थानीय मूल्य वृद्धि की गई है।

11.2. 10 करोड़ रुपये से अधिक मूल्य की क्रय के मामलों में, स्थानीय आपूर्तिकर्ता स्थानीय सामग्री का प्रतिशत देते हुए कंपनी के सांविधिक लेखा परीक्षक (कंपनियों के मामले में) या लागत लेखापरीक्षक या किसी पेशेवर लागत लेखाकार या पेशेवर चार्टर्ड लेखाकार (कंपनियों के अलावा अन्य आपूर्तिकर्ताओं के संबंध में) से एक प्रमाणपत्र उपलब्ध कराएगा।

11.3. यदि किसी इलेक्ट्रॉनिक उत्पाद के संबंध में स्थानीय सामग्री/घरेलू मूल्य वृद्धि के संबंध में बोलीकर्ता के दावे के खिलाफ क्रय एजेंसी या संबंधित मंत्रालय/विभाग द्वारा शिकायत प्राप्त की जाती है, तो उसे एसटीक्यूसी के पास भेजा जाएगा।

11.4. एसटीक्यूसी को संदर्भित कोई भी शिकायत 4 सप्ताह के भीतर निपटा दी जाएगी। बोलीकर्ता को एसटीक्यूसी हेतु किसी इलेक्ट्रॉनिक उत्पाद में दावा की गई घरेलू मूल्य वृद्धि के समर्थन में आवश्यक दस्तावेज प्रस्तुत करने की आवश्यकता होगी। यदि बोलीकर्ता के द्वारा कोई जानकारी प्रस्तुत नहीं की जाती है, तो ऐसी प्रयोगशालाएं दावे के वास्तविकता को सिद्ध करने के लिए अगली आवश्यक कार्रवाई कर सकती हैं। स्थानीय सामग्री की गणना में विसंगतियों के मामले में, स्थानीय सामग्री के प्रतिशत की गणना के लिए कंपनी के सांविधिक लेखा परीक्षक या लागत लेखा परीक्षक (कंपनियों के मामले में) या प्रैक्टिसिंग कौन्सिल ऑफ एकाउंटेंट्स या प्रैक्टिसिंग चार्टर्ड एकाउंटेंट (कंपनियों के अलावा अन्य आपूर्तिकर्ताओं के संबंध में) से एक प्रमाण पत्र स्व-घोषणा प्रमाण पत्र पर अधिकृत होगा।

11.5. 2 लाख रुपए या खरीदी जा रहे घरेलू रूप से विनिर्मात इलेक्ट्रॉनिक उत्पादों की कीमत का 1% शिकायत शुल्क (5 लाख रुपए की अधिकतम सीमा के अध्यक्षीन), जो भी अधिक हो, का डिमांड ड्राफ्ट द्वारा भुगतान किया जाएगा, जो एसटीक्यूसी में जमा जमा होगा। यदि शिकायत गलत पाई जाती है, तो शिकायत शुल्क जब्त कर लिया जाएगा। यदि, शिकायत को बरकरार रखा जाता है और काफी हद तक सही पाया जाता है तो शिकायतकर्ता को जमा शुल्क बिना किसी ब्याज के वापस कर दिया जाएगा।

11.6. सामान्य वित्तीय नियम (जीएफआर) के नियम 175(1)(i)(एच) के तहत झूठी घोषणाएं सत्यनिष्ठा संहिता का उल्लंघन होंगी, जिसके लिए बोली लगाने वाले या उसके उत्तराधिकारियों को नियम 151 (iii) के अनुसार प्रतिबंधित किया जा सकता है। सामान्य वित्तीय नियमों के साथ-साथ बोली लगाने के ऐसे अन्य प्रावधान, एकल मंत्रालय/विभाग द्वारा रोक लगाना और व्यय विभाग के कार्यालय ज्ञापन संख्या एफ.1/20/2018-पीपीडी दिनांक 2 नवंबर, 2021 के अनुसार आदेशों को रद्द करना समय-समय पर संशोधित कानून के तहत अनुमन्य हो सकता है।

12. इलेक्ट्रॉनिक्स उत्पाद अधिसूचनाओं के कार्यान्वयन की निगरानी के लिए एमईआईटीवाई नोडल मंत्रालय होगा। एसटीक्यूसी द्वारा दिए गए निर्णय के विरुद्ध किसी विवाद/स्पष्टीकरण के मामले में, शिकायतों के सत्यापन/पुनरीक्षण, यादृच्छिक आधार पर स्व-घोषणाओं और लेखा परीक्षक/लेखाकार के प्रमाणपत्रों के स्वतंत्र सत्यापन, इलेक्ट्रॉनिकी उत्पादों के घरेलू विनिर्माताओं के विरुद्ध प्रतिबंधात्मक और भेदभावपूर्ण निबंधन और शर्तों के लिए निम्नलिखित घटकों वाली एक समिति गठित की जाती है: -

i)	समूह समन्वयक/वैज्ञानिक- 'जी' (आईपीएचडब्ल्यू)	- अध्यक्ष
ii)	एसटीक्यूसी से वैज्ञानिक-'जी'/वैज्ञानिक-'एफ'	- सदस्य
iii)	वैज्ञानिक- 'ई'/सर्ट-इन/साइबर डिवीजन अथवा वरिष्ठ.	- सदस्य
vi)	अध्यक्ष द्वारा सहयोजित कोई अन्य सदस्य (सदस्यों)	-सदस्य
v)	आईपीएचडब्ल्यू प्रभाग से वैज्ञानिक-'ई'/प्रतिनिधि	-सदस्य सचिव

13. यदि प्रश्न उठता है कि क्या खरीदी जा रही कोई वस्तु एक इलेक्ट्रॉनिक उत्पाद है, जिसे सार्वजनिक क्रय (मेक इन इंडिया को वरीयता) आदेश 2017 के तहत शामिल किया जाना है, तो इस मामले को स्पष्टीकरण के लिए इलेक्ट्रॉनिकी और सूचना प्रौद्योगिकी मंत्रालय को संदर्भित किया जाएगा।

[फा. सं. डब्ल्यू-43/11/2021-आईपीएचडब्ल्यू]

आशा नांगिया, समूह समन्वयक और वैज्ञानिक 'जी'

परिशिष्ट 'क'

सीसीटीवी की सुरक्षा के लिए अनिवार्य आवश्यकता

संवेदनशील जानकारी की सुरक्षा और सिस्टम को प्रभावी ढंग से संचालित करने के लिए सीसीटीवी (क्लोज-सर्किट टेलीविजन) प्रणाली को सुरक्षित करना महत्वपूर्ण है। परीक्षण के प्रमुख क्षेत्रों में एक्सप्लोस्ट नेटवर्क सेवाएं, डिवाइस संचार प्रोटोकॉल, डिवाइस के यूएआरटी, जेटीएजी, एसडब्ल्यूडी आदि तक भौतिक पहुंच, मेमोरी और फर्मवेयर निकालने की क्षमता, फर्मवेयर अपडेट प्रक्रिया सुरक्षा और डेटा का भंडारण और एन्क्रिप्शन शामिल हैं। सीसीटीवी सिस्टम की सुरक्षा के लिए यहां संक्षिप्त आवश्यकताएं दी गई हैं:

	<p>और विकास प्रक्रियाओं के हिस्से के रूप में एक या अधिक अद्यतन मैलवेयर पहचान उपकरण नियोजित किए जाएंगे। अंतिम पैकेजिंग और प्रदायगी से पहले मैलवेयर पहचान तकनीकों का उपयोग किया जाएगा (उदाहरण के लिए, एक या अधिक अद्यतन मैलवेयर पहचान उपकरणों का उपयोग करके मैलवेयर के लिए तैयार उत्पादों और घटकों को स्कैन करना)।</p>	<p>पहचान ट्रेनिंग/जालसाजी, सीएम टूल के ट्रेकिंग लक्ष्यों की आवश्यकता के रूप में की गई है। गुणवत्ता आश्वासन प्रक्रिया को प्रस्तुत करने और उसे प्रदर्शित करने की आवश्यकता है।</p>	
	<p>4.4 आपूर्ति शृंखला जोखिम की पहचान, मूल्यांकन, प्राथमिकता और शमन आयोजित किया जाएगा।</p>		<p>आपूर्ति शृंखला जोखिम / व्यापार निरंतरता योजना नीति दस्तावेज, प्लेबुक जो दर्शाती है कि आपूर्ति शृंखला व्यवधान को कैसे संभालना है, घटना के बाद सारांश दस्तावेजों को प्रस्तुत करने और उसी को प्रदर्शित करने की आवश्यकता है।</p>

MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY

(IPHW DIVISION)

NOTIFICATION

New Delhi, the: 6th March, 2024

Subject: Public Procurement (Preference to Make in India) Order 2017-Notifying CCTV/ Video Surveillance System for Security in furtherance of the Order

Reference:

(i) Department for Promotion of Industry and Internal Trade (DPIIT) Order No. P-45021/2/2017-B.E.-II dated 15.06.2017, as amended by Orders dated 28.05.2018, 29.05.2019, 04.06.2020 and 16.09.2020

(ii) Ministry of Electronics and Information Technology (MeitY) Electronic Products Notification No. W-43/4/2019-IPHW-MeitY dated 07.09.2020

S.O. 1119(E).—The Government has issued Public Procurement (Preference to Make in India) Order 2017 vide the Department for Promotion of Industry and Internal Trade (DPIIT) Order No.P-45021/2/2017-B.E.-II dated 15.06.2017, as amended by Orders dated 28.05.2018, 29.05.2019, 04.06.2020 and 16.09.2020, to encourage 'Make in India' and promote manufacturing and production of goods and services in India with a view to enhancing income and employment.

2. In furtherance of the Public Procurement (Preference to Make in India) Order 2017 [PPP-MII Order 2017] notified vide reference cited above, the Ministry of Electronics and Information Technology (MeitY) hereby notifies

that preference shall be provided by all procuring entities to locally manufactured Video Surveillance System for Security as per the aforesaid Order, as amended from time to time.

3. For the purpose of this notification:

3.1 The definition of Class-I local supplier, Class-II local supplier and Non-local supplier shall be as per paragraph 2 of the DPIIT PPP-MII Order 2017 No. P-45021/2/2017-PP(BE-II) dated 16.09.2020, as amended from time to time. The mechanism for calculation of local content is prescribed for each notified Electronic Product in this notification.

3.2 Paragraph 3A of the DPIIT PPP-MII Order 2017 No. P-45021/2/2017-PP(BE-II) dated 16.09.2020, as amended from time to time, shall be referred for percentage of procurement for which preference to domestically manufactured Electronic Products is to be provided (in value terms).

4. Following electronic products of Video Surveillance System are notified under the Public Procurement (Preference to Make in India) Order 2017:

4.1 Video Surveillance System

Definition:

For the purpose of this Notification, Video Surveillance System is usually a system that *inter-alia* includes: (i) Closed Circuit Television (CCTV) Camera (Analog/ IP/ Analog Speed Dome/ IP Speed Dome), (ii) Digital Video Recorder (DVR) / Network Video Recorder (NVR). Some of the applications of Security and Video Surveillance System are surveillance of Cities, Schools, Banks, Government Offices, public places, traffic monitoring and home security, etc.

4.2 Mechanism for calculation of local content of CCTV Camera (Analog):

The domestic BOM of CCTV Camera (Analog) would be the sum of the cost of main inputs as specified in Column 1 of the following table, provided the inputs individually satisfy the value addition requirement specified in Column 2 of the table:

Sr. No.	Main inputs in BOM / stages for manufacture of CCTV Camera (Analog)	Value addition / local content required for the input to be classified as domestic BOM		
	(1)	(2)		
1.0	Main PCB*	Domestic PCB Assembly* and testing from imported / domestically manufactured parts and components, including the value of Semiconductors** and excluding the value of bare PCB. However, the weightage of the total value of Main PCB with/without optional boards shall not exceed 10 % of the total BOM of the CCTV Camera (Analog)		
(i)	I/O Board (optional)			
(ii)	Infrared (IR) Board (optional)			
(iii)	Control Board (optional)			
2.0	Bare PCB	Domestically manufactured from domestically manufactured inputs. The weightage of the total value of Bare PCB shall not exceed 5 % of the total BOM of the CCTV Camera (Analog)		
3.0	Optics	Domestically manufactured from domestically manufactured inputs. The weightage of the total value of Optics shall not exceed 10 % of the total BOM of the CCTV Camera (Analog)		
4.0	In-house R&D #	Domestically/In-house R&D includes scientific research, experimentation, prototyping and testing for development of new products, process, technologies, or solutions using its own resources/expertise or legal contract with R&D unit registered with <i>Department of Scientific and Industrial Research (DSIR)</i> in India. The weightage of this will be calculated based on the percentage of the domestic BOM in respective Financial Year as mentioned in below table.:		
		2023-24 & 2024-25	2025-26	2026-27 onwards
		7%	10%	12%
5.0	In-house Design/IPR #	Domestically/In-house Designing involves the process of design practices, services, or solutions within the organization's own facilities, using its own resources/expertise or legal contract with third party in India. Any patents, trademarks, copyrights, and trade secrets registered under Intellectual Property		

		Rights (IPR) in India in favor of the design for their creations or inventions establishes legal ownership. The weightage of this will be calculated based on the percentage of the domestic BOM in respective Financial Year as mentioned in below table.:						
		<table border="1"> <tr> <td>2023-24 & 2024-25</td> <td>2025-26</td> <td>2026-27 onwards</td> </tr> <tr> <td>7%</td> <td>10%</td> <td>12%</td> </tr> </table>	2023-24 & 2024-25	2025-26	2026-27 onwards	7%	10%	12%
2023-24 & 2024-25	2025-26	2026-27 onwards						
7%	10%	12%						
6.0	Housing (Plastic /Aluminium/MS) and Camera Mount	Domestically manufactured from domestically manufactured inputs. The weightage of the total value of inputs for Housing and Camera Mount shall not exceed to 15 % of the total BOM of the CCTV Camera (Analog).						
7.0	Connecting Cables & Connectors	Domestically manufactured from domestically manufactured inputs. The weightage of the total value of inputs for Connecting Cables and Connectors shall not exceed 5% of the total BOM of the CCTV Camera (Analog).						
8.0	Final Assembly and Testing	Domestically assembled / tested meeting Indian Standards as notified from time to time. The weightage of the total value of final assembling and testing shall not exceed 10% of the total BOM of the CCTV Camera.						

* It is essential that the Printed Circuit Board Assembly (PCBA) of the parts and components on the bare PCB using the SMT process should mandatorily be done in India.

** This shall be reviewed when the Semiconductor FAB in India is operational.

The applicant will be eligible to avail the benefit of Sr. No. 4.0 (In-house R&D) & Sr. No. 5.0 (In-house Design/IPR) in respective financial year for calculation of Value Addition/Local Content by meeting the minimum Value Addition/Local Content mentioned in below table for respective financial year.

Financial Year	2023-24 & 2024-25	2025-26	2026-27 onwards
Minimum Value Addition/Local Content of (Sr. No. 1) Main PCB and (Sr. No.8) Final Assembly and Testing as -Essential and others as optional	25%	35%	45%

4.3 Mechanism for calculation of local content of CCTV Camera (IP):

The domestic BOM of CCTV Camera (IP) would be the sum of the cost of main inputs as specified in Column 1 of the following table, provided the inputs individually satisfy the value addition requirement specified in Column 2 of the table:

Sr. No.	Main inputs in BOM / stages for manufacture of CCTV Camera (IP)	Value addition / local content required for the input to be classified as domestic BOM
	1	2
1.0	Main PCB* with Capture and/or Processor Card	Domestic PCB Assembly* and testing from imported / domestically manufactured parts and components, including the value of Semiconductors** and excluding the value of bare PCB. However, the weightage of the total value of Main PCB with/without optional boards shall not exceed 10 % of the total BOM of the CCTV Camera (IP)
(i)	Network Interface Card (optional)	
(ii)	Infrared (IR) Board (optional)	
(iii)	I/O Board (optional)	
(iv)	Power over Ethernet (PoE) Card (optional)	
2.0	Bare PCB	Domestically manufactured from domestically manufactured inputs. The weightage of the total value of Bare PCB shall not exceed 5 % of the total BOM of the CCTV Camera (IP)
3.0	Optics	Domestically manufactured from domestically manufactured inputs. The weightage of the total value of Optics shall not exceed 10 % of the total BOM of the CCTV Camera (IP)
4.0	In-house R&D #	Domestically/In-house R&D includes scientific research, experimentation,

		prototyping and testing for development of new products, process, technologies, or solutions using its own resources/expertise or legal contract with R&D unit registered with <i>Department of Scientific and Industrial Research (DSIR)</i> in India. The weightage of this will be calculated based on the percentage of the domestic BOM in respective Financial Year as mentioned in below table.:						
		<table border="1"> <tr> <td>2023-24 & 2024-25</td> <td>2025-26</td> <td>2026-27 onwards</td> </tr> <tr> <td>7%</td> <td>10%</td> <td>12%</td> </tr> </table>	2023-24 & 2024-25	2025-26	2026-27 onwards	7%	10%	12%
2023-24 & 2024-25	2025-26	2026-27 onwards						
7%	10%	12%						
5.0	In-house Design/IPR #	Domestically/In-house Designing involves the process of design practices, services, or solutions within the organization's own facilities, using its own resources/expertise or legal contract with third party in India. Any patents, trademarks, copyrights, and trade secrets registered under Intellectual Property Rights (IPR) in India in favor of the design for their creations or inventions establishes legal ownership. The weightage of this will be calculated based on the percentage of the domestic BOM in respective Financial Year as mentioned in below table.:						
		<table border="1"> <tr> <td>2023-24 & 2024-25</td> <td>2025-26</td> <td>2026-27 onwards</td> </tr> <tr> <td>7%</td> <td>10%</td> <td>12%</td> </tr> </table>	2023-24 & 2024-25	2025-26	2026-27 onwards	7%	10%	12%
2023-24 & 2024-25	2025-26	2026-27 onwards						
7%	10%	12%						
6.0	Housing (Plastic / Aluminium / MS) and	Domestically manufactured from domestically manufactured inputs. The weightage of the total value of inputs for Housing and Camera Mount shall not exceed 15 % of the total BOM of the CCTV Camera (IP).						
7.0	Connecting Cables and Connectors	Domestically manufactured from domestically manufactured inputs. The weightage of the total value of inputs for Connecting Cables and Connectors shall not exceed 5% of the total BOM of the CCTV Camera (IP).						
8.0	Final Assembly and Testing	Domestically assembled / tested meeting Indian Standards as notified from time to time. The weightage of the total value of Final Assembling and Testing shall not exceed 10% of the total BOM of the CCTV Camera (IP)						

* It is essential that the Printed Circuit Board Assembly (PCBA) of the parts and components on the bare PCB using the SMT process should mandatorily be done in India.

** This shall be reviewed when the Semiconductor FAB in India is operational.

The applicant will be eligible to avail the benefit of Sr. No. 4.0 (In-house R&D) & Sr. No. 5.0 (In-house Design/IPR) in respective financial year for calculation of Value Addition/Local Content by meeting the minimum Value Addition/Local Content mentioned in below table for respective financial year.

Financial Year	2023-24 & 2024-25	2025-26	2026-27 onwards
Minimum Value Addition/Local Content of (Sr. No. 1.0) Main PCB and (Sr. No. 8.0) Final Assembly and Testing as -Essential and others as optional	25%	35%	45%

4.4 Mechanism for calculation of local content of CCTV Camera (Analog Speed Dome):

The domestic BOM of CCTV Camera (Analog Speed Dome) would be the sum of the costs of main inputs as specified in Column 1 of the following table, provided the inputs individually satisfy the value addition requirement specified in Column 2 of the table:

Sr. No.	Main inputs in BOM / stages for manufacture of CCTV Camera (Analog Speed Dome)	Value addition required for the input to be classified as domestic BOM
	1	2
1	Main Controller Board*	Domestic PCB Assembly* and testing from imported / domestically manufactured parts and components, including the value of Semiconductors** and excluding the value of bare PCB. However, the weightage of the total value of Main Controller Board/Main PCB with/without optional boards shall not exceed 10 % of the total BoM of the CCTV Camera (ASD)
(i)	I/O Board (optional)	
(ii)	Infrared (IR) Board (optional)	
2.0	Bare PCB	Domestically manufactured from domestically manufactured inputs. The weightage of the total value of Bare PCB shall not exceed 5 % of the total

		BoM of the CCTV Camera (ASD)			
3.0	Inhouse R&D#	Domestically/In-house R&D includes scientific research, experimentation, prototyping and testing for development of new products, process, technologies, or solutions using its own resources/expertise or legal contract with R&D unit registered with <i>Department of Scientific and Industrial Research (DSIR)</i> in India. The weightage of this will be calculated based on the percentage of the domestic BoM in respective Financial Year as mentioned in below table.:	2023-24 & 2024-25	2025-26	2026-27 onwards
			7%	10%	12%
4.0	In-house Design/IPR#	Domestically/In-house Designing involves the process of design practices, services, or solutions within the organization's own facilities, using its own resources/expertise or legal contract with third party in India. Any patents, trademarks, copyrights, and trade secrets registered under Intellectual Property Rights (IPR) in India in favor of the design for their creations or inventions establishes legal ownership. The weightage of this will be calculated based on the percentage of the domestic BoM in respective Financial Year as mentioned in below table.:	2023-24 & 2024-25	2025-26	2026-27 onwards
			7%	10%	12%
5.0	Housing (Plastic/ Aluminium/ MS) and Camera Mount	Domestically manufactured from domestically manufactured inputs. The weightage of the total value of inputs for Housing and Camera Mount shall not exceed 5 % of the total BoM of the CCTV Camera (ASD).			
6.0	Connecting Cables and Connectors	Domestically manufactured from domestically manufactured inputs. The weightage of the total value of inputs for Connecting Cables and Connectors shall not exceed 5% of the total BoM of the CCTV Camera (ASD).			
7.0	Motor, Heater & Blower, Zoom Module, Belt, Plastic Mechanism Parts, Glass etc.	Domestically manufactured from imported / domestically manufactured input parts and mechanical components. However, the weightage of the total value of all these parts/components shall not exceed 5% of the total BoM of the CCTV Camera (ASD)			
8.0	Power Adapter	Domestic PCB assembly* and the final assembly and testing from imported / domestically manufactured parts and components, subject to the condition that the value of domestically manufactured parts and components used in the assembly of "Power Adapter" will be minimum 40% (of the total value of parts and components used in the manufacture of "Power Adapter"). However, the weightage of the total value of "Power Adapter" shall not exceed 5% of the total BoM of the CCTV Camera (ASD)			
9.0	Final Assembly and Testing	Domestically assembled / tested meeting Indian Standards as notified from time to time. The weightage of the total value of final assembling and testing shall not exceed 10 % of the total BoM of the CCTV Camera (ASD)			

* It is essential that the Printed Circuit Board Assembly (PCBA) of the parts and components on the bare PCB using the SMT process should mandatorily be done in India.

** This shall be reviewed when the Semiconductor FAB in India is operational.

The applicant will be eligible to avail the benefit of Sr. No. 3.0 (In-house R&D) & Sr. No. 4.0 (In-house Design/IPR) in respective financial year for calculation of Value Addition/Local Content by meeting the minimum Value Addition/Local Content mentioned in below table for respective financial year.

Financial Year	2023-24 & 2024-25	2025-26	2026-27 onwards
Minimum Value Addition/Local Content of (Sr. No. 1.0) Main PCB and (Sr. No. 9.0) Final Assembly and Testing as -Essential and others as optional	25%	35%	45%

4.5 Mechanism for calculation of local content of CCTV Camera (IP Speed Dome):

The domestic BOM of CCTV Camera (IP Speed Dome) would be the sum of the cost of main inputs as specified in Column 1 of the following table, provided the inputs individually satisfy the value addition requirement specified in Column 2 of the table:

Sr. No.	Main inputs in BOM / stages for manufacture of CCTV Camera (IP Speed Dome)	Value addition / local content required for the input to be classified as domestic BOM						
	1	2						
1.0	Main Controller Board*	Domestic PCB Assembly* and testing from imported / domestically manufactured parts and components, including the value of Semiconductors** and excluding the value of bare PCB. However, the weightage of the total value of Main Controller Board with/without optional boards Shall not exceed 10 % of the total BoM of the CCTV Camera (IPSD)						
(i)	I/O Board (optional)							
(ii)	Infrared (IR) Board (optional)							
(iii)	Processor Card (optional)							
(iv)	Network Interface Card (Optional)							
(v)	Power over Ethernet (PoE) Card (optional)							
2.0	Bare PCB	Domestically manufactured from domestically manufactured inputs. The weightage of the total value of Bare PCB shall not exceed 5 % of the total BoM of the CCTV Camera (IPSD)						
3.0	In-house R&D #	Domestically/In-house R&D includes scientific research, experimentation, prototyping and testing for development of new products, process, technologies, or solutions using its own resources /expertise or legal contract with R&D unit registered with <i>Department of Scientific and Industrial Research (DSIR)</i> in India. The weightage of this will be calculated based on the percentage of the domestic BoM in respective Financial Year as mentioned in below table.: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>2023-24 & 2024-25</th> <th>2025-26</th> <th>2026-27 onwards</th> </tr> </thead> <tbody> <tr> <td>7%</td> <td>10%</td> <td>12%</td> </tr> </tbody> </table>	2023-24 & 2024-25	2025-26	2026-27 onwards	7%	10%	12%
2023-24 & 2024-25	2025-26	2026-27 onwards						
7%	10%	12%						
4.0	In-house Design/IPR #	Domestically/In-house Designing involves the process of design practices, services, or solutions within the organization's own facilities, using its own resources/expertise or legal contract with third party in India. Any patents, trademarks, copyrights, and trade secrets registered under Intellectual Property Rights (IPR) in India in favor of the design for their creations or inventions establishes legal ownership. The weightage of this will be calculated based on the percentage of the domestic BoM in respective Financial Year as mentioned in below table.: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>2023-24 & 2024-25</th> <th>2025-26</th> <th>2026-27 onwards</th> </tr> </thead> <tbody> <tr> <td>7%</td> <td>10%</td> <td>12%</td> </tr> </tbody> </table>	2023-24 & 2024-25	2025-26	2026-27 onwards	7%	10%	12%
2023-24 & 2024-25	2025-26	2026-27 onwards						
7%	10%	12%						
5.0	Housing (Plastic / Aluminium / MS) and Camera Mount	Domestically manufactured from domestically manufactured inputs. The weightage of the total value of inputs for Housing and Camera Mount shall not exceed 5 % of the total BoM of the CCTV Camera (IPSD).						
6.0	Connecting Cables and Connectors	Domestically manufactured from domestically manufactured inputs. The weightage of the total value of inputs for Connecting Cables and Connectors shall not exceed 5% of the total BoM of the CCTV Camera (IPSD).						
7.0	Motor, Heater & Blower, Zoom Module, Belt, Plastic Mechanism Parts, Glass etc.	Domestically manufactured from imported / domestically manufactured input parts and mechanical components. However, the weightage of the total value of all these parts/components shall not exceed 5% of the total BoM of the CCTV Camera (IPSD).						
8.0	Power Adapter	Domestic PCB assembly* and the final assembly and testing from imported / domestically manufactured parts and components, subject to the condition that the value of domestically manufactured parts and components used in the						

		assembly of "Power Adapter" will be minimum 40% (of the total value of parts and components used in the manufacture of "Power Adapter"). However, the weightage of the total value of "Power Adapter" shall not exceed 5% of the total BoM of the CCTV Camera (IPSD)
9.0	Final Assembly and Testing	Domestically assembled / tested meeting Indian Standards as notified from time to time. The weightage of the total value of final assembling and testing shall not exceed 10 % of the total BoM of the CCTV Camera (IPSD)

* It is essential that the Printed Circuit Board Assembly (PCBA) of the parts and components on the bare PCB using the SMT process should mandatorily be done in India.

** This shall be reviewed when the Semiconductor FAB in India is operational.

The applicant will be eligible to avail the benefit of Sr. No. 3.0 (In-house R&D) & Sr. No. 4.0 (In-house Design/IPR) in respective financial year for calculation of Value Addition/Local Content by meeting the minimum Value Addition/Local Content mentioned in below table for respective financial year.

Financial Year	2023-24 & 2024-25	2025-26	2026-27 onwards
Minimum Value Addition/Local Content of (Sr. No. 1.0) Main PCB and (Sr. No. 9.0) Final Assembly and Testing as -Essential and others as optional	25%	35%	45%

4.6 Mechanism for calculation of local content of DVR/ NVR:

The domestic BOM of DVR/ NVR would be the sum of the cost of main inputs as specified in Column 1 of the following table, provided the inputs individually satisfy the value addition requirement specified in Column 2 of the table:

Sr No.	Main inputs in BOM / stages for manufacture of DVR / NVR	Value addition / local content required for the input to be classified as domestic BOM		
	1	2		
1.0	Main PCB*	Domestic PCB Assembly* and testing from imported / domestically manufactured parts and components, including the value of Semiconductors** and excluding the value of bare PCB. However, the weightage of the total value of Main PCB with/without optional boards shall not exceed 10 % of the total BoM of the DVR/NVR.		
(i)	Front Panel & LED Board (optional)			
(ii)	I/O Board (optional)			
2.0	Bare PCB	Domestically manufactured from domestically manufactured inputs. The weightage of the total value of Bare PCB shall not exceed 5 % of the total BoM of the CCTV Camera (DVR/NVR)		
3.0	In-house R&D #	Domestically/In-house R&D includes scientific research, experimentation, prototyping and testing for development of new products, process, technologies, or solutions using its own resources/expertise or legal contract with R&D unit registered with <i>Department of Scientific and Industrial Research (DSIR)</i> in India. The weightage of this will be calculated based on the percentage of the domestic BOM in respective Financial Year as mentioned in below table.:		
		2023-24 & 2024-25	2025-26	2026-27 onwards
		7%	10%	12%
4.0	In-house Design/IPR #	Domestically/In-house Designing involves the process of design practices, services, or solutions within the organization's own facilities, using its own resources/expertise or legal contract with third party in India. Any patents, trademarks, copyrights, and trade secrets registered under Intellectual Property Rights (IPR) in India in favor of the design for their creations or inventions establishes legal ownership. The weightage of this will be calculated based on the percentage of the domestic BOM in respective Financial Year as mentioned in below table.:		

		2023-24 & 2024-25	2025-26	2026-27 onwards
		7%	10%	12%
5.0	Housing (Plastic / Aluminium / MS) and Camera Mount	Domestically manufactured from domestically manufactured inputs. The weightage of the total value of inputs for Housing and Camera Mount shall not exceed 5 % of the total BoM of the DVR/NVR.		
6.0	Connecting Cables, Connectors and USB Mouse	Domestically manufactured from domestically manufactured inputs. The weightage of the total value of inputs for Connecting Cables, Connectors and USB Mouse shall not exceed 5% of the total BoM of the DVR/NVR.		
7.0	Remote Control	Domestic assembly* and testing from imported / domestically manufactured parts and components subject to the condition that the value of domestically manufactured parts and components used in the assembly of "Remote Control" will be minimum 20% (of the total value of the parts and components used in the manufacture of "Remote Control") in Year 2, which will increase to minimum 30%, 40% and 50% in Financial Years 2025-26, 2026-27 and 2027-28 onwards respectively.		
8.0	Power Adapter	Domestic PCB assembly* and the final assembly and testing from imported / domestically manufactured parts and components, subject to the condition that the value of domestically manufactured parts and components used in the assembly of "Power Adapter" will be minimum 40% (of the total value of parts and components used in the manufacture of "Power Adapter"). However, the weightage of the total value of "Power Adapter" shall not exceed 5% of the total BoM of the DVR/NVR.		
9.0	Final Assembly and Testing	Domestically assembled/tested meeting Indian Standards as notified from time to time. The weightage of the total value of final assembling and testing shall not exceed 10 % of the total BOM of the DVR/NVR.		

* It is essential that the Printed Circuit Board Assembly (PCBA) of the parts and components on the bare PCB using the SMT process should mandatorily be done in India.

** This shall be reviewed when the Semiconductor FAB in India is operational.

The applicant will be eligible to avail the benefit of Sr. No. 4.0 (In-house R&D) & Sr. No. 5.0 (In-house Design/IPR) in respective financial year for calculation of Value Addition/Local Content by meeting the minimum Value Addition/Local Content mentioned in below table for respective financial year.

Financial Year	2023-24 & 2024-25	2025-26	2026-27 onwards
Minimum Value Addition/Local Content of (Sr. No. 1.0) Main PCB and (Sr. No. 9.0) Final Assembly and Testing as -Essential and others as optional	25%	35%	45%

5. The surveillance devices i.e., CCTV Cameras (Analog/ IP/ Analog Speed Dome/ IP Speed Dome) should comply with the Essential Requirements (ERs) for security prescribed by MeitY to ensure the security of the VSS / CCTV systems, as per the Appendix 'A', as amended from time to time. The security testing report for CCTV/VSS to be issued by Standardisation Testing and Quality Certification (STQC) Laboratory or any other agency notified by MeitY from time to time. The validity of the test report issued by STQC Lab will be three years from the date of issue of the report. These Essential Requirements (ERs) for security of CCTV Cameras/VSS system will be enforced after 3 months from the date of issuance of this Notification. The security norms for the DVR and NVR will be notified subsequently.

6. The notification will come into effect after 3 months from the date of issuance of this Notification. This Notification shall remain valid till the revised Notification is issued. The Year 1 for the purpose of this notification would be upto 31.03.2025.

7. No Electronic Product Notification under the Public Procurement (Preference to Make in India) Order 2017 shall have retrospective effect.

8. Purchase Preference shall be provided as per the provisions cited in the Public Procurement (Preference to Make in India) Order 2017 dated 16.09.2020 and, as amended from time to time, for the procurement of aforesaid electronics products.

9. The notification would also be applicable to all Central Schemes (CS)/ Central Sector Schemes (CSS) for the procurement of electronic products made by States and local bodies, if project or scheme is fully or partially funded by Government of India.

10. Procedure for calculating local content/ domestic value addition

10.1 Bill of Material sourced from domestic manufacturers (Dom-BOM) may be calculated based on one of the followings depending on data available:

- a) Sum of the costs of all inputs which go into the product (including duties and taxes levied on procurement of inputs except those for which credit/ set-off can be taken) and which have not been imported directly or through a domestic trader or an intermediary.
- b) Ex-Factory Price of product minus profit after tax minus sum of imported Bill of Material used (directly or indirectly) as inputs in producing the product (including duties and taxes levied on procurement of inputs except those for which credit/ set-off can be taken) minus warranty costs.
- c) Market price minus post-production freight, insurance and other handling costs minus profit after tax minus warranty costs minus sum of Imported Bill of Material used as inputs in producing the product (including duties and taxes levied on procurement of inputs except those for which credit / set-off can be taken) minus sales and marketing expenses.

10.2 Total Bill of Material (Total BOM) may be calculated based on one of the following depending on data available:

- a) Sum of the costs of all inputs which go into the product (including duties and taxes levied on procurement of inputs except those for which credit / set-off can be taken).
- b) Ex-Factory Price of product minus profit after tax, minus warranty costs.
- c) Market price minus post-production freight, insurance and other handling costs minus profit after tax, minus warranty costs minus sales and marketing expenses.

10.3 The percentage of domestic value-addition may be calculated based on information furnished as per the following formula:

Percentage of local content/ domestic value-addition = [(Dom-BOM) / (Total BOM)]*100

11. Verification of local content/ Domestic Value Addition

11.1. The local supplier at the time of tender, bidding or solicitation shall provide self-certification that the item offered meets the minimum local content and shall give details of the location(s) at which the local value addition is made.

11.2. In cases of procurement for a value in excess of Rs.10 crore, the local supplier shall provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

11.3. In case a complaint is received by the procuring agency or the concerned Ministry/Department against the claim of a bidder regarding local content/ domestic value addition in an Electronic Product(s), the same shall be referred to STQC.

11.4. Any complaint referred to STQC shall be disposed of within 4 weeks. The bidder shall be required to furnish the necessary documentation in support of the domestic value addition claimed in an Electronic Product(s) to STQC. If no information is furnished by the bidder, such laboratories may take further necessary action, to establish the bonafides of the claim. In case of the discrepancies in computation of local content, a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) for calculating the percentage of local content will supersede over the self-declaration certificate.

11.5. A complaint fee of Rs.2 Lakh or 1% of the value of the domestically manufactured Electronic Products being procured (subject to a maximum of Rs. 5 Lakh), whichever is higher, to be paid by Demand Draft to be deposited with STQC. In case, the complaint is found to be incorrect, the complaint fee shall be forfeited. In case, the complaint is upheld and found to be substantially correct, deposited fee of the complainant would be refunded without any interest.

11.6. False declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(b) of the General Financial Rules (GFR) for which a bidder or its successors can be debarred as per Rule 151 (iii) of the General Financial Rules along with such other provisions of bidding, debarment by a single Ministry/Department and revocation of orders as per the Department of Expenditure O.M-No. F.1/20/2018-PPD dated 2nd Nov, 2021 may be permissible under law amended from time to time.

12. MeitY shall be the Nodal Ministry to monitor the implementation of the Electronic Products notifications. In case of any dispute/clarifications against the decision given by STQC, a committee is constituted with the following

compositions for verification/vetting the complaints, independent verification of self-declarations and auditor's/accountant's certificates on random basis, restrictive and discriminating terms and conditions against the domestic manufactures of Electronics Products(s): -

- | | | |
|------|--|--------------------|
| i) | Group Coordinator/Scientist- 'G' (IPHW) | - Chairperson |
| ii) | Scientist-'G'/Scientist-'F' from STQC | - Member |
| iii) | Scientist- 'E' or above from Cert-In/Cyber Division | - Member |
| vi) | Any other member(s) as co-opted by the Chairperson - | Member |
| v) | Representative from IPHW Division | - Member Secretary |

13. In case of a question whether an item being procured is an Electronic Product(s) to be covered under the Public Procurement (Preference to Make in India) Order 2017, the matter would be referred to the Ministry of Electronics and Information Technology for clarification.

[F. No. W-43/11/2021-IPHW]

ASHA NANGIA, Group Coordinator & Scientist 'G'

Appendix 'A'

Essential Requirement(s) for Security of CCTV

Securing a CCTV (Closed-Circuit Television) system is crucial to protect sensitive information and ensure the system operates effectively. Key areas of testing include exposed network services, device communication protocols, physical access to the device's UART, JTAG, SWD, etc., the ability to extract memory and firmware, firmware update process security and storage and encryption of data. Here are brief requirements for the security of a CCTV system:

- 1) Physical Security - Use tamper-resistant camera enclosures and locking mechanisms to deter physical tampering.
- 2) Access Control by Authentication, Role-Based Access Control (RBAC) and regularly review and update access permissions to reflect personnel changes.
- 3) Network Security by employing encryption of data transmission
- 4) Software Security by Regular Updates, Disable Unused Features and Strong Password Policies
- 5) Penetration Testing: Employ penetration testing to assess the system's resistance to cyberattacks and address vulnerabilities.

Essential Security Requirements

Sr. No.	Category	Testing Parameter	What to be tested	Documents Required
1)	Hardware Level Security Parameter (supported by software)	1.1 Verify that application layer debugging interfaces such as USB, UART, and other serial variants are disabled or protected by a complex password.	1. Identification of the availability of debugging interfaces such as USB, UART, and other serial variants through the Datasheet of the SoC being used in the device under test 2. Verification and validation of the ports/interfaces enabled in the production devices and the related access control mechanism for protection of the same as declared in the vendor documentation 3. Testing, in presence of	1. Datasheet of the SoC being used in the device. 2. Documentation related to ports/interfaces enabled in the production devices and the related access control mechanism for protection of the same. 3. Process flow of the Manufacturing/Provisioning of the device

		<p>OEM team, to verify the enabling/disabling of all the ports and debugging interfaces such as USB, UART, and other serial variants using their relevant hardware based debuggers and access control mechanisms in case the interface is enabled.</p> <p>4. Process audit of the manufacturing facility to validate the vendor's claim regarding the debugging interfaces which are closed/disabled during provisioning.</p> <p>[For instance, through Block connection diagram depicting pin connections between the host microcontroller and its interactions with various sub components/peripherals.]</p>	
	1.2 Verify that cryptographic keys and certificates are unique to each individual device.	<p>Identifying all the keys and certificates being used in the device eco-system and verification through:</p> <ul style="list-style-type: none"> • Testing, in presence of OEM team • Code review • Process audit of the key-life cycle process 	<p>1. List of all keys and certificates being used in the device ecosystem</p> <p>2. Key management life cycle (purpose, generation, storage, destruction/zeroization, validity, key changeover/rotation)</p>
	1.3 Verify that on-chip debugging interfaces such as JTAG or SWD are disabled or that available protection mechanism is enabled and configured appropriately.	<p>1. Identification of the availability of debugging interfaces such as USB, UART, and other serial variants through the Datasheet of the SoC being used in the device under test</p> <p>2. Verification and validation of the ports/interfaces enabled in the production devices and the related access control mechanism for protection of the same as declared in the vendor documentation</p> <p>3. Testing, in presence of OEM team, to verify the enabling/disabling of all the</p>	<p>1. Datasheet of the SoC being used in the device.</p> <p>2. Documentation related to ports/interfaces enabled in the production devices and the related access control mechanism for protection of the same.</p> <p>3. Process flow of the Manufacturing/Provisioning of the device</p>

		<p>ports and debugging interfaces such as USB, UART, and other serial variants using their relevant hardware based debuggers and access control mechanisms in case the interface is enabled.</p> <p>4. Process audit of the manufacturing facility to validate the vendor's claim regarding the debugging interfaces which are closed/disabled during provisioning.</p> <p>[For instance, through Block connection diagram depicting pin connections between the host microcontroller and its interactions with various sub components/peripherals.]</p>	
	1.4 Verify that trusted execution is implemented and enabled, if available on the device SoC or CPU.	<p>Identifying whether TEE/SE/TPM is available or not in the device through the SoC datasheet and technical documentation submitted by the vendor.</p> <p>Further assessment is done on the basis of scenarios as applicable to device as defined below:</p> <p>CASE 1: TEE/SE/TPM is not available:</p> <p>No further assessment</p> <p>CASE 2: TEE/SE/TPM is available and enabled:</p> <p>Verification through code-review that crypto functions are called through TEE/SE/TPM APIs.</p> <p>CASE 3: TEE/SE/TPM is available but not enabled by the vendor:</p> <p>Termed as non-conformance to the requirement. OEM is required to enable and implement the TEE/SE/TPM.</p>	<p>1. Datasheet of the SoC being used in the device.</p> <p>2. User manual/ Technical specifications of the device</p> <p>3. Code snippets of the TEE API call, wherever applicable</p>
	1.5 Verify that sensitive data, private keys and certificates are stored securely in a Secure Element, TPM,	<p>Identifying all the keys and certificates being used in the device eco-system, sensitive data and their storage mechanism(s); and verification through:</p>	<p>1. List of all keys and certificates being used in the device ecosystem</p> <p>2. List of all the sensitive data with their intended usage and secure storage</p>

	TEE (Trusted Execution Environment), or protected using strong cryptography.	<ul style="list-style-type: none"> • Testing, in presence of OEM team • Code review • Process audit of the key-life cycle process 	<p>mechanism(s) as implemented along with secure configurations to be enabled in the device.</p> <p>3. Key management life cycle (purpose, generation, storage, destruction/zeroization, validity, key changeover/rotation) private keys and certificates.</p>
	1.6 Verify the presence of tamper resistance and/or tamper detection features.	Testing, in presence of OEM team, to verify the measures implemented in the device to prevent software and hardware tampering.	<p>1. Measures available in the device to prevent software tampering.</p> <p>2. Measures available in the device to prevent hardware tampering.</p>
	1.7 Verify that any available Intellectual Property protection technologies provided by the chip manufacturer are enabled.	Testing, in presence of OEM team, to verify the enabling of the Intellectual Property protection technologies provided by the chip manufacturer, if available.	<p>1. Datasheet of the SoC</p> <p>2. Documentation regarding the Intellectual Property protection technologies provided by the chip manufacturer which have been enabled.</p> <p>3. In case, no Intellectual Property protection technologies are being provided by the chip manufacturer, then a declaration stating the same.</p>
	1.8 Verify the device validates the boot image signature before loading.	<p>Testing, in presence of OEM team, to verify the following:</p> <p>1. Device boots up successfully with the documented secure boot process when a valid boot image is provided.</p> <p>2. Device does not boot up when a tampered boot image (like with missing signature, invalid signature) is provided.</p>	<p>1. Datasheet of the SoC</p> <p>2. Technical specifications of the device regarding secure boot (should consist of keys involved and their management life cycle*, signature validation process and any other secure mechanisms if implemented.)</p>
	1.9 Verify usage of cryptographically secure pseudo-random number generator on embedded device (e.g., using chip-provided random number	<p>Verification of the documentation provided by the vendor regarding the random number generators being used in the device.</p> <p>Verification through code-review that random number generators or related</p>	<p>Documentation regarding the random generators (either hardware based or software based or both) being used in the device with their intended usage.</p> <p>In case, hardware based random number generators are being used, vendors</p>

		generators).	libraries as applicable are being used in the device.	shall submit the following: 1. Datasheet of the SoC 2. Technical specifications of the device regarding random generators In case, software based random number generators are being used, vendors shall provide the libraries being used for the same.
2)	Software/Firmware	2.1 Verify that memory protection controls such as ASLR and DEP are enabled by the embedded/IoT operating system, if applicable.	Testing, in presence of OEM team, to verify the declared memory protection controls available and enabled in the device using command line-based tools/commands or any other open-source tool like DEP, EMET tool.	Declaration of the memory protection controls available and enabled in the device.
		2.2 Verify that the firmware apps protect data-in-transit using transport layer security.	1. Verifying that strong encryption algorithms and secure TLS version is supported by the device to establish secure communication. 2. Verifying that device properly validates the server's TLS certificate to ensure that it is trusted and has not been tampered with. 3. Testing for vulnerabilities which can affect the security of TLS connection such as padding oracle attacks, or weak cipher suites. 4. Using tools such as Nmap to identify open ports through which device can be accessed leading to unintended data retrieval. 5. Verifying that the TLS session(s) are resistant to attempts of interception and decryption of network traffic using man-in-the-middle attacks using tools like Burpsuite.	Specifications and documentation related to the configurations available in the applications and firmware related to transport layer security.
		2.3 Verify that the firmware apps validate the digital signature of server connections.	1. Identifying the scenarios when the device establishes the server connections with the external world and verifying the following: <ul style="list-style-type: none">• Security features, related to secure server connections and digital	Document mentioning the use-cases when the device establishes server connections with the external world, with detailed information about the security measures in place while validating the digital signatures of the

			<p>signature validation as implemented like strong cipher suites, secure TLS version, SSL pinning etc. supported by code walkthrough.</p> <ul style="list-style-type: none"> • Proper certificate validation, certificate chain validation and certificate revocation checks are implemented in the device. <p>2. Testing for vulnerabilities which can affect the security of TLS connection such as padding oracle attacks, or weak cipher suites.</p> <p>3. Using tools such as Nmap to identify open ports through which device can be accessed leading to unintended data retrieval.</p> <p>4. Verifying that TLS session(s) are resistant to attempts of interception and decryption of network traffic using man-in-the-middle attacks using tools like Burpsuite.</p>	server connections.
	2.4 Verify that any use of banned C functions are replaced with the appropriate safe equivalent functions.	Secure code review [both automated and manual], in presence of OEM team, using a licensed static analysis tool through any of the following approaches:	<p>1. Visit to the evaluation agency by the vendor with the firmware code and installing the licensed static analysis tool available with the evaluation agency in their systems. [Recommended]</p> <p>2. Visit to the evaluation agency by the vendor with the firmware code and any licensed static analysis tool available with them and demonstrating the code review activity in the presence of representatives of evaluation agency.</p>	<p>1. Firmware binaries for code review.</p> <p>2. Internal code review reports</p>

		<p>3. Giving a remote access of the systems at vendor site to the evaluation agency for installing their licensed static analysis tool available with them.</p> <p>4. Giving a remote access of the systems at vendor site to the evaluation agency containing the firmware code along with the licensed static analysis tool available with the vendors.</p>	
	<p>2.5 Verify that each firmware maintains a software bill of materials cataloging third party components, versioning, and published vulnerabilities.</p>	<p>Verification of the submitted list of third-party components by running automated tools like FACT on the firmware.</p> <p>Identifying vulnerabilities in the third-party component(s) through publically available vulnerability databases</p> <p>Verification and validation of the process defined by the vendor for providing regular security updates and patches for the firmware to address any known vulnerabilities in third-party components.</p>	<p>1. Documentation for information on software bill of materials, including third-party components and versions.</p> <p>2. Organization process and policies for the following:</p> <ul style="list-style-type: none"> • Addressing and patching any identified vulnerabilities in third-party components. • Informing the customers about the security issues or vulnerabilities and providing security updates and patches for the same. <p>3. Configuration management system and related policies for maintaining firmware and third-party binaries, libraries and frameworks along with the patches/fixes issued to the devices.</p>
	<p>2.6 Verify all code including third-party binaries, libraries, frameworks are reviewed for hardcoded credentials (backdoors).</p>	<p>Independent secure code review [both automated and manual] using a licensed static analysis tool through any of the following approaches:</p> <p>1. Visit to the evaluation agency by the vendor with the firmware code and installing the licensed static analysis tool available with the evaluation agency in their systems.</p>	<p>1. Firmware binaries for code review.</p> <p>2. Internal code review reports</p>

			<p>[Recommended]</p> <p>2. Visit to the evaluation agency by the vendor with the firmware code and any licensed static analysis tool available with them and demonstrating the code review activity in the presence of representatives of evaluation agency.</p> <p>3. Giving a remote access of the systems at vendor site to the evaluation agency for installing their licensed static analysis tool available with them.</p> <p>4. Giving a remote access of the systems at vendor site to the evaluation agency containing the firmware code along with the licensed static analysis tool available with the vendors.</p>	
	2.7 Verify that the firmware apps pin the digital signature to a trusted server(s).	<p>1. Identifying the scenarios when the device establishes the server connections with the external world and verifying the following:</p> <ul style="list-style-type: none"> • Security features, related to secure server connections and digital signature validation as implemented like strong cipher suites, secure TLS version, SSL pinning etc. supported by code walkthrough. • Proper certificate validation, certificate chain validation and certificate revocation checks are implemented in the device. 	Document mentioning the use-cases when the device establishes server connections with the external world, with detailed information about the security measures in place while validating the digital signatures of the server connections.	
	2.8 Verify security controls are in place to hinder firmware reverse engineering (e.g. removal of verbose debugging symbols).	Testing, in presence of OEM team, to verify the security controls as provided by the vendor to hinder firmware reverse engineering.	Documentation regarding the security controls in place to hinder firmware reverse engineering.	
	2.9 Verify that	Testing, in presence of	Measures implemented in	

	the firmware update process is not vulnerable to time-of-check vs time-of-use attacks.	OEM team, to verify the measures implemented in the device to make it resistant to time-of-check vs.time-of-use attacks.	the device to make it resistant to time-of-check vs. time-of-use attacks.
	2.10 Verify the device uses code signing and validates firmware upgrade files before installing.	Testing, in presence of OEM team, to verify the following: i) Device gets successfully updated with the documented secure upgrade process when a valid update package is provided. ii) Device does not boot up when a tampered update package (like with missing signature, invalid signature) is provided.	Process of achieving secure firmware upgrade which should consist of keys involved and their management life cycle*, signature validation process and any other secure mechanisms if implemented.
	2.11 Verify that the device cannot be downgraded to old versions (anti-rollback) of valid firmware.	Testing, in presence of OEM team, to verify that the device cannot be downgraded to old versions (anti-rollback) of valid firmware.	Process of achieving secure firmware upgrade which should consist of keys involved and their management life cycle*, signature validation process and any other secure mechanisms if implemented.
	2.12 Verify that firmware can perform automatic firmware updates upon a predefined schedule.	Verification shall be done as per the applicable scenario: Case 1: Automatic OTA updates are available: A standard operating procedure for issuing automatic updates/upgrades to the in-field devices is required to be submitted by the vendor which can then be evaluated by the evaluation agency as per C20, C21 and C22 security requirement. Case 2: Automatic OTA updates are not available and vendor provides manual updates: A standard operating procedure for issuing manual updates/upgrades to the in-field devices is required to be submitted by the vendor which can then be evaluated by the	1. Modes of updates available i.e. automatic, manual or both. 2. Organizational process and policies regarding the issuing of updates to the devices.

			evaluation agency as per C20, C21 and C22 security requirement.	
3)	Secure Process Conformance	3.1 Verify that wireless communications are mutually authenticated.	Testing, in presence of OEM team, to verify the process of mutual authentication as laid down in the documentation by the vendor.	The documentation regarding the process of mutual authentication as implemented in the device when wireless communications are initiated. In case, the device does not support wireless communications, the vendor shall provide a declaration for the same.
		3.2 Verify that wireless communications are sent over an encrypted channel.	Identifying all the security mechanisms being used in the communication process verification through: <ul style="list-style-type: none"> • Testing, in presence of OEM team • Code review • Process audit of the key-life cycle process 	Documentation regarding the security measures implemented in the device to prevent tampering of the data being sent through wireless mode of communication. In case, the device does not support wireless communications, the vendor shall provide a declaration for the same.
		3.3 Verify that whether trusted sources are being used for sourcing the components of the device i.e. trusted supply chain through a managed Bill of materials for critical hardware components (related to security functions like SoC) is in use.		Bill of materials for critical hardware components (related to security functions like SoC).
		3.4 Supply chain risk identification, assessment, prioritization, and mitigation shall be conducted. Supply chain risk/business continuity planning policy documents, playbooks reflecting how to handle supply chain disruption,		Supply chain risk identification, assessment, prioritization, and mitigation documents. Supply chain risk/business continuity planning policy documents, playbooks reflecting how to handle supply chain disruption, post-incident summary documents.

		post-incident summary documents need to be submitted and demonstrate the same.		
		3.5 Verify the no proprietary network protocols are being used in the device. If yes, then complete implementation details and the source code for the same shall be provided.		Document for Network protocols used in the device.
4)	Security Conformance at product development stage	4.1 Design and architecture details till the PCBA and SoC level to be provided to aid in counterfeit mitigation and malware detection.		Design and architecture documents till the PCBA and SoC level.
		4.2 Threat mitigation strategies for tainted and counterfeit products shall be implemented as part of product development.	Process and method artifacts need to be submitted and demonstrate the same.	
		4.3 One or more up-to-date malware detection tools shall be deployed as part of the code acceptance and development processes. Malware detection techniques shall be used before final packaging and delivery (e.g., scanning finished products and components for malware using one or more up-to-date	List of components that have been identified as requiring tracking targets of tainting/counterfeiting, CM tool. Quality assurance process need to be submitted and demonstrate the same.	

		malware detection tools).		
		4.4 Supply chain risk identification, assessment, prioritization, and mitigation shall be conducted.		Supply chain risk/business continuity planning policy documents, playbooks reflecting how to handle supply chain disruption, post-incident summary documents need to be submitted and demonstrate the same.



भारत का राजपत्र

The Gazette of India

सी.जी.-डी.एल.-अ.-09042024-253632
CG-DL-E-09042024-253632

असाधारण
EXTRAORDINARY

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

प्राधिकार से प्रकाशित
PUBLISHED BY AUTHORITY

सं. 1569]

नई दिल्ली, मंगलवार, अप्रैल 9, 2024/चैत्र 20, 1946

No. 1569]

NEW DELHI, TUESDAY, APRIL 9, 2024/CHAITRA 20, 1946

इलेक्ट्रॉनिकी और सूचना प्रौद्योगिकी मंत्रालय

(आईपीएचडब्ल्यू प्रभाग)

आदेश

नई दिल्ली, 9 अप्रैल, 2024

विषय: "इलेक्ट्रॉनिकी और सूचना प्रौद्योगिकी माल में संशोधन" (अनिवार्य पंजीकरण की आवश्यकता) आदेश, 2021"

का.आ. 1652(अ).—भारतीय मानक ब्यूरो अधिनियम, 2016, (2016 का 11) की धारा 25 की उपधारा (3) के साथ पठित धारा 16 की उप-धारा (1) और (2) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, केंद्र सरकार का यह मत है कि सार्वजनिक हित में ऐसा करना आवश्यक या समीचीन है, इसके द्वारा "इलेक्ट्रॉनिकी और सूचना प्रौद्योगिकी माल (अनिवार्य पंजीकरण के लिए आवश्यकताएं) आदेश, 2021" में निम्नलिखित संशोधन किए जाते हैं:

2. सी.सी.टी.वी. कैमरे हेतु, कॉलम (5) की निम्नलिखित प्रविष्टि को "इलेक्ट्रॉनिकी और सूचना प्रौद्योगिकी माल (अनिवार्य पंजीकरण के लिए आवश्यकताएं) आदेश, 2021 की अनुसूची में क्रम संख्या 41 पर जोड़ा जाएगा।

क्रमांक (1)	माल या सामान (2)	भारतीय मानक (3)	भारतीय मानक का शीर्षक (4)	अपेक्षित आवश्यकता (आवश्यकताएं) (5)
41	सीसीटीवी कैमरा	आईएस 13252 : भाग 1 : 2010	सूचना तकनीकी उपकरण - सुरक्षा सामान्य आवश्यकताएं—	अनुलग्नक के अनुसार सीसीटीवी हेतु अनिवार्य आवश्यकता (आवश्यकताएं)

3. "इलेक्ट्रॉनिकी और सूचना प्रौद्योगिकी माल (अनिवार्य पंजीकरण के लिए आवश्यकताएं) आदेश, 2021" के प्रावधान इस अधिसूचना के आधार पर उक्त आदेश की अनुसूची में जोड़े गए कॉलम (2) में निर्दिष्ट माल या सामान पर आधिकारिक राजपत्र में इस अधिसूचना के प्रकाशन की तारीख से छह महीने की समाप्ति पर, कॉलम (5) में निर्दिष्ट किए गए संबंधित अपेक्षित आवश्यकताओं के अनुरूप लागू होंगे। बीआईएस अनुरूपता मूल्यांकन विनियम, 2018 की योजना II के अनुसार बीआईएस मान्यता प्राप्त प्रयोगशालाओं से परीक्षण रिपोर्ट जमा करना मानक चिन्ह का उपयोग करने के लिए लाइसेंस प्राप्त करने हेतु एक पूर्व-आवश्यकता होगी।

[फा.सं. डब्ल्यू-43/11/2021-आईपीएचडब्ल्यू]

आशा नांगिया, समूह समन्वयक और वैज्ञानिक 'जी'

अनुसूचक

सीसीटीवी की सुरक्षा के लिए अनिवार्य आवश्यकता

संवेदनशील जानकारी की सुरक्षा और सिस्टम को प्रभावी ढंग से संचालित करने के लिए सीसीटीवी (क्लोज-सर्किट टेलीविजन) प्रणाली को सुरक्षित करना महत्वपूर्ण है। परीक्षण के प्रमुख क्षेत्रों में एक्सपोस्ट नेटवर्क सेवाएं, डिवाइस संचार प्रोटोकॉल, डिवाइस के यूएआरटी, जेटीएजी, एसडब्ल्यूडी आदि तक भौतिक पहुंच, मेमोरी और फर्मवेयर निकालने की क्षमता, फर्मवेयर अपडेट प्रक्रिया सुरक्षा और डेटा का भंडारण और एन्क्रिप्शन शामिल हैं। सीसीटीवी सिस्टम की सुरक्षा के लिए यहां संक्षिप्त आवश्यकताएं दी गई हैं:

1. भौतिक सुरक्षा - भौतिक छेड़छाड़ को रोकने के लिए छेड़छाड़-प्रतिरोधी कैमरा एन्क्लोजर और लॉकिंग तंत्र का उपयोग करें।
2. प्रमाणीकरण द्वारा अभिगम नियंत्रण, भूमिका-आधारित अभिगम नियंत्रण (आरबीएसी) और कर्मियों के परिवर्तनों को प्रतिबिंबित करने के लिए अभिगम अनुमतियों की नियमित रूप से समीक्षा और अद्यतनीकरण।
3. डेटा ट्रांसमिशन के एन्क्रिप्शन को नियोजित करके नेटवर्क सुरक्षा
4. नियमित अपडेट द्वारा सॉफ्टवेयर सुरक्षा, अप्रयुक्त सुविधाओं को अक्षम करना और सुदृढ़ पासवर्ड नीतियाँ
5. पेनीट्रेशन परीक्षण: साइबर हमलों के लिए सिस्टम के प्रतिरोध का आकलन करने और कमजोरियों को दूर करने के लिए पेनीट्रेशन परीक्षण को नियोजित करें।

अनिवार्य सुरक्षा आवश्यकताएँ

क्रमांक	वर्ग	परीक्षण पैरामीटर	क्या परीक्षण किया जाए	अपेक्षित दस्तावेज़
	हार्डवेयर स्तर सुरक्षा पैरामीटर (सॉफ्टवेयर द्वारा समर्थित)	1.1 एक जटिल पासवर्ड द्वारा यह सत्यापित करें कि एप्लिकेशन लेयर डिबगिंग इंटरफ़ेस जैसे यूएसबी, यूएआरटी और अन्य सीरियल वेरिएंट अक्षम या संरक्षित हैं।	1. परीक्षण के तहत डिवाइस में उपयोग किए जा रहे एसओसी की डेटाशीट के माध्यम से यूएसबी, यूएआरटी और अन्य सीरियल वेरिएंट जैसे डिबगिंग इंटरफ़ेस की उपलब्धता की पहचान करना 2. विक्रेता दस्तावेज़ीकरण में घोषित की गई सुरक्षा के लिए उत्पादन उपकरणों और संबंधित पहुंच नियंत्रण तंत्र में सक्षम पोर्ट/इंटरफ़ेस का सत्यापन और वेधता हार्डवेयर आधारित डिबगर्स और एक्सेस कंट्रोल तंत्र का उपयोग करके सभी पोर्ट और यूएसबी, यूएआरटी और अन्य सीरियल वेरिएंट जैसे डिबगिंग इंटरफ़ेस को सक्षम/अक्षम करने को सत्यापित करने के लिए ओईएम	विक्रेता द्वारा निम्नलिखित को उपलब्ध करना होगा: 1. डिवाइस में उपयोग किए जा रहे एसओसी की डेटाशीट। 2. उत्पादन उपकरणों में सक्षम पोर्ट/इंटरफ़ेस से संबंधित दस्तावेज़ीकरण और उसकी सुरक्षा के लिए संबंधित एक्सेस नियंत्रण तंत्र। 3. डिवाइस के विनिर्माण/प्रावधान की प्रक्रिया प्रवाह

		के दौरान बंद/अक्षम है। [उदाहरण के लिए, ब्लॉक कनेक्शन आरेख के माध्यम से होस्ट माइक्रोकंट्रोलर के बीच पिन कनेक्शन और विभिन्न उप घटकों/परिधीय के साथ इसकी बातचीत को दर्शाया गया है।]	
1.4 सत्यापित करें कि विश्वसनीय निष्पादन लागू और सक्षम है, यदि डिवाइस एसओसी या सीपीयू पर उपलब्ध है।	विक्रेता द्वारा प्रस्तुत एसओसी डेटाशीट और तकनीकी दस्तावेज के माध्यम से डिवाइस में टीईई/एसई/टीपीएम उपलब्ध है या नहीं, इसकी पहचान करना। आगे का मूल्यांकन डिवाइस पर लागू परिदृश्यों के आधार पर किया जाता है जैसा कि नीचे परिभाषित किया गया है: स्थिति 1: टीईई/एसई/टीपीएम उपलब्ध नहीं है: कोई और अग्रिम मूल्यांकन नहीं स्थिति 2: टीईई/एसई/टीपीएम उपलब्ध और सक्षम है: कोड-समीक्षा के माध्यम से सत्यापन कि क्रिप्टो प्रकशन को टीईई/एसई/टीपीएम एपीआई के माध्यम से बुलाया जाता है। स्थिति 3: टीईई/एसई/टीपीएम उपलब्ध है लेकिन विक्रेता द्वारा सक्षम नहीं किया गया है: आवश्यकता के अनुरूप न होने के रूप में करार दिया गया। टीईई/एसई/टीपीएम को सक्षम और कार्यान्वित करने के लिए ओईएम की आवश्यकता होती है।	विक्रेता द्वारा निम्नलिखित को उपलब्ध कराना होगा: 1. डिवाइस में उपयोग किए जा रहे एसओसी की डेटाशीट। 2. डिवाइस का उपयोगकर्ता मैनुअल/तकनीकी विनिर्देश 3. टीईई एपीआई कॉल के कोड लिपेट, जहां भी लागू हो	
1.5 सत्यापित करें कि संवेदनशील डेटा, निजी कुंजियों और प्रमाणपत्र एक सुरक्षित तत्व, टीपीएम, टीईई (विश्वसनीय निष्पादन पर्यावरण) में सुरक्षित रूप से संग्रहीत हैं, या सुदृढ़ क्रिप्टोग्राफी का उपयोग करके संरक्षित हैं।	डिवाइस इको-सिस्टम, संवेदनशील डेटा और उनके भंडारण तंत्र में उपयोग की जा रही सभी कुंजियों और प्रमाणपत्रों की पहचान करना; और इसके माध्यम से सत्यापन करना : <ul style="list-style-type: none">• ओईएम टीम की उपस्थिति में परीक्षण• कोड समीक्षा• कुंजी-जीवन चक्र प्रक्रिया संबंधी प्रक्रिया लेखा परीक्षा	विक्रेता द्वारा निम्नलिखित को प्रस्तुत करना होगा: 1. डिवाइस इकोसिस्टम में उपयोग की जा रही सभी कुंजियों और प्रमाणपत्रों की सूची 2. डिवाइस में सक्षम किए जाने वाले सुरक्षित कॉन्फिगरेशन के साथ कार्यान्वित सभी संवेदनशील डेटा की उनके इच्छित उपयोग और सुरक्षित भंडारण तंत्र (ओं) के साथ सूची। 3. मुख्य प्रबंधन जीवन चक्र (उद्देश्य, उत्पादन, भंडारण, विनाश/शुद्धीकरण, वीधता, कुंजी परिवर्तन/रोटेशन) निजी कुंजी	

		और प्रमाणपत्र।
1.6 टैम्पर रेसिस्टेंस और/या टैम्पर का पता लगाने वाली सुविधाओं की उपस्थिति सत्यापित करें।	सॉफ्टवेयर और हार्डवेयर से टैपरिंग को रोकने के लिए डिवाइस में लागू किए गए उपायों को सत्यापित करने के लिए ओईएम टीम की उपस्थिति में परीक्षण।	विक्रेता द्वारा निम्नलिखित को प्रस्तुत करना होगा: 1. सॉफ्टवेयर से टैपरिंग रोकने के लिए डिवाइस संबंधी उपलब्ध उपाय। 2. हार्डवेयर से टैपरिंग रोकने के लिए डिवाइस संबंधी उपलब्ध उपाय।
1.7 चिप निर्माता द्वारा प्रदान की गई कोई भी उपलब्ध बौद्धिक संपदा सुरक्षा तकनीक सक्षम है।	यदि उपलब्ध हो तो चिप निर्माता द्वारा प्रदान की गई बौद्धिक संपदा सुरक्षा तकनीकों को सक्षम करने के लिए ओईएम टीम की उपस्थिति में परीक्षण।	विक्रेता द्वारा निम्नलिखित को प्रस्तुत करना होगा: 1. एमओसी की डेटाशीट 2. चिप निर्माता द्वारा प्रदान की गई बौद्धिक संपदा संरक्षण प्रौद्योगिकियों के संबंध में दस्तावेज़ीकरण, जिन्हें सक्षम किया गया है। 3. यदि चिप निर्माता द्वारा कोई बौद्धिक संपदा संरक्षण तकनीक प्रदान नहीं की जा रही है, तो एक घोषणा जिसमें समरूप बात हो।
1.8 सत्यापित करें कि डिवाइस लोड करने से पहले बूट छवि हस्ताक्षर को सत्यापित करता है।	निम्नलिखित को सत्यापित करने के लिए ओईएम टीम की उपस्थिति में परीक्षण करना : 1. बूट छवि प्रदान किए जाने पर डिवाइस दस्तावेज़ीकृत सुरक्षित बूट प्रक्रिया के साथ सफलतापूर्वक बूट हो जाता है। 2. छेड़छाड़ की गई बूट छवि (जैसे मिनिंग हस्ताक्षर, अमान्य हस्ताक्षर) प्रदान किए जाने पर डिवाइस बूट नहीं होता है।	विक्रेता द्वारा निम्नलिखित को प्रस्तुत करना होगा: 1. एमओसी की डेटाशीट 2. सुरक्षित बूट के संबंध में डिवाइस के तकनीकी विनिर्देश (इसमें शामिल बुनियादी और उनका प्रबंधन जीवन चक्र, हस्ताक्षर सत्यापन प्रक्रिया और लागू होने पर कोई अन्य सुरक्षित तंत्र शामिल होना चाहिए।)
1.9 एम्बेडेड डिवाइस पर क्रिप्टोग्राफिक रूप से सुरक्षित छद्म-यादृच्छिक संख्या जनरेटर के उपयोग को सत्यापित करें (उदाहरण के लिए, चिप-प्रदत्त यादृच्छिक संख्या जनरेटर का उपयोग करके)।	डिवाइस में उपयोग किए जा रहे यादृच्छिक संख्या जनरेटर के संबंध में विक्रेता द्वारा प्रदान किए गए दस्तावेज़ का सत्यापन करना। कॉड-समीक्षा के माध्यम से सत्यापन कि डिवाइस में यादृच्छिक संख्या जनरेटर या संबंधित लाइब्रेरी का उपयोग किया जा रहा है।	विक्रेता को अपने इच्छित उपयोग के साथ डिवाइस में उपयोग किए जा रहे यादृच्छिक जनरेटर (या तो हार्डवेयर आधारित या सॉफ्टवेयर आधारित या दोनों) के संबंध में दस्तावेज़ प्रस्तुत करना होगा। यदि हार्डवेयर आधारित यादृच्छिक संख्या जनरेटर का उपयोग किया जा रहा है, तो विक्रेताओं को निम्नलिखित प्रस्तुत करना होगा: 1. एमओसी की डेटाशीट 2. यादृच्छिक जनरेटर के संबंध में डिवाइस की तकनीकी विशिष्टताएँ यदि सॉफ्टवेयर आधारित

				यादृच्छिक संख्या जनरेटर का उपयोग किया जा रहा है, तो विक्रेताओं को इसके लिए उपयोग की जाने वाली लाइसेंसी प्रदान करनी होगी।
2.	सॉफ्टवेयर/फर्मवेयर	2.1 स्थापित करें कि एएसएलआर और डीईपी जैसे मेमोरी सुरक्षा नियंत्रण एम्बेडेड/आईओटी ऑपरेटिंग सिस्टम द्वारा सक्षम हैं, यदि लागू हो।	कमांड लाइन-आधारित टूल/कमांड या डीईपी, ईएमईटी टूल जैसे किसी अन्य ओपन-सोर्स टूल का उपयोग करके डिवाइस में उपलब्ध और सक्षम घोषित मेमोरी सुरक्षा नियंत्रणों को स्थापित करने के लिए ओईएम टीम की उपस्थिति में परीक्षण करना।	विक्रेता को डिवाइस में उपलब्ध और सक्षम मेमोरी सुरक्षा नियंत्रणों की घोषणा प्रस्तुत करनी होगी।
		2.2 स्थापित करें कि फर्मवेयर ऐप्स ट्रांसपोर्ट लेयर सुरक्षा का उपयोग करके ट्रांजिट में डेटा की सुरक्षा करते हैं।	1. यह स्थापित करना कि सुरक्षित संचार स्थापित करने के लिए सुदृढ़ एन्क्रिप्शन एल्गोरिदम और सुरक्षित टीएलएस संस्करण डिवाइस द्वारा समर्थित है। 2. यह स्थापित करना कि डिवाइस सर्वर के टीएलएस प्रमाणपत्र को ठीक से मान्य करता है ताकि यह सुनिश्चित हो सके कि यह विश्वसनीय है और इसके साथ छेड़छाड़ नहीं की गई है। 3. सुभेदताओं का परीक्षण जो टीएलएस कनेक्शन की सुरक्षा को प्रभावित कर सकता है जैसे पैकिंग अरिंकल हमले, या सुभेद सिफर सुदृढ़ता। 4. खुले पॉर्ट्स की पहचान करने के लिए एनएमएपी जैसे टूल का उपयोग करना जिसके माध्यम से डिवाइस तक पहुंचा जा सकता है जिससे अनपेक्षित डेटा पुनर्प्राप्ति हो सकती है। 5. यह स्थापित करना कि टीएलएस सत्र बर्षमुदत जैसे टूल का उपयोग करके मैन-इन-द-मिडिल हमलों का उपयोग करके नेटवर्क ट्रैफिक के अवरोधन और डिस्क्रिप्शन के प्रयासों के लिए प्रतिरोधी है।	विक्रेता ट्रांसपोर्ट लेयर सुरक्षा से संबंधित एन्क्रिप्शन और फर्मवेयर में उपलब्ध कॉन्फिगरेशन से संबंधित विनिर्देश और दस्तावेज प्रस्तुत करेगा।
		2.3 स्थापित करें कि फर्मवेयर ऐप्स सर्वर कनेक्शन के डिजिटल हस्ताक्षर को मान्य करते हैं।	1. उन परिदृश्यों की पहचान करना जब डिवाइस बाह्य दुनिया के साथ सर्वर कनेक्शन स्थापित करता है और निम्नलिखित की पुष्टि करता है:	विक्रेता को उपयोग के मामलों का उल्लेख करते हुए एक दस्तावेज प्रस्तुत करना होगा जब डिवाइस बाह्य दुनिया के साथ सर्वर कनेक्शन स्थापित करता है, जिसमें सर्वर कनेक्शन के डिजिटल

		<ul style="list-style-type: none"> • सुरक्षित सर्वर कनेक्शन और डिजिटल हस्ताक्षर सत्यापन से संबंधित सुरक्षा सुविधाएँ, जैसे सुदृढ़ साईफर सुइट्स, सुरक्षित टीएलएस संस्करण, एसएसएल पिनिंग आदि कोड वॉकथ्रू द्वारा समर्थित हैं। • डिवाइस में उचित प्रमाणपत्र सत्यापन, प्रमाणपत्र श्रृंखला सत्यापन और प्रमाणपत्र निरस्तीकरण जांच लागू की जाती हैं। <p>2. सुभेदताओं का परीक्षण जो टीएलएस कनेक्शन की सुरक्षा को प्रभावित कर सकता है जैसे पैडिंग अरिथमेटिक हमले, या सुभेद सिफर सुइट्स।</p> <p>3. सुले पोर्ट की पहचान करने के लिए एनएमएपी जैसे टूल का उपयोग करना जिसके माध्यम से डिवाइस तक पहुँचा जा सकता है जिससे अनपेक्षित डेटा पुनर्प्राप्ति हो सकती है।</p> <p>4. यह सत्यापित करना कि टीएलएस सच बर्पसुइट जैसे उपकरणों का उपयोग करके मैन-इन-द-मिडिल हमलों का उपयोग करके मेटावर्क ट्रैफिक के अवरोधन और डिजिटल प्रमाणों के लिए प्रतिक्रिया है।</p>	<p>हस्ताक्षरों को मान्य करते समय सुरक्षा उपायों के बारे में विस्तृत जानकारी होगी।</p>
	<p>2.4 सत्यापित करें कि प्रतिबंधित सी प्रोफाइल के किसी भी उपयोग को उचित सुरक्षित समकक्ष प्रोफाइल के साथ बदल दिया गया है।</p>	<p>निम्नलिखित में से किसी भी दृष्टिकोण के माध्यम से लाइसेंस प्राप्त स्थैतिक विश्लेषण उपकरण का उपयोग करके ओईएम टीम की उपस्थिति में सुरक्षित कोड समीक्षा [स्वचालित और मैन्युअल दोनों]:</p> <p>1. क्रमबद्ध कोड के साथ विवेका द्वारा मूल्यांकन एजेंसी का दौरा करना और मूल्यांकन एजेंसी के पास उपलब्ध लाइसेंस प्राप्त स्थैतिक विश्लेषण उपकरण को</p>	<p>विवेका द्वारा उपलब्ध करना होगा:</p> <p>1. कोड समीक्षा के लिए क्रमबद्ध वापसनेरिज़।</p> <p>2. आंतरिक कोड समीक्षा रिपोर्ट</p>

		<p>अपने सिस्टम में स्थापित करना। [अनुसूचित]</p> <p>2. विक्रेता द्वारा फर्मवेयर कोड और उनके पास उपलब्ध किसी भी लाइसेंस प्राप्त स्वैतिक विज्ञापन उपकरण के साथ मूल्यांकन एजेंसी का दौरा करना और मूल्यांकन एजेंसी के प्रतिनिधियों की उपस्थिति में कोड समीक्षा गतिविधि का प्रदर्शन करना।</p> <p>3. मूल्यांकन एजेंसी को उनके पास उपलब्ध लाइसेंस प्राप्त स्वैतिक विज्ञापन उपकरण स्थापित करने के लिए विक्रेता साइट पर सिस्टम की रिमोट एक्सेस प्रदान करना।</p> <p>4. विक्रेताओं के पास उपलब्ध लाइसेंस प्राप्त स्वैतिक विज्ञापन उपकरण के साथ फर्मवेयर कोड वाले मूल्यांकन एजेंसी को विक्रेता साइट पर सिस्टम की दूरस्थ अभिगम प्रदान करना।</p>	
2.5	<p>सत्यापित करें कि प्रत्येक फर्मवेयर तृतीय पक्ष के घटकों, संस्करण और प्रकाशित सुभेदताओं को सूचीबद्ध करने वाली सामग्री का एक सॉफ्टवेयर बिल रखा है।</p>	<p>फर्मवेयर पर एफ़एसीटी जैसे स्वचालित उपकरण चलाकर तृतीय-पक्ष घटकों की प्रस्तुत सूची का सत्यापन करना।</p> <p>सार्वजनिक रूप से उपलब्ध सुभेदता डेटाबेस के माध्यम से तीसरे पक्ष के घटकों में सुभेदताओं की पहचान करना।</p> <p>तृतीय पक्ष के घटकों में किसी भी ज्ञात सुभेदता को दूर करने के लिए फर्मवेयर के लिए नियमित सुरक्षा अपडेट और पैच प्रदान करने के लिए विक्रेता द्वारा परिभाषित प्रक्रिया का सत्यापन और वैधता।</p>	<p>विक्रेता द्वारा निम्नलिखित को प्रस्तुत करना होगा:</p> <p>1. तृतीय पक्ष के घटकों और संस्करणों सहित सामग्री के सॉफ्टवेयर बिल की जानकारी के लिए दस्तावेज़ीकरण करना।</p> <p>2. निम्नलिखित के लिए संगठन प्रक्रिया और नीतियां:</p> <ul style="list-style-type: none"> • तृतीय पक्ष के घटकों में पहचानी गई किसी भी सुभेदता को संबोधित करना और ठीक करना। • ग्राहकों को सुरक्षा मुद्दों या सुभेदताओं के बारे में सूचित करना और उनके लिए सुरक्षा अद्यतन और पैच प्रदान करना। <p>3. उपकरणों के लिए जारी किए गए पैच/फिक्स के साथ फर्मवेयर और तृतीय-पक्ष वाइररी, लाइब्रेरी और फ्रेमवर्क को बनाए रखने के लिए कॉन्फिगरेशन प्रबंधन प्रणाली और संबंधित नीतियां।</p>
2.6	<p>हार्डकोडेड क्रेडेंशियल्स (बैकडोर) के लिए तृतीय-पक्ष वायनेरिज़, लाइब्रेरीज़,</p>	<p>निम्नलिखित में से किसी भी दृष्टिकोण के माध्यम से लाइसेंस प्राप्त स्वैतिक विज्ञापन उपकरण का उपयोग करके स्वतंत्र सुरक्षित</p>	<p>विक्रेता द्वारा उपलब्ध करना होगा:</p> <p>1. कोड समीक्षा के लिए फर्मवेयर वायनेरिज़।</p>

		2.8 (बर्बोज़ डिबिंगिंग प्रतीकों को हटाने) में बाधा डालने के लिए सुरक्षा नियंत्रण मौजूद हैं।	फ़ॉर्मवेयर रिवर्स इंजीनियरिंग में बाधा डालने के लिए विक्रेता द्वारा प्रदान किए गए सुरक्षा नियंत्रणों को सत्यापित करने के लिए, ओईएम टीम की उपस्थिति में परीक्षण करना।	फ़ॉर्मवेयर रिवर्स इंजीनियरिंग में बाधा डालने के लिए विक्रेता को सुरक्षा नियंत्रण के संबंध में दस्तावेज़ प्रस्तुत करना होगा।
		2.9 सत्यापित करें कि फ़ॉर्मवेयर अपडेट प्रक्रिया समय-समय पर बनाम उपयोग के समय के हमलों के प्रति संवेदनशील नहीं है।	डिवाइस में लागू किए गए उपायों को सत्यापित करने के लिए ओईएम टीम की उपस्थिति में परीक्षण किया गया, ताकि इसे समय-समय पर उपयोग किए जाने वाले हमलों के प्रति प्रतिरोधी बनाया जा सके।	विक्रेता को डिवाइस में लागू किए गए उपायों को प्रस्तुत करना होगा ताकि इसे समय-समय बनाम उपयोग के समय के हमलों के प्रति प्रतिरोधी बनाया जा सके।
		2.10 सत्यापित करें कि डिवाइस इंस्टॉल करने से पहले कोड साइनिंग का उपयोग करता है और फ़ॉर्मवेयर अपडेट प्रक्रियाओं को मान्य करता है।	निम्नलिखित को सत्यापित करने के लिए ओईएम टीम की उपस्थिति में परीक्षण करना : क. वैध अपडेट पैकेज उपलब्ध कराए जाने पर डिवाइस दस्तावेज़ीकृत सुरक्षित अपडेट प्रक्रिया के साथ सफलतापूर्वक अपडेट हो जाता है। ख. छेड़छाड़ किए गए अपडेट पैकेज (जैसे मिसिंग हस्ताक्षर, अमान्य हस्ताक्षर) प्रदान किए जाने पर डिवाइस ब्रूट नहीं होता है।	विक्रेता को सुरक्षित फ़ॉर्मवेयर अपडेट प्राप्त करने की प्रक्रिया प्रस्तुत करनी होगी जिसमें शामिल कुंजियाँ और उनका प्रबंधन जीवन चक्र , हस्ताक्षर सत्यापन प्रक्रिया और लागू होने पर कोई अन्य सुरक्षित तंत्र शामिल होना चाहिए।
		2.11 सत्यापित करें कि डिवाइस को वैध फ़ॉर्मवेयर के पुराने संस्करण (एंटी-रोलबैक) में डाउनग्रेड नहीं किया जा सकता है।	यह सत्यापित करने के लिए कि डिवाइस को वैध फ़ॉर्मवेयर के पुराने संस्करणों (एंटी-रोलबैक) में डाउनग्रेड नहीं किया जा सकता है, ओईएम टीम की उपस्थिति में परीक्षण किया जा रहा है।	विक्रेता को सुरक्षित फ़ॉर्मवेयर अपडेट प्राप्त करने की प्रक्रिया प्रस्तुत करनी होगी जिसमें शामिल कुंजियाँ और उनका प्रबंधन जीवन चक्र , हस्ताक्षर सत्यापन प्रक्रिया और लागू होने पर कोई अन्य सुरक्षित तंत्र शामिल होना चाहिए।
		2.12 सत्यापित करें कि फ़ॉर्मवेयर पूर्वनिर्धारित शेड्यूल पर स्वचालित फ़ॉर्मवेयर अपडेट कर सकता है।	सत्यापन लागू परिदृश्य के अनुसार किया जाएगा: स्थिति 1: स्वचालित ओटीए अपडेट उपलब्ध हैं: इन-फील्ड उपकरणों को स्वचालित अपडेट/अपग्रेड जारी करने के लिए एक मानक संचालन प्रक्रिया विक्रेता द्वारा प्रस्तुत की जानी आवश्यक है जिसका मूल्यांकन, मूल्यांकन एजेंसी द्वारा सी20, सी21 और सी22 सुरक्षा आवश्यकता के अनुसार किया जा सकता है।	विक्रेता निम्नलिखित प्रदान करेगा: विक्रेता द्वारा निम्नलिखित को प्रस्तुत करना होगा: 1. उपलब्ध अपडेट के तरीके यानी स्वचालित, मैन्युअल या दोनों। 2. उपकरणों को अपडेट जारी करने के संबंध में संगठनात्मक प्रक्रिया और नीतियाँ।

			<p>स्थिति 2: स्वचालित ओटीए अपडेट उपलब्ध नहीं हैं और विक्रेता मैन्युअल अपडेट प्रदान करता है:</p> <p>इन-फील्ड डिवाइसों में मैन्युअल अपडेट/अपग्रेड जारी करने के लिए विक्रेता द्वारा एक मानक संचालन प्रक्रिया प्रस्तुत की जानी आवश्यक है जिसका मूल्यांकन, मूल्यांकन एजेंसी द्वारा सी20, सी21 और सी22 सुरक्षा आवश्यकता के अनुसार किया जा सकता है।</p>		
3.	सुरक्षित अनुरूपता	प्रक्रिया	3.1 सत्यापित करें कि वायरलेस संचार परस्पर प्रमाणित हैं।	विक्रेता द्वारा दस्तावेज़ में निर्धारित आपसी प्रमाणीकरण की प्रक्रिया को सत्यापित करने के लिए, ओईएम टीम की उपस्थिति में परीक्षण करना।	विक्रेताओं को वायरलेस संचार शुरू होने पर डिवाइस में लागू पारस्परिक प्रमाणीकरण की प्रक्रिया के संबंध में दस्तावेज़ प्रदान करना होगा। यदि डिवाइस वायरलेस संचार का समर्थन नहीं करता है, तो विक्रेता को इसके लिए एक घोषणा पत्र प्रदान करना होगा।
			3.2 सत्यापित करें कि वायरलेस संचार एक एन्क्रिप्टेड चैनल पर भेजा जाता है।	संचार प्रक्रिया सत्यापन में उपयोग किए जा रहे सभी सुरक्षा तंत्रों की पहचान करना: <ul style="list-style-type: none"> ओईएम टीम की उपस्थिति में परीक्षण करना फ़ोटो समीक्षा कुंजी-जीवन चक्र प्रक्रिया संबंधी प्रक्रिया लेखा परीक्षा लेखा परीक्षा 	संचार के वायरलेस मोड के माध्यम से भेजे जाने वाले डेटा से छेड़छाड़ को रोकने के लिए विक्रेताओं को डिवाइस में लागू सुरक्षा उपायों के संबंध में दस्तावेज़ उपलब्ध कराने होंगे। यदि डिवाइस वायरलेस संचार का समर्थन नहीं करता है, तो विक्रेता को इसके लिए एक घोषणा पत्र प्रदान करना होगा।
			3.3 सत्यापित करें कि क्या डिवाइस के घटकों की सौरिंग के लिए विश्वसनीय स्रोतों का उपयोग किया जा रहा है यानी महत्वपूर्ण हार्डवेयर घटकों (एसओसी जैसे सुरक्षा कार्यों से संबंधित) के लिए सामग्रियों के प्रबंधित बिल के माध्यम से विश्वसनीय आपूर्ति श्रृंखला का उपयोग किया जा रहा है।		विक्रेता को महत्वपूर्ण हार्डवेयर घटकों (एसओसी जैसे सुरक्षा कार्यों से संबंधित) के लिए सामग्री का बिल प्रस्तुत करना होगा।
			3.4 आपूर्ति श्रृंखला जोखिम की पहचान,		विक्रेता निम्नलिखित प्रस्तुत करेगा: आपूर्ति श्रृंखला जोखिम की

		<p>मूल्यांकन, प्राथमिकता और शमन आयोजित किया जाएगा। आपूर्ति शृंखला जोखिम/व्यवसाय निरंतरता योजना नीति दस्तावेज़, आपूर्ति शृंखला व्यवधान को संभालने के तरीके को दर्शाने वाली प्लेबुक, घटना के बाद के सारांश दस्तावेज़ प्रस्तुत करने और उन्हें प्रदर्शित करने की आवश्यकता है।</p>	<p>पहचान, मूल्यांकन, प्राथमिकता और शमन दस्तावेज़।</p> <p>आपूर्ति शृंखला जोखिम / व्यापार निरंतरता योजना नीति दस्तावेज़, प्लेबुक जो दर्शाती है कि आपूर्ति शृंखला व्यवधान को कैसे संभालना है, घटना के बाद सारांश दस्तावेज़ों को प्रस्तुत करना।</p>
		<p>3.5 सत्यापित करें कि डिजाइन में कोई प्रप्राइवेटेरी नेटवर्क प्रोटोकॉल का उपयोग नहीं किया जा रहा है। यदि हाँ, तो संपूर्ण कार्यान्वयन विवरण और उसके लिए स्रोत कोड प्रदान किया जाएगा।</p>	<p>डिजाइन में प्रयुक्त नेटवर्क प्रोटोकॉल के लिए दस्तावेज़।</p>
4.	उत्पाद विकास चरण में सुरक्षा अनुरूपता	<p>4.1 नकली शमन और मैलवेयर का पता लगाने में सहायता के लिए पीसीबीए और एसओसी स्तर तक डिजाइन और आर्किटेक्चर विवरण प्रदान किया जाएगा।</p>	<p>पीसीबीए और एसओसी स्तर तक डिजाइन और आर्किटेक्चर दस्तावेज़।</p>
		<p>4.2 उत्पाद विकास के हिस्से के रूप में खराब और नकली उत्पादों के लिए खतरा कम करने की रणनीतियों को लागू किया जाएगा।</p>	<p>प्रक्रिया और विधि के विरूपण साक्ष्य प्रस्तुत करने और उन्हें प्रदर्शित करने की आवश्यकता है।</p>
		<p>4.3 कोड स्वीकृति और विकास प्रक्रियाओं के हिस्से के रूप में एक या अधिक अद्यतन मैलवेयर पहचान उपचारण नियोजित किए जाएंगे। अंतिम पैकेजिंग और प्रदायगी से पहले मैलवेयर पहचान</p>	<p>उन घटकों की सूची जिनकी पहचान टैनिंग/जालसाजी, सीएम टूल के ट्रेकिंग लक्ष्यों की आवश्यकता के रूप में की गई है। गुणवत्ता आश्वासन प्रक्रिया को प्रस्तुत करने और उसे प्रदर्शित करने की आवश्यकता है।</p>

		तकनीकों का उपयोग किया जाएगा (उदाहरण के लिए, एक या अधिक अद्यतन मैलवेयर पहचान उपकरणों का उपयोग करके मैलवेयर के लिए तैयार उत्पादों और घटकों को स्कैन करना)।	
		4.4 आपूर्ति श्रृंखला जोखिम की पहचान, मूल्यांकन, प्राथमिकता और शमन आयोजित किया जाएगा।	आपूर्ति श्रृंखला जोखिम / व्यापार निरंतरता योजना नीति दस्तावेज, प्लेबुक जो दर्शाती है कि आपूर्ति श्रृंखला व्यवधान को कैसे संभालना है, घटना के बाद सारांश दस्तावेजों को प्रस्तुत करने और उसी को प्रदर्शित करने की आवश्यकता है।

MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY

(IPHW Division)

ORDER

New Delhi, the 9th April, 2024

Subject: Amendment to the "Electronics and Information Technology Goods (Requirement of Compulsory Registration) Order, 2021"

S.O. 1652(E).—In exercise of the powers conferred by sub-section (1) and (2) of section 16 read with sub section (3) of section 25 of the Bureau of Indian Standards Act, 2016, (11 of 2016), the Central Government is of the opinion that it is necessary or expedient so to do in the public interest, hereby makes the following amendments to the "Electronics and Information Technology Goods (Requirements for Compulsory Registration) Order, 2021":

2. For CCTV Camera, the following entry of Column (5) be added at S. No. 41 in the Schedule of the "Electronics and Information Technology Goods (Requirements for Compulsory Registration) Order, 2021.

Sr. No. (1)	Goods or Articles (2)	Indian Standard (3)	Title of Indian Standard (4)	Essential Requirement(s) (5)
41	CCTV Camera	IS 13252: Part 1: 2010	Information Technology Equipment - Safety General Requirements--	Essential Requirement(s) for CCTV as per Annexure

3. The provisions of "Electronics and Information Technology Goods (Requirements for Compulsory Registration) Order, 2021" shall apply on the Goods or articles as specified in the column (2) added to the schedule of the said Order by virtue of this notification, for conforming to the corresponding Essential Requirement(s) as specified in the column (5), on the expiry of six months from the date of publication of this notification in the Official Gazette. As per Scheme II of BIS Conformity Assessment Regulations, 2018, submission of test reports from BIS recognized labs, shall form a pre-requisite for obtaining license to use Standard Mark.

[F.No. W-43/11/2021-IPHW]

ASHA NANGIA, Group Coordinator & Scientist 'G'

Essential Requirement(s) for Security of CCTV

Securing a CCTV (Closed-Circuit Television) system is crucial to protect sensitive information and ensure the system operates effectively. Key areas of testing include exposed network services, device communication protocols, physical access to the device's UART, JTAG, SWD, etc., the ability to extract memory and firmware, firmware update process security and storage and encryption of data. Here are brief requirements for the security of a CCTV system:

1. Physical Security - Use tamper-resistant camera enclosures and locking mechanisms to deter physical tampering.
2. Access Control by Authentication, Role-Based Access Control (RBAC) and regularly review and update access permissions to reflect personnel changes.
3. Network Security by employing encryption of data transmission
4. Software Security by Regular Updates, Disable Unused Features and Strong Password Policies
5. Penetration Testing: Employ penetration testing to assess the system's resistance to cyberattacks and address vulnerabilities.

Essential Security Requirements

Sr. No.	Category	Testing Parameter	What to be tested	Documents Required
1.	Hardware Level Security Parameter (supported by software)	1.1 Verify that application layer debugging interfaces such as USB, UART, and other serial variants are disabled or protected by a complex password.	<p>1. Identification of the availability of debugging interfaces such as USB, UART, and other serial variants through the Datasheet of the SoC being used in the device under test</p> <p>2. Verification and validation of the ports/interfaces enabled in the production devices and the related access control mechanism for protection of the same as declared in the vendor documentation</p> <p>3. Testing, in presence of OEM team, to verify the enabling/disabling of all the ports and debugging interfaces such as USB, UART, and other serial variants using their relevant hardware-based debuggers and access control mechanisms in case the interface is enabled.</p> <p>4. Process verification of the manufacturing facility to validate the vendor's claim regarding the debugging interfaces which are closed/disabled during provisioning. [For instance, through Block connection diagram depicting pin connections between the host</p>	<p>The vendor shall provide the following:</p> <p>a. Datasheet of the SoC being used in the device.</p> <p>b. Documentation related to ports/interfaces enabled in the production devices and the related access control mechanism for protection of the same.</p> <p>c. Process flow of the Manufacturing/Provisioning of the device</p>

			microcontroller and its interactions with various sub components/peripherals.]	
		1.2 Verify that cryptographic keys and certificates are unique to each individual device.	Identifying all the keys and certificates being used in the device ecosystem and verification through: <ul style="list-style-type: none"> • Testing, in presence of OEM team • Code review • Process audit of the key-life cycle process 	Vendor shall submit the following: <ol style="list-style-type: none"> 1. List of all keys and certificates being used in the device ecosystem 2. Key management life cycle (purpose, generation, storage, destruction/zeroization, validity, key changeover/rotation)
		1.3 Verify that on-chip debugging interfaces such as JTAG or SWD are disabled or that available protection mechanism is enabled and configured appropriately.	1. Identification of the availability of debugging interfaces such as USB, UART, and other serial variants through the Datasheet of the SoC being used in the device under test 2. Verification and validation of the ports/interfaces enabled in the production devices and the related access control mechanism for protection of the same as declared in the vendor documentation 3. Testing, in presence of OEM team, to verify the enabling/disabling of all the ports and debugging interfaces such as USB, UART, and other serial variants using their relevant hardware based debuggers and access control mechanisms in case the interface is enabled. 4. Process audit of the manufacturing facility to validate the vendor's claim regarding the debugging interfaces which are closed/disabled during provisioning. [For instance, through Block connection diagram depicting pin connections between the host microcontroller and its interactions with various sub components/peripherals.]	The vendor shall provide the following: <ol style="list-style-type: none"> a. Datasheet of the SoC being used in the device. b. Documentation related to ports/interfaces enabled in the production devices and the related access control mechanism for protection of the same. c. Process flow of the Manufacturing/Provisioning of the device

		<p>1.4 Verify that trusted execution is implemented and enabled, if available on the device SoC or CPU.</p>	<p>Identifying whether TEE/SE/TPM is available or not in the device through the SoC datasheet and technical documentation submitted by the vendor.</p> <p>Further assessment is done on the basis of scenarios as applicable to device as defined below:</p> <p>CASE 1: TEE/SE/TPM is not available: No further assessment</p> <p>CASE 2: TEE/SE/TPM is available and enabled: Verification through code-review that crypto functions are called through TEE/SE/TPM APIs.</p> <p>CASE 3: TEE/SE/TPM is available but not enabled by the vendor: Termed as non-conformance to the requirement. OEM is required to enable and implement the TEE/SE/TPM.</p>	<p>The vendor shall provide the following:</p> <ol style="list-style-type: none"> 1. Datasheet of the SoC being used in the device. 2. User manual/ Technical specifications of the device 3. Code snippets of the TEE API call, wherever applicable
		<p>1.5 Verify that sensitive data, private keys and certificates are stored securely in a Secure Element, TPM, TEE (Trusted Execution Environment), or protected using strong cryptography.</p>	<p>Identifying all the keys and certificates being used in the device ecosystem, sensitive data and their storage mechanism(s); and verification through:</p> <ul style="list-style-type: none"> • Testing, in presence of OEM team • Code review • Process audit of the key-life cycle process 	<p>Vendor shall submit the following:</p> <ol style="list-style-type: none"> 1. List of all keys and certificates being used in the device ecosystem 2. List of all the sensitive data with their intended usage and secure storage mechanism(s) as implemented along with secure configurations to be enabled in the device. 3. Key management life cycle (purpose, generation, storage, destruction/zeroization, validity, key changeover/rotation) private keys and certificates.
		<p>1.6 Verify the presence of tamper resistance and/or tamper detection features.</p>	<p>Testing, in presence of OEM team, to verify the measures implemented in the device to prevent software and hardware tampering.</p>	<p>Vendor shall submit the following:</p> <ol style="list-style-type: none"> 1. Measures available in the device to prevent software tampering. 2. Measures available in the device to prevent hardware tampering.
		<p>1.7 Verify that any available Intellectual</p>	<p>Testing, in presence of OEM team, to verify the enabling of the</p>	<p>Vendor shall submit the following:</p> <ol style="list-style-type: none"> 1. Datasheet of the SoC

		Property protection technologies provided by the chip manufacturer are enabled.	Intellectual Property protection technologies provided by the chip manufacturer, if available.	2. Documentation regarding the Intellectual Property protection technologies provided by the chip manufacturer which have been enabled. 3. In case, no Intellectual Property protection technologies are being provided by the chip manufacturer, then a declaration stating the same.
		1.8 Verify the device validates the boot image signature before loading.	Testing, in presence of OEM team, to verify the following: 1. Device boots up successfully with the documented secure boot process when a valid boot image is provided. 2. Device does not boot up when a tampered boot image (like with missing signature, invalid signature) is provided.	Vendor shall submit the following: 1. Datasheet of the SoC 2. Technical specifications of the device regarding secure boot (should consist of keys involved and their management life cycle, signature validation process and any other secure mechanisms if implemented.)
		1.9 Verify usage of cryptographically secure pseudo-random number generator on embedded device (e.g., using chip-provided random number generators).	Verification of the documentation provided by the vendor regarding the random number generators being used in the device. Verification through code-review that random number generators or related libraries as applicable are being used in the device.	Vendor shall submit the documentation regarding the random generators (either hardware based or software based or both) being used in the device with their intended usage. In case, hardware based random number generators are being used, vendors shall submit the following: 1. Datasheet of the SoC 2. Technical specifications of the device regarding random generators In case, software based random number generators are being used, vendors shall provide the libraries being used for the same.
2.	Software/Firmware	2.1 Verify that memory protection controls such as ASLR and DEP are enabled by the embedded/IoT operating system, if applicable.	Testing, in presence of OEM team, to verify the declared memory protection controls available and enabled in the device using command line-based tools/commands or any other open-source tool like DEP, EMET tool.	Vendor shall submit the declaration of the memory protection controls available and enabled in the device.
		2.2 Verify that the firmware apps protect data-in-transit using transport layer	1. Verifying that strong encryption algorithms and secure TLS version is supported by the device to establish secure	The vendor shall submit the specifications and documentation related to the configurations available in the applications and

		security.	<p>communication.</p> <p>2. Verifying that device properly validates the server's TLS certificate to ensure that it is trusted and has not been tampered with.</p> <p>3. Testing for vulnerabilities which can affect the security of TLS connection such as padding oracle attacks, or weak cipher suites.</p> <p>4. Using tools such as Nmap to identify open ports through which device can be accessed leading to unintended data retrieval.</p> <p>5. Verifying that the TLS session(s) are resistant to attempts of interception and decryption of network traffic using man-in-the-middle attacks using tools like Burpsuite.</p>	firmware related to transport layer security.
		2.3 Verify that the firmware apps validate the digital signature of server connections.	<p>1. Identifying the scenarios when the device establishes the server connections with the external world and verifying the following:</p> <ul style="list-style-type: none"> • Security features, related to secure server connections and digital signature validation as implemented like strong cipher suites, secure TLS version, SSL pinning etc. supported by code walkthrough. • Proper certificate validation, certificate chain validation and certificate revocation checks are implemented in the device. <p>2. Testing for vulnerabilities which can affect the security of TLS connection such as padding oracle attacks, or weak cipher suites.</p>	Vendor shall submit a document mentioning the use-cases when the device establishes server connections with the external world, with detailed information about the security measures in place while validating the digital signatures of the server connections.

		<p>3. Using tools such as Nmap to identify open ports through which device can be accessed</p> <p>leading to unintended data retrieval.</p> <p>4. Verifying that TLS session(s) are resistant to attempts of interception and decryption of network traffic using man-in-the-middle attacks using tools like Burpsuite.</p>	
	<p>2.4 Verify that any use of banned C functions are replaced with the appropriate safe equivalent functions.</p>	<p>Secure code review [both automated and manual], in presence of OEM team, using a licensed static analysis tool through any of the following approaches:</p> <p>1. Visit to the evaluation agency by the vendor with the firmware code and installing the licensed static analysis tool available with the evaluation agency in their systems. [Recommended]</p> <p>2. Visit to the evaluation agency by the vendor with the firmware code and any licensed static analysis tool available with them and demonstrating the code review activity in the presence of representatives of evaluation agency.</p> <p>3. Giving a remote access of the systems at vendor site to the evaluation agency for installing their licensed static analysis tool available with them.</p> <p>4. Giving a remote access of the systems at vendor site to the evaluation agency containing the firmware code along with the licensed static analysis tool available with the vendors.</p>	<p>Vendor shall provide :</p> <p>1. Firmware binaries for code review.</p> <p>2. Internal code review reports</p>
	<p>2.5 Verify that each firmware maintains a software bill of materials cataloging third party</p>	<p>Verification of the submitted list of third-party components by running automated tools like FACT on the firmware.</p> <p>Identifying vulnerabilities</p>	<p>Vendor shall submit the following:</p> <p>1. Documentation for information on software bill of materials, including third-party components and versions.</p>

		<p>components, versioning, and published vulnerabilities.</p>	<p>in the third-party component(s) through publicly available vulnerability databases Verification and validation of the process defined by the vendor for providing regular security updates and patches for the firmware to address any known vulnerabilities in third-party components.</p>	<p>2. Organization process and policies for the following:</p> <ul style="list-style-type: none"> • Addressing and patching any identified vulnerabilities in third-party components. • Informing the customers about the security issues or vulnerabilities and providing security updates and patches for the same. <p>3. Configuration management system and related policies for maintaining firmware and third-party binaries, libraries and frameworks along with the patches/fixes issued to the devices.</p>
		<p>2.6 Verify all code including third-party binaries, libraries, frameworks are reviewed for hardcoded credentials (backdoors).</p>	<p>Independent secure code review [both automated and manual] using a licensed static analysis tool through any of the following approaches:</p> <ol style="list-style-type: none"> 1. Visit to the evaluation agency by the vendor with the firmware code and installing the licensed static analysis tool available with the evaluation agency in their systems. [Recommended] 2. Visit to the evaluation agency by the vendor with the firmware code and any licensed static analysis tool available with them and demonstrating the code review activity in the presence of representatives of evaluation agency. 3. Giving a remote access of the systems at vendor site to the evaluation agency for installing their licensed static analysis tool available with them. 4. Giving a remote access of the systems at vendor site to the evaluation agency containing the firmware code along with the licensed static analysis tool available with the vendors. 	<p>Vendor shall provide:</p> <ol style="list-style-type: none"> 1. Firmware binaries for code review. 2. Internal code review reports

		<p>2.7 Verify that the firmware apps pin the digital signature to a trusted server(s).</p>	<p>1. Identifying the scenarios when the device establishes the server connections with the external world and verifying the following:</p> <ul style="list-style-type: none"> • Security features, related to secure server connections and digital signature validation as implemented like strong cipher suites, secure TLS version, SSL pinning etc. supported by code walkthrough. • Proper certificate validation, certificate chain validation and certificate revocation checks are implemented in the device. 	<p>Vendor shall submit a document mentioning the use-cases when the device establishes server connections with the external world, with detailed information about the security measures in place while validating the digital signatures of the server connections.</p>
		<p>2.7 Verify security controls are in place to hinder firmware reverse engineering (e.g. removal of verbose debugging symbols).</p>	<p>Testing, in presence of OEM team, to verify the security controls as provided by the vendor to hinder firmware reverse engineering.</p>	<p>Vendor shall submit the documentation regarding the security controls in place to hinder firmware reverse engineering.</p>
		<p>2.8 Verify that the firmware update process is not vulnerable to time-of-check vs time-of-use attacks.</p>	<p>Testing, in presence of OEM team, to verify the measures implemented in the device to make it resistant to time-of-check vs. time-of-use attacks.</p>	<p>Vendor shall submit the measures implemented in the device to make it resistant to time-of-check vs. time-of-use attacks.</p>
		<p>2.9 Verify the device uses code signing and validates firmware upgrade files before installing.</p>	<p>Testing, in presence of OEM team, to verify the following:</p> <ol style="list-style-type: none"> 1. Device gets successfully updated with the documented secure upgrade process when a valid update package is provided. 2. Device does not boot up when a tampered update package (like with missing signature, invalid signature) is provided. 	<p>Vendor shall submit the process of achieving secure firmware upgrade which should consist of keys involved and their management life cycle, signature validation process and any other secure mechanisms if implemented.</p>

		2.10 Verify that the device cannot be downgraded to old versions (anti-rollback) of valid firmware.	Testing, in presence of OEM team, to verify that the device cannot be downgraded to old versions (anti-rollback) of valid firmware.	Vendor shall submit the process of achieving secure firmware upgrade which should consist of keys involved and their management life cycle*, signature validation process and any other secure mechanisms if implemented.
		2.11 Verify that firmware can perform automatic firmware updates upon a predefined schedule.	<p>Verification shall be done as per the applicable scenario:</p> <p>Case 1: Automatic OTA updates are available: A standard operating procedure for issuing automatic updates/upgrades to the in-field devices is required to be submitted by the vendor which can then be evaluated by the evaluation agency as per C20, C21 and C22 security requirement of OWASP open standard.</p> <p>Case 2: Automatic OTA updates are not available and vendor provides manual updates: A standard operating procedure for issuing manual updates/upgrades to the in-field devices is required to be submitted by the vendor which can then be evaluated by the evaluation agency as per C20, C21 and C22 security requirement of OWASP open standard.</p>	<p>Vendor shall provide the following:</p> <ol style="list-style-type: none"> 1. Modes of updates available i.e. automatic, manual or both. 2. Organizational process and policies regarding the issuing of updates to the devices.
3.	Secure Process Conformance	3.1 Verify that wireless communications are mutually authenticated.	Testing, in presence of OEM team, to verify the process of mutual authentication as laid down in the documentation by the vendor.	<p>Vendors shall provide the documentation regarding the process of mutual authentication as implemented in the device when wireless communications are initiated.</p> <p>In case, the device does not support wireless communications, the vendor shall provide a declaration for the same.</p>
		3.2 Verify that wireless communications are sent over an encrypted	Identifying all the security mechanisms being used in the communication process verification through:	Vendors shall provide the documentation regarding the security measures implemented in the device to prevent tampering of the data

		channel.	<ul style="list-style-type: none"> • Testing, in presence of OEM team • Code review • Process audit of the key-life cycle process 	<p>being sent through wireless mode of communication.</p> <p>In case, the device does not support wireless communications, the vendor shall provide a declaration for the same.</p>
		3.3 Verify that whether trusted sources are being used for sourcing the components of the device i.e. trusted supply chain through a managed Bill of materials for critical hardware components (related to security functions like SoC) is in use.		Vendor shall submit Bill of materials for critical hardware components (related to security functions like SoC).
		3.4 Supply chain risk identification, assessment, prioritization, and mitigation shall be conducted. Supply chain risk/business continuity planning policy documents, playbooks reflecting how to handle supply chain disruption, post-incident summary documents need to be submitted and demonstrate the same.		<p>Vendor shall submit the following:</p> <p>Supply chain risk identification, assessment, prioritization, and mitigation documents.</p> <p>Supply chain risk/business continuity planning policy documents, playbooks reflecting how to handle supply chain disruption, post-incident summary documents.</p>
		3.5 Verify the no proprietary network protocols are being used in the device. If yes, then complete implementation details and the source code for the same shall be provided.		Document for Network protocols used in the device.
4.	Security Conformance at	4.1 Design and architecture details till the PCBA and SoC		Design and architecture documents till the PCBA and SoC level.

product development stage	level to be provided to aid in counterfeit mitigation and malware detection.		
	4.2 Threat mitigation strategies for tainted and counterfeit products shall be implemented as part of product development.	Process and method artifacts need to be submitted and demonstrate the same.	
	4.3 One or more up-to-date malware detection tools shall be deployed as part of the code acceptance and development processes. Malware detection techniques shall be used before final packaging and delivery (e.g., scanning finished products and components for malware using one or more up-to-date malware detection tools).	List of components that have been identified as requiring tracking targets of tainting/counterfeiting. CM tool. Quality assurance process need to be submitted and demonstrate the same.	
	4.4 Supply chain risk identification, assessment, prioritization, and mitigation shall be conducted.		Supply chain risk/business continuity planning policy documents, playbooks reflecting how to handle supply chain disruption, post-incident summary documents need to be submitted and demonstrate the same.

W-43/11/2021-IPHW
Government of India
Ministry of Electronics and Information Technology
(IPHW Division)

Electronics Niketan,
6, CGO Complex,
Lodhi Road, New Delhi-110003.

Dated: 11 Mar, 2024

OFFICE MEMORANDUM

Subject: -Advisory on the Threat of Information Leakage through CCTV/ Video Surveillance system (VSS)/ Digital Video Recorders /Network Video Recorders-reg

The reference is made to the concerns raised by various Ministries/Departments regarding the security implications associated with the deployment of Closed-Circuit Television (CCTV) Cameras and the conduct of cyber auditing and testing of hardware pertaining to CCTV cameras and other Internet of Things (IoT) devices. The Ministry of Electronics and Information Technology (MeitY) has formulated comprehensive security guidelines for CCTV cameras as included in **Annexure 'A'**.

2. In light of these concerns, Government Ministries/Departments are strongly advised to adhere to the guidelines outlined within the ambit of the Public Procurement Orders to safeguard the overall security and integrity of CCTV Cameras and IoT Devices.
3. This issues with the approval of the Competent Authority.


(Asha Nangia)

Group Coordinator & Scientist-'G'
Ph. 011-24301965

To,

- i) Secretaries of All Ministries/Department of Government of India**
- ii) Chief Secretaries/Administrators of Union Territories/National Capital Territory of Delhi**

A video surveillance system, also known as Closed-Circuit Television (CCTV) system, is a collection of cameras and other related equipment used to monitor and record activities in a specific area commonly used for security and surveillance purposes.

2. Key components of a video surveillance system typically include cameras, (Analog, Digital, IP Cameras), Video Management System (VMS) Software, Storage (Network Video Recorders (NVRs) or Digital Video Recorders (DVRs)), Power Supply etc.

3. While these surveillance technologies undoubtedly offer a range of benefits and are valuable tools for monitoring and security, they also raise certain concerns and risks. Some of the growing risks associated with CCTV systems include data security, privacy breach, hacking and cyber-attack etc. Various incidents have also been reported due to security flaw in the surveillance cameras.

4. The cybersecurity is an ongoing process, so staying vigilant and keeping system up to date with the latest security practices can significantly enhance the security of CCTV system and protect it from potential threats and unauthorized access. In this regard, the following measures are advised to minimize the risk associated with CCTV surveillance system:

- i) The Rules and regulations as applicable, notified by the Government or procurement of goods and services must be followed e.g.
 - a) Public procurement Order (Make in India), 2017
 - b) Electronics and Information Technology Goods (Requirement of Compulsory Registration) Order, 2021
- ii) BIS has formulated Blank Detail Specification (BDS) for IS 16910 for performance requirements of CCTVs. The procuring government agency can stipulate their own technical requirements for the parameters listed in the BDS and the testing can be done as per the test methods prescribed in the standard.
- iii) The procurement of Video Surveillance System from the brand having history of security breaches and data leakages should be avoided.

- iv) **Hardware Security:** For the Hardware Security testing of CCTV cameras, the government agencies should use the testing infrastructure available with Standardization Testing and Quality Certification (STQC) Laboratory or any other agency notified by MeitY from time to time for testing the CCTVs as per the Essential Requirement(s) notified under the PPO for CCTV.
- v) **Network Security:** The general cyber security practices for installation and monitoring should be also be adopted. Maintain the network isolation (Air-Gap) from the public network to minimize the risk of unauthorized access and potential cyberattacks. Wherever, air gap is not possible, Network segmentation, secure tunnel/Virtual Private Network (VPN) /Dedicated Lease Line etc. should be used for restricting access to CCTV systems and isolate them from critical infrastructure and sensitive data. Use MAC address binding to prevent the unauthorized access by unidentified devices.
- vi) **Secure Physical Access:** Restrict physical access to the CCTV control room and equipment. Only authorized personnel should have access to the system. Use locks, access control systems, and surveillance measures to protect the equipment.
- vii) **Strong Passwords:** Change default passwords immediately upon installation and use strong, unique passwords for all cameras, recorders, and access points. Avoid using easily guessable information or common words.
- viii) **Regular Firmware Updates:** Manufacturers often release updates that address security vulnerabilities. Regularly check for updates and apply them promptly keeps the firmware and software of your CCTV devices up to date.
- ix) **Encryption of Data:** Ensure all communication between cameras, recorders, and viewing devices is encrypted. This prevents unauthorized individuals from intercepting and accessing sensitive information.
- x) **Disable Unused Features:** Turn off or disable any features and services that are not necessary for the proper functioning of the CCTV system. Each enabled feature potentially introduces another security vulnerability.
- xi) **Secure Remote Access:** If remote access is required for maintenance or monitoring, implement a secure VPN (Virtual Private Network) for remote connections. Avoid exposing the system directly to the internet whenever possible. IPBEUs (IP-Based Encryption Unit) to safeguard data transmission between cameras and recording devices, Lease Line for dedicated and secure

- network connectivity and Implementation of data diodes to ensure unidirectional flow of information, enhancing security.
- xii) **Regular Auditing and Monitoring:** Monitor the CCTV system logs for unusual activities and potential security breaches. Regularly audit the system to ensure that everything is functioning correctly and there are no unauthorized access attempts.
 - xiii) **Physical Camera Security:** Position cameras in a way that prevents tampering and vandalism. Use vandal-resistant camera housings and install them in high and secure locations where they are less likely to be tampered with.
 - xiv) **User Access Control:** Implement a strict access control policy to limit the number of individuals who can access the CCTV system and its data. Assign different levels of access based on roles and responsibilities.
 - xv) **Data Storage and Retention:** Ensure proper data storage and retention policies are in place. Securely store recordings and define how long data should be retained before it gets automatically deleted. Data Storage should be in terms of storage duration (number of Days) based on operational requirements rather than storage capacity. The data storage of all CCTVs installed at Government Establishment/Public Places should be mandated to be within the India even if it is stored in cloud platforms.
 - xvi) **Staff Training:** Provide comprehensive training to employees and system administrators on security best practices. Make sure they understand the potential risks and how to mitigate them effectively.
 - xvii) **Regular Security Assessments:** Conduct periodic security assessments and penetration tests to identify vulnerabilities and weaknesses in the CCTV system. Address any issues discovered promptly.
 - xviii) **Tender/RFP** should encompass both Hardware and Software parts of the Bill of Materials (BoM) combined presenting comprehensive specifications for these components to facilitate the interoperability of the HW/SW as a whole in the VSs system. Model Technical Specifications/Guidelines for CCTVs/VSS issued by MHA from time to time, should be adopted while formulating the technical specifications for procurement of CCTV/VSS.
 - xix) **CCTV Device testing and certification:** CCTV Cameras (Analog/ IP/ Analog Speed Dome/ IP Speed Dome) should comply with the Essential Requirements (ERs) notified as part of the PPO for CCTV in Gazette of India (EXTRAORDINARY, PART II—Section 3—Sub-section (ii) dated 7th March,

2024, at Sr. No. No. 1062) to ensure the security of the VSS / CCTV systems, as amended from time to time. The security testing certificate for CCTV/VSS to be issued by Standardisation Testing and Quality Certification (STQC) Laboratory or any other agency notified by MeitY from time to time. The validity of the test report issued by STQC Lab will be three years from the date of issue of the report.

5. In this regard, the Government Ministries, Departments are advised to instruct the Chief Information Security Officers (CISOs) of their respective organizations and subordinate organizations for enforcing the above measures to address the security threats of the CCTV network vulnerability and to ensure the overall security and integrity of CCTV/Video Surveillance Systems.

=====*****=====

Annexure-08

To,
NTPC Limited Noida

TO WHOMSOEVER IT MAY CONCERN

Sub: Support for Installed System at Various Location at NTPC Plants

As per Lifecycle policy of Yokogawa, we have Two Phases in Lifecycle:

- a) Standard Sales Phase
- b) Maintenance Phase

The Hardware is supported for at least 10 Years in the maintenance phase

While in Standard Sales Phase the Hardware is supplied for all NEW Projects and / or expansion projects while in Maintenance phase initially it is provided for expansion projects and later only for maintenance purpose

The Hardware (CENTUM VP) Supplied at NTPC except controllers for Barh - Offsites is in Standard Sales Phase

Please note as WINDOWS 7 Support is not available from Microsoft, CENTUM VP Licensed Software version is also changed to be compatible to WINDOWS 10. The earlier version of CENTUM VP Software compatible to WINDOWS 7 is obsolete.

The Workstation, Server, network Switches compatible to WINDOWS 7 are also obsolete and are not available.

The Same will not be available for following Projects

1. Kudgi STPP- 1 , 3x 800 MW
2. Lara STPP- 1 , 2x 800 MW
3. NTPC Barh STPP-I, 3 x 660 MW
4. BRBCL- 4 x 250 MW
5. NTPC Talcher, Kaniya- 2 x 500 MW
6. NTPC Vindychal-V, 1 x 500 MW

Further:

Support Availability -for Windows 10 and Windows Server 2019 along with Control System:

Support for the Supplied control system will be available for next 10 years from year 2022 after Upgradation of HMI , when read in conjunction with following:

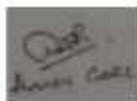
- Windows 10 LTSC Version Support will be available till 2029 (as per Microsoft)
- Windows Server 2019 will be available till 2029 (as per Microsoft)
- In ONLY BARH SSTPP- offsites section the support for supplied controller will be available till 2025

With the Operating System and CENTUM VP System Software Upgrade - application Software and the NEW CENTUM VP System Software will work seamlessly

We endeavor to provide unstinted Services and envisage to have continued relation with your esteemed organization

Thanking you and assuring you best of attention at all times Yours
sincerely

For Yokogawa India Limited



Avnish Garg

AVP- System Sales



To,
NTPC Limited
Kudgi Super Thermal Power Station
Bijapur, Karnataka – 586216

Annexure-09

Dear Sir,

We would like to inform you that existing Schneider Electric's SCADA system installed in your plant is running on Windows XP Operating System. Microsoft has communicated commonly that they will no longer provide security updates or technical support for the Windows XP operating system. Therefore, it is critical to migrate now to a modern operating system and as such existing Windows XP needs to be upgraded to Windows 10.

Accordingly, existing Schneider Electric's Vijeo Citect SCADA will also be upgraded to our Citect SCADA latest version to make it compatible with Windows 10.

Link for End of support declaration by Microsoft Corporation: <https://www.microsoft.com/en-in/microsoft-365/windows/end-of-windows-xp-support>

For, Schneider Electric Systems India Private Limited



Deepak Kumar
General Manager
Automation Solution & Service Sales
Process Automation
Mob: 9717361325

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited			
Name of the generating Station		Kudgi STPP-STAGE 01			
Month		April-2023			
SL	Particulars	Unit	COAL DOMESTIC (NTPC MINES)	COAL-DOMESTIC	COAL - IMPORTED
A)	OPENING QUANTITY				
1	Opening Stock of coal	MT	0.00	78327.99	89977.25
2	Value of Stock	Rs.	0.00	495738649.18	1283272277.16
B)	QUANTITY				
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	86224.14	427980.53	162641.00
3.01	- Qty Received (Pit Head)	MT	0.00	0.00	162641.00
3.02	- Qty Received (Non Pit Head)	MT	86224.14	427980.53	0.00
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	2801.26-	0.00	0.00
5	Coal supplied by Coal/Lignite Company (3+4)	MT	83422.88	427980.53	162641.00
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	689.79	3423.84	325.28
6.01	- Normative Loss (Pit Head)	MT	0.00	0.00	325.28
6.02	- Normative Loss (Non Pit Head)	MT	689.79	3423.84	0.00
7	Net Coal / Lignite supplied (5 - 6)	MT	82733.09	424556.69	162315.72
C)	PRICE				
8	Amount charged by the Coal / Lignite Company	Rs.	230962987.00	1413258098.00	2260901797.57
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	6766873.13-	0.00	0.00
10	Handling, Sampling and such other Similar charges	Rs.	2306935.89	526806378.39	0.00
11	Total Amount charged (8 +9+10)	Rs.	226503049.76	1940064476.39	2260901797.57
D)	TRANSPORTATION				
12	Transportation charges by Rail / Ship / Road Transport	Rs.	265957447.00	822902199.00	0.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00	0.00	0.00
14	Demurrage charges, if any	Rs.	0.00	834577.00	0.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00	0.00	0.00
16	Total transportation charges (12+/- 13 - 14 + 15)	Rs.	265957447.00	822067622.00	0.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	492460496.76	2762132098.39	2260901797.57
E)	TOTAL COST				
18	Landed Cost of Coal/Lignite (2+17) / (1+7)	Rs./MT	5952.40	6478.37	14047.85
19	Blending Ratio (Domestic/Imported)	%	5.00	68.95	26.05
20	Weighted average cost of Coal /Lignite (Including biomass)	Rs./MT	8423.65		
20.10	Weighted average cost of Coal /Lignite (Excluding biomass)	Rs./MT	8423.65	8423.65	8423.65
F)	QUALITY				
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	0	3559	0
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4601	3603	0
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0	0	5000
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0	0	5000
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	4012		
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	4012	4012	4012
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	0	3176	0
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3554	3019	0
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0	0	4973
29	GCV of Imported coal supplied as received at station	kCal/Kg	0	0	5013
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3578		
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3578	3578	3578

Submitted On :28.08.2023

Rahul Kumar, Sr. Manager (Fin), NTPC Ltd.
Digitally signed by Rahul Kumar, Sr. Manager (Fin), NTPC Ltd. Date: 2024.05.28 12:25:58 +05'30'

As per our report of even date
For M/s Goyal Parul and Co.
Chartered Accountants
FRN: 016750N

Digitally signed by SANCHIT AGRAWAL
Date: 2024.08.23
14:43:41 +05'30'

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

Kudgi Super Thermal Power Station (Stage 01)

S.No.	Particulars	Unit	April-2023
			LDO
A)	OPENING QUANTITY		
1	OPENING QUANTITY OF OIL	(KL)	3832.83
2	VALUE OF STOCK		32,90,13,903.56
B)	QUANTITY		
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)	-
C)	PRICE		
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.)	-
D)	TRANSPORTAION		
12	TRANSPORTATION CHARGES BY RAIL/ROAD/SHIP	(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 TRANSPORTING 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.)	-
E)	TOTAL COST		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	85841.10
19	BLENDED RATIO(/IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	85841.10
F)	QUALITY		
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)	9361

As per our report of even date
For M/s Goyal Parul and Co.
Chartered Accountants
FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL
Date: 2024.08.23
14:44:14 +05'30'

Rahul
Kumar, Sr.
Manager
(Fin), NTPC
Ltd.

Digitally signed
by Rahul Kumar,
Sr. Manager
(Fin), NTPC Ltd.
Date: 2024.05.28
12:26:23 +05'30'

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited			
Name of the generating Station		Kudgi STPP-STAGE 01			
Month		May-2023			
SL	Particulars	Unit	COAL DOMESTIC (NTPC MINES)	COAL-DOMESTIC	COAL - IMPORTED
A)	OPENING QUANTITY				
1	Opening Stock of coal	MT	48973.79	37326.78	76432.87
2	Value of Stock	Rs.	291511605.68	241816277.18	1073717592.65
B)	QUANTITY				
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	211111.35	345201.42	137599.60
3.01	- Qty Received (Pit Head)	MT	0.00	0.00	137599.60
3.02	- Qty Received (Non Pit Head)	MT	211111.35	345201.42	0.00
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	4148.27-	0.00	0.00
5	Coal supplied by Coal/Lignite Company (3+4)	MT	206963.08	345201.42	137599.60
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	1688.89	2761.61	275.20
6.01	- Normative Loss (Pit Head)	MT	0.00	0.00	275.20
6.02	- Normative Loss (Non Pit Head)	MT	1688.89	2761.61	0.00
7	Net Coal / Lignite supplied (5 - 6)	MT	205274.19	342439.81	137324.40
C)	PRICE				
8	Amount charged by the Coal / Lignite Company	Rs.	580284145.00	1121198095.22	1899803445.74
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	10016470.60-	0.00	0.00
10	Handling, Sampling and such other Similar charges	Rs.	3629426.75	272635179.42	357156054.50-
11	Total Amount charged (8 +9+10)	Rs.	573897101.15	1393833274.64	1542647391.24
D)	TRANSPORTATION				
12	Transportation charges by Rail / Ship / Road Transport	Rs.	637211655.00	644436341.00	0.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00	0.00	0.00
14	Demurrage charges, if any	Rs.	0.00	823195.00	0.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00	0.00	0.00
16	Total transportation charges (12+/- 13 - 14 + 15)	Rs.	637211655.00	643613146.00	0.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	1211108756.15	2037446420.64	1542647391.24
E)	TOTAL COST				
18	Landed Cost of Coal/Lignite (2+17) / (1+7)	Rs./MT	5910.06	6001.75	12239.89
19	Blending Ratio (Domestic/Imported)	%	24.19	56.81	19.00
20	Weighted average cost of Coal /Lignite (Including biomass)	Rs./MT	7164.84		
20.10	Weighted average cost of Coal /Lignite (Excluding biomass)	Rs./MT	7164.84	7164.84	7164.84
F)	QUALITY				
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4601	3596	0
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4601	3531	0
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0	0	5000
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0	0	5000
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	4073		
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	4073	4073	4073
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3554	3043	0
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3494	3042	0
28	GCV of imported coal of the Opening stock as received at station	kCal/Kg	0	0	4999
29	GCV of imported coal supplied as received at station	kCal/Kg	0	0	5020
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3529		
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3529	3529	3529

Submitted On :26.09.2023

As per our report of even date
For M/s Goyal Parul and Co.,
Chartered Accountants
FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL
Date: 2024.08.23
14:44:37 +05'30'

Rahul
Kumar, Sr.
Manager
(Fin), NTPC
Ltd.
Digitally signed
by Rahul Kumar,
Sr. Manager
(Fin), NTPC Ltd.
Date: 2024.05.28
12:28:41 +05'30'

DETAILS OF SOURCE WISE FUEL FOR COMPUTATION OF ENERGY CHARGES

PART 1
FORM-15

NAME OF THE PETITIONER
NAME OF THE GENERATING STATION

NTPC Limited
Kudgi Super Thermal Power Station (Stage 01)

S.No.	Particulars	Unit	May-2023
			LDO
A)	OPENING QUANTITY		
1	OPENING QUANTITY OF OIL	(KL)	3710.33
2	VALUE OF STOCK		31,84,98,369.10
B)	QUANTITY		
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)	-
C)	PRICE		
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.)	-
D)	TRANSPORTAION		
12	TRANSPORTATION CHARGES BY RAIL/ROAD/SHIP	(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.)	-
E)	TOTAL COST		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	85841.10
19	BLENDING RATIO(/IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	85841.10
F)	QUALITY		
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)	9361

As per our report of even date
For M/s Goyal Parul and Co.
Chartered Accountants
FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL
Date: 2024.08.23 14:44:59
+05'30'

Digitally signed
by Rahul Kumar,
Sr. Manager
(Fin), NTPC
Ltd.
Date: 2024.05.28
12:26:56 +05'30'

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited			
Name of the generating Station		Kudgi STPP-STAGE 01			
Month		June-2023			
SL	Particulars	Unit	COAL DOMESTIC (NTPC MINES)	COAL-DOMESTIC	COAL - IMPORTED
A)	OPENING QUANTITY				
1	Opening Stock of coal	MT	97061.58	10679.79	90307.17
2	Value of Stock	Rs.	573639621.02	64097472.27	1105349586.30
B)	QUANTITY				
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	124948.73	407801.00	48345.60
3.01	- Qty Received (Pit Head)	MT	0.00	0.00	48345.60
3.02	- Qty Received (Non Pit Head)	MT	124948.73	407801.00	0.00
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	1596.41-	0.00	0.00
5	Coal supplied by Coal/Lignite Company (3+4)	MT	123352.32	407801.00	48345.60
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	999.59	3262.41	96.69
6.01	- Normative Loss (Pit Head)	MT	0.00	0.00	96.69
6.02	- Normative Loss (Non Pit Head)	MT	999.59	3262.41	0.00
7	Net Coal / Lignite supplied (5 - 6)	MT	122352.73	404538.59	48248.91
C)	PRICE				
8	Amount charged by the Coal / Lignite Company	Rs.	348449450.00	1711381820.78	666264574.44
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	4017780.00-	0.00	0.00
10	Handling, Sampling and such other Similar charges	Rs.	9806777.98	274387092.14	0.15-
11	Total Amount charged (8 +9+10)	Rs.	354238447.98	1985768912.92	666264574.29
D)	TRANSPORTATION				
12	Transportation charges by Rail / Ship / Road Transport	Rs.	379392731.40	713522879.60	0.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00	0.00	0.00
14	Demurrage charges, if any	Rs.	656097.40	2169048.60	0.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00	0.00	0.00
16	Total transportation charges (12+/- 13 - 14 + 15)	Rs.	378736634.00	711353831.00	0.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	732975081.98	2697122743.92	666264574.29
E)	TOTAL COST				
18	Landed Cost of Coal/Lignite (2+17) / (1+7)	Rs./MT	5955.01	6650.04	12786.26
19	Blending Ratio (Domestic/Imported)	%	26.30	57.70	16.00
20	Weighted average cost of Coal /Lignite (Including biomass)	Rs./MT	7448.88		
20.10	Weighted average cost of Coal /Lignite (Excluding biomass)	Rs./MT	7448.88	7448.88	7448.88
F)	QUALITY				
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4601	3538	0
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4601	3752	0
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0	0	5000
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0	0	5000
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	4171		
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	4171	4171	4171
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3505	3042	0
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3453	3119	0
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0	0	5012
29	GCV of Imported coal supplied as received at station	kCal/Kg	0	0	4915
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3509		
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3509	3509	3509

Submitted On :26.10.2023

As per our report of even date
For M/s Goyal Parul and Co.
Chartered Accountants
FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL
Date: 2024.08.23
14:45:11 +05'30'

Rahul Kumar, Sr. Manager (Fin), NTPC Ltd.
Digitally signed by Rahul Kumar, Sr. Manager (Fin), NTPC Ltd. Date: 2024.08.23 12:27:11 +05'30'

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

Kudgi Super Thermal Power Station (Stage 01)

S.No.	Particulars	Unit	June-2023
			LDO
A)	OPENING QUANTITY		
1	OPENING QUANTITY OF OIL	(KL)	3118.03
2	VALUE OF STOCK		26,76,54,687.14
B)	QUANTITY		
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)	-
C)	PRICE		
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.)	-
D)	TRANSPORTAION		
12	TRANSPORTATION CHARGES BY RAIL/ROAD/SHIP	(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 TRANSPORTING 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.)	-
E)	TOTAL COST		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	85841.10
19	BLENDING RATIO(/IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	85841.10
F)	QUALITY		
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)	9361

As per our report of even date

For M/s Goyal Parul and Co.

Chartered Accountants

FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL

Date: 2024.08.23
14:45:26 +05'30

Digitally signed
by Rahul Kumar,
Sr. Manager (Fin),
NTPC Ltd.
Date: 2024.05.28
12:27:24 +05'30

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited			
Name of the generating Station		Kudgi STPP-STAGE 01			
Month		July-2023			
SL	Particulars	Unit	COAL DOMESTIC (NTPC MINES)	COAL-DOMESTIC	COAL - IMPORTED
A)	OPENING QUANTITY				
1	Opening Stock of coal	MT	44656.67	31790.02	32256.08
2	Value of Stock	Rs.	265931034.47	211405134.77	412434616.29
B)	QUANTITY				
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	89090.54	433879.42	178.00
3.01	- Qty Received (Pit Head)	MT	0.00	0.00	178.00
3.02	- Qty Received (Non Pit Head)	MT	89090.54	433879.42	0.00
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	0.00	0.00	0.00
5	Coal supplied by Coal/Lignite Company (3+4)	MT	89090.54	433879.42	178.00
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	712.72	3471.04	0.36
6.01	- Normative Loss (Pit Head)	MT	0.00	0.00	0.36
6.02	- Normative Loss (Non Pit Head)	MT	712.72	3471.04	0.00
7	Net Coal / Lignite supplied (5 - 6)	MT	88377.82	430408.38	177.64
C)	PRICE				
8	Amount charged by the Coal / Lignite Company	Rs.	287017970.00	1554807825.40	2593268.87
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	0.00	33193388.34	0.00
10	Handling, Sampling and such other Similar charges	Rs.	1351920.08	271013629.41	0.00
11	Total Amount charged (8 +9+10)	Rs.	288369890.08	1859014843.15	2593268.87
D)	TRANSPORTATION				
12	Transportation charges by Rail / Ship / Road Transport	Rs.	235281376.00	855162303.60	0.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00	0.00	0.00
14	Demurrage charges, if any	Rs.	407236.00	1983281.00	0.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00	0.00	0.00
16	Total transportation charges (12+/- 13 - 14 + 15)	Rs.	234874140.00	853179022.60	0.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	523244030.08	2712193865.75	2593268.87
E)	TOTAL COST				
18	Landed Cost of Coal/Lignite (2+17) / (1+7)	Rs./MT	5932.11	6325.42	12796.19
19	Blending Ratio (Domestic/Imported)	%	10.32	83.00	6.68
20	Weighted average cost of Coal /Lignite (Including biomass)	Rs./MT	6716.89		
20.10	Weighted average cost of Coal /Lignite (Excluding biomass)	Rs./MT	6716.89	6716.89	6716.89
F)	QUALITY				
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4601	3746	0
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4601	3613	0
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0	0	5000
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0	0	5000
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	3815		
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	3815	3815	3815
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3476	3117	0
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3223	2995	0
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0	0	4978
29	GCV of Imported coal supplied as received at station	kCal/Kg	0	0	4250
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3166		
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3166	3166	3166

Submitted On :26.10.2023

As per our report of even date
For M/s Goyal Parul and Co.
Chartered Accountants
FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL
Date: 2024.08.23
14:45:40 +05'30'

Rahul
Kumar, Sr.
Manager
(Fin),
NTPC Ltd.
Digitally signed by Rahul Kumar, Sr. Manager (Fin), NTPC Ltd. Date: 2024.08.23 12:27:37 +05'30'

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

Kudgi Super Thermal Power Station (Stage 01)

S.No.	Particulars	Unit	July-2023
			LDO
A)	OPENING QUANTITY		
1	OPENING QUANTITY OF OIL	(KL)	2812.03
2	VALUE OF STOCK		24,13,87,311.43
B)	QUANTITY		
3	QUANTITY OF OIL SUPPLIED BY OIL/LIGNIE COMPANY	(KL)	2526.03
4	ADJUSTMENT (+/-) IN QUANTITY SUPPLIED MADE BY OIL COMPANY	(KL)	
5	OIL SUPPLIED BY OIL COMPANY(3+4)	(KL)	2526.03
6	NORMATIVE TRANSIT & HANDLING LOSSES (FOR OIL BASED PROJECTS)	(KL)	
7	NET OIL SUPPLIED (5-6)	(KL)	2526.03
C)	PRICE		
8	AMOUNT CHARGED BY OIL COMPANY	(Rs.)	17,68,91,390.00
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.)	17,68,91,390.00
D)	TRANSPORTAION		
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.)	17,68,91,390.00
E)	TOTAL COST		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	78357.89
19	BLENDING RATIO(/IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	78357.89
F)	QUALITY		
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)	9384

As per our report of even date
For M/s Goyal Parul and Co.
Chartered Accountants
FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL
Date: 2024.08.23
14:45:56 +05'30'

Digitally signed
by Rahul Kumar,
Sr. Manager (Fin),
NTPC Ltd.
Date: 2024.05.28
12:27:49 +05'30'

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited			
Name of the generating Station		Kudgi STPP-STAGE 01			
Month		August-2023			
SL	Particulars	Unit	COAL DOMESTIC (NTPC MINES)	COAL-DOMESTIC	COAL - IMPORTED
A)	OPENING QUANTITY				
1	Opening Stock of coal	MT	79883.95	34842.90	0.00
2	Value of Stock	Rs.	473880327.18	220395973.71	0.00
B)	QUANTITY				
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	82070.85	512032.17	66487.48
3.01	- Qty Received (Pit Head)	MT	0.00	0.00	66487.48
3.02	- Qty Received (Non Pit Head)	MT	82070.85	512032.17	0.00
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	3014.68-	0.00	0.00
5	Coal supplied by Coal/Lignite Company (3+4)	MT	79056.17	512032.17	66487.48
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	656.57	4096.26	132.98
6.01	- Normative Loss (Pit Head)	MT	0.00	0.00	132.98
6.02	- Normative Loss (Non Pit Head)	MT	656.57	4096.26	0.00
7	Net Coal / Lignite supplied (5 - 6)	MT	78399.60	507935.91	66354.50
C)	PRICE				
8	Amount charged by the Coal / Lignite Company	Rs.	231830441.00	1656640235.00	882483572.17
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	7548892.00-	0.00	0.00
10	Handling, Sampling and such other Similar charges	Rs.	1399255.01	595652011.24	0.19-
11	Total Amount charged (8 +9+10)	Rs.	225680804.01	2252292246.24	882483571.98
D)	TRANSPORTATION				
12	Transportation charges by Rail / Ship / Road Transport	Rs.	245277302.00	954436413.00	0.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00	0.00	0.00
14	Demurrage charges, if any	Rs.	647378.00	4192946.00	0.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00	0.00	0.00
16	Total transportation charges (12+/- 13 - 14 + 15)	Rs.	244629924.00	950243467.00	0.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	470310728.01	3202535713.24	882483571.98
E)	TOTAL COST				
18	Landed Cost of Coal/Lignite (2+17) / (1+7)	Rs./MT	5965.19	6306.31	13299.53
19	Blending Ratio (Domestic/Imported)	%	20.40	73.66	5.94
20	Weighted average cost of Coal /Lignite (Including biomass)	Rs./MT	6652.15		
20.10	Weighted average cost of Coal /Lignite (Excluding biomass)	Rs./MT	6652.15	6652.15	6652.15
F)	QUALITY				
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4601	3624	0
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4601	3428	0
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0	0	0
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0	0	5000
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	3770		
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	3770	3770	3770
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3307	3003	0
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3177	3147	0
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0	0	0
29	GCV of Imported coal supplied as received at station	kCal/Kg	0	0	4851
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3261		
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3261	3261	3261

Submitted On :24.11.2023

As per our report of even date
For M/s Goyal Parul and Co.
Chartered Accountants
FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL
Date: 2024.08.23
14:46:10 +05'30'

Rahul Kumar, Sr. Manager (Fin), NTPC Ltd. Digitally signed by Rahul Kumar, Sr. Manager (Fin), NTPC Ltd. Date: 2024.08.23 12:28:02 +05'30'

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

Kudgi Super Thermal Power Station (Stage 01)

S.No.	Particulars	Unit	August-2023
			LDO
A)	OPENING QUANTITY		
1	OPENING QUANTITY OF OIL	(KL)	4398.06
2	VALUE OF STOCK		34,46,22,289.30
B)	QUANTITY		
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)	-
C)	PRICE		
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.)	-
D)	TRANSPORTAION		
12	TRANSPORTATION CHARGES BY RAIL/ROAD/SHIP	(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.)	-
E)	TOTAL COST		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	78357.89
19	BLENDING RATIO(/IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	78357.89
F)	QUALITY		
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)	9384

As per our report of even date

For M/s Goyal Parul and Co.

Chartered Accountants

FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL

Date: 2024.08.23
14:46:26 +05'30'

Digitally signed
by Rahul Kumar,
Sr. Manager
(Fin), NTPC
Ltd.
Date: 2024.08.28
12:28:18 +05'30'

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited			
Name of the generating Station		Kudgi STPP-STAGE 01			
Month		September-2023			
SL	Particulars	Unit	COAL DOMESTIC (NTPC MINES)	COAL-DOMESTIC	COAL - IMPORTED
A)	OPENING QUANTITY				
1	Opening Stock of coal	MT	10289.56	8314.82	23254.51
2	Value of Stock	Rs.	61379170.31	52436019.11	309273915.18
B)	QUANTITY				
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	106183.53	683912.54	77114.15
3.01	- Qty Received (Pit Head)	MT	0.00	0.00	77114.15
3.02	- Qty Received (Non Pit Head)	MT	106183.53	683912.54	0.00
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	2587.63-	0.00	0.00
5	Coal supplied by Coal/Lignite Company (3+4)	MT	103595.90	683912.54	77114.15
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	849.47	5471.30	154.23
6.01	- Normative Loss (Pit Head)	MT	0.00	0.00	154.23
6.02	- Normative Loss (Non Pit Head)	MT	849.47	5471.30	0.00
7	Net Coal / Lignite supplied (5 - 6)	MT	102746.43	678441.24	76959.92
C)	PRICE				
8	Amount charged by the Coal / Lignite Company	Rs.	331495186.00	2287972375.00	975034214.96
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	6486414.00-	1231261.00-	0.00
10	Handling, Sampling and such other Similar charges	Rs.	1548573.35	1087640865.71	0.20-
11	Total Amount charged (8 +9+10)	Rs.	326557345.35	3374381979.71	975034214.76
D)	TRANSPORTATION				
12	Transportation charges by Rail / Ship / Road Transport	Rs.	293138980.00	1239370870.00	0.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00	0.00	0.00
14	Demurrage charges, if any	Rs.	435689.00	2876304.00	0.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00	0.00	0.00
16	Total transportation charges (12+/- 13 - 14 + 15)	Rs.	292703291.00	1236494566.00	0.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	619260636.35	4610876545.71	975034214.76
E)	TOTAL COST				
18	Landed Cost of Coal/Lignite (2+17) / (1+7)	Rs./MT	6021.44	6790.35	12815.60
19	Blending Ratio (Domestic/Imported)	%	7.68	78.82	13.50
20	Weighted average cost of Coal /Lignite (Including biomass)	Rs./MT	7544.98		
20.10	Weighted average cost of Coal /Lignite (Excluding biomass)	Rs./MT	7544.98	7544.98	7544.98
F)	QUALITY				
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4601	3441	0
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4601	3603	0
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0	0	5000
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0	0	5000
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	3867		
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	3867	3867	3867
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3241	3138	0
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3601	3274	0
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0	0	4851
29	GCV of Imported coal supplied as received at station	kCal/Kg	0	0	4904
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3514		
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3514	3514	3514

Submitted On :22.02.2024

As per our report of even date
For M/s Goyal Parul and Co.,
Chartered Accountants
FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL
Date: 2024.08.23
14:46:42 +05'30'

Digitally signed
by Rahul Kumar,
Sr. Manager (Fin),
NTPC Ltd.
Date: 2024.05.28
12:28:32 +05'30'

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

Kudgi Super Thermal Power Station (Stage 01)

S.No.	Particulars	Unit	September-2023
			LDO
A)	OPENING QUANTITY		
1	OPENING QUANTITY OF OIL	(KL)	3594.06
2	VALUE OF STOCK		28,16,22,549.53
B)	QUANTITY		
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)	-
C)	PRICE		
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.)	-
D)	TRANSPORTAION		
12	TRANSPORTATION CHARGES BY RAIL/ROAD/SHIP	(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.)	-
E)	TOTAL COST		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	78357.89
19	BLENDING RATIO(/IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	78357.89
F)	QUALITY		
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)	9384

As per our report of even date

For M/s Goyal Parul and Co.

Chartered Accountants

FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL

Date: 2024.08.23 14:46:59

+05'30'

351

Digitally signed
by Rehul Kumar,
Sr. Manager
(Fin), NTPC
Ltd.
Date: 2024.08.28
12:08:46 +05'30'

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited			
Name of the generating Station		Kudgi STPP-STAGE 01			
Month		October-2023			
SL	Particulars	Unit	COAL DOMESTIC (NTPC MINES)	COAL-DOMESTIC	COAL - IMPORTED
A)	OPENING QUANTITY				
1	Opening Stock of coal	MT	63964.76	183071.29	13914.43
2	Value of Stock	Rs.	385160192.28	1243117694.22	178321763.64
B)	QUANTITY				
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	19862.77	504272.16	48241.20
3.01	- Qty Received (Pit Head)	MT	0.00	0.00	48241.20
3.02	- Qty Received (Non Pit Head)	MT	19862.77	504272.16	0.00
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	2401.86-	0.00	0.00
5	Coal supplied by Coal/Lignite Company (3+4)	MT	17460.91	504272.16	48241.20
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	158.90	4034.18	96.48
6.01	- Normative Loss (Pit Head)	MT	0.00	0.00	96.48
6.02	- Normative Loss (Non Pit Head)	MT	158.90	4034.18	0.00
7	Net Coal / Lignite supplied (5 - 6)	MT	17302.01	500237.98	48144.72
C)	PRICE				
8	Amount charged by the Coal / Lignite Company	Rs.	50053764.00	1536402953.00	589352148.92
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	6017591.90-	0.00	60996566.00-
10	Handling, Sampling and such other Similar charges	Rs.	278043.26	722228516.67	0.00
11	Total Amount charged (8 +9+10)	Rs.	44314215.36	2258631469.67	528355582.92
D)	TRANSPORTATION				
12	Transportation charges by Rail / Ship / Road Transport	Rs.	65890254.00	997547781.00	0.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00	0.00	0.00
14	Demurrage charges, if any	Rs.	90984.00	2627621.00	0.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00	0.00	0.00
16	Total transportation charges (12+/- 13 - 14 + 15)	Rs.	65799270.00	994920160.00	0.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	110113485.36	3253551629.67	528355582.92
E)	TOTAL COST				
18	Landed Cost of Coal/Lignite (2+17) / (1+7)	Rs./MT	6094.42	6580.72	11387.16
19	Blending Ratio (Domestic/Imported)	%	9.54	82.62	7.85
20	Weighted average cost of Coal /Lignite (Including biomass)	Rs./MT	6911.40		
20.10	Weighted average cost of Coal /Lignite (Excluding biomass)	Rs./MT	6911.40	6911.40	6911.40
F)	QUALITY				
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4601	3600	0
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4601	3570	0
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0	0	5000
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0	0	5000
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	3787		
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	3787	3787	3787
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3569	3272	0
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3602	3087	0
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0	0	4892
29	GCV of Imported coal supplied as received at station	kCal/Kg	0	0	5005
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3323		
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3323	3323	3323

Submitted On :22.02.2024

As per our report of even date
For M/s Goyal Parul and Co.
Chartered Accountants
FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL
Date: 2024.08.23
14:47:14 +05'30'

Rahul Kumar, Sr. Manager (Fin), NTPC Ltd.
Digitally signed by Rahul Kumar, Sr. Manager (Fin), NTPC Ltd. Date: 2024.05.28 12:28:59 +05'30'

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

Kudgi Super Thermal Power Station (Stage 01)

S.No.	Particulars	Unit	October-2023
			LDO
A)	OPENING QUANTITY		
1	OPENING QUANTITY OF OIL	(KL)	3178.36
2	VALUE OF STOCK		24,90,49,176.56
B)	QUANTITY		
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)	-
C)	PRICE		
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.)	-
D)	TRANSPORTAION		
12	TRANSPORTATION CHARGES BY RAIL/ROAD/SHIP	(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.)	-
E)	TOTAL COST		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	78357.89
19	BLENDING RATIO(/IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	78357.89
F)	QUALITY		
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)	9384

As per our report of even date

For M/s Goyal Parul and Co.

Chartered Accountants

FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL

Date: 2024.08.23

14:47:32 +05'30' 353

Digitally signed by
Rahul Kumar,
Sr. Manager (Fin),
NTPC Ltd.
Date: 2024.08.28
12:29:51 +05'30'

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited			
Name of the generating Station		Kudgi STPP-STAGE 01			
Month		November-2023			
SL	Particulars	Unit	COAL DOMESTIC (NTPC MINES)	COAL-DOMESTIC	COAL - IMPORTED
A)	OPENING QUANTITY				
1	Opening Stock of coal	MT	6420.47	35073.57	504.15
2	Value of Stock	Rs.	39128964.84	230809743.48	5740774.32
B)	QUANTITY				
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	91722.60	536860.03	92457.20
3.01	- Qty Received (Pit Head)	MT	0.00	0.00	92457.20
3.02	- Qty Received (Non Pit Head)	MT	91722.60	536860.03	0.00
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	1917.61-	0.00	0.00
5	Coal supplied by Coal/Lignite Company (3+4)	MT	89804.99	536860.03	92457.20
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	733.78	4294.88	184.91
6.01	- Normative Loss (Pit Head)	MT	0.00	0.00	184.91
6.02	- Normative Loss (Non Pit Head)	MT	733.78	4294.88	0.00
7	Net Coal / Lignite supplied (5 - 6)	MT	89071.21	532565.15	92272.29
C)	PRICE				
8	Amount charged by the Coal / Lignite Company	Rs.	230849550.00	1750422215.80	1072047886.02
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	4807920.47-	0.00	0.00
10	Handling, Sampling and such other Similar charges	Rs.	819122.11	536474248.65	0.00
11	Total Amount charged (8 +9+10)	Rs.	226860751.64	2286896464.45	1072047886.02
D)	TRANSPORTATION				
12	Transportation charges by Rail / Ship / Road Transport	Rs.	300864775.00	1085552435.70	0.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00	0.00	0.00
14	Demurrage charges, if any	Rs.	150660.00	900658.00	0.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00	0.00	0.00
16	Total transportation charges (12+/- 13 - 14 + 15)	Rs.	300714115.00	1084651777.70	0.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	527574866.64	3371548242.15	1072047886.02
E)	TOTAL COST				
18	Landed Cost of Coal/Lignite (2+17) / (1+7)	Rs./MT	5934.59	6346.22	11617.05
19	Blending Ratio (Domestic/Imported)	%	10.80	79.20	10.00
20	Weighted average cost of Coal /Lignite (Including biomass)	Rs./MT	6828.82		
20.10	Weighted average cost of Coal /Lignite (Excluding biomass)	Rs./MT	6828.82	6828.82	6828.82
F)	QUALITY				
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4601	3574	0
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4601	3479	0
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0	0	5000
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0	0	5000
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	3757		
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	3757	3757	3757
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3600	3148	0
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3600	2914	0
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0	0	5006
29	GCV of Imported coal supplied as received at station	kCal/Kg	0	0	4797
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3188		
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3188	3188	3188

Submitted On :10.01.2024

As per our report of even date
For M/s Goyal Parul and Co.
Chartered Accountants
FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL
Date: 2024.08.23
14:47:49 +05'30'

Rahul Kumar, Digitally signed
Sr. Manager (Fin), NTPC Ltd.
(Fin), NTPC Ltd.
Date: 2024.05.28
12:29:25 +05'30'

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

Kudgi Super Thermal Power Station (Stage 01)

S.No.	Particulars	Unit	November-2023
			LDO
A)	OPENING QUANTITY		
1	OPENING QUANTITY OF OIL	(KL)	2509.36
2	VALUE OF STOCK		19,66,27,751.24
B)	QUANTITY		
3	QUANTITY OF OIL SUPPLIED BY OIL/LIGNIE COMPANY	(KL)	2525.27
4	ADJUSTMENT (+/-)IN QUANTITY SUPPLIED MADE BY OIL COMPANY	(KL)	
5	OIL SUPPLIED BY OIL COMPANY(3+4)	(KL)	2525.27
6	NORMATIVE TRANSIT & HANDLING LOSSES (FOR OIL BASED PROJECTS)	(KL)	
7	NET OIL SUPPLIED (5-6)	(KL)	2525.27
C)	PRICE		
8	AMOUNT CHARGED BY OIL COMPANY	(Rs.)	21,51,29,941.00
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.)	21,51,29,941.00
D)	TRANSPORTAION		
12	TRANSPORTATION CHARGES BY RAIL/ROAD/SHIP	(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.)	21,51,29,941.00
E)	TOTAL COST		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	81785.18
19	BLENDING RATIO(/IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	81785.18
F)	QUALITY		
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)	9398

As per our report of even date

For M/s Goyal Parul and Co.

Chartered Accountants

FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL

Date: 2024.08.23
14:48:05 +05'30'

Rahul Kumar, Sr. Manager (Fin), NTPC Ltd. Digitally signed by Rahul Kumar, Sr. Manager (Fin), NTPC Ltd. Date: 2024.08.28 12:29:38 +05'30'

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited			
Name of the generating Station		Kudgi STPP-STAGE 01			
Month		December-2023			
SL	Particulars	Unit	COAL DOMESTIC (NTPC MINES)	COAL-DOMESTIC	COAL - IMPORTED
A)	OPENING QUANTITY				
1	Opening Stock of coal	MT	31195.67	96148.72	33246.43
2	Value of Stock	Rs.	185133497.14	610180603.79	386225554.53
B)	QUANTITY				
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	10890.93	650713.78	91050.89
3.01	- Qty Received (Pit Head)	MT	0.00	0.00	91050.89
3.02	- Qty Received (Non Pit Head)	MT	10890.93	650713.78	0.00
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	0.00	0.00	0.00
5	Coal supplied by Coal/Lignite Company (3+4)	MT	10890.93	650713.78	91050.89
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	87.13	5205.71	182.10
6.01	- Normative Loss (Pit Head)	MT	0.00	0.00	182.10
6.02	- Normative Loss (Non Pit Head)	MT	87.13	5205.71	0.00
7	Net Coal / Lignite supplied (5 - 6)	MT	10803.80	645508.07	90868.79
C)	PRICE				
8	Amount charged by the Coal / Lignite Company	Rs.	49921217.00	2273634581.20	1170266044.66
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	0.00	10043425.00-	0.00
10	Handling, Sampling and such other Similar charges	Rs.	249773.61	581953361.16	0.00
11	Total Amount charged (8 +9+10)	Rs.	50170990.61	2845544517.36	1170266044.66
D)	TRANSPORTATION				
12	Transportation charges by Rail / Ship / Road Transport	Rs.	13582993.00	1248847231.30	0.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00	0.00	0.00
14	Demurrage charges, if any	Rs.	38474.00-	2298771.00-	0.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00	0.00	0.00
16	Total transportation charges (12+/- 13 - 14 + 15)	Rs.	13621467.00	1251146002.30	0.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	63792457.61	4096690519.66	1170266044.66
E)	TOTAL COST				
18	Landed Cost of Coal/Lignite (2+17) / (1+7)	Rs./MT	5926.88	6346.43	12540.70
19	Blending Ratio (Domestic/Imported)	%	4.78	80.20	15.02
20	Weighted average cost of Coal /Lignite (Including biomass)	Rs./MT	7256.49		
20.10	Weighted average cost of Coal /Lignite (Excluding biomass)	Rs./MT	7256.49	7256.49	7256.49
F)	QUALITY				
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4601	3485	0
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4601	3592	0
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0	0	5000
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0	0	5000
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	3841		
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	3841	3841	3841
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3600	2928	0
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3356	2856	0
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0	0	4798
29	GCV of Imported coal supplied as received at station	kCal/Kg	0	0	4884
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3197		
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3197	3197	3197

Submitted On :10.01.2024

As per our report of even date
For M/s Goyal Parul and Co.
Chartered Accountants
FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL
Date: 2024.08.23
14:48:21 +05'30'

Rahul Kumar, Sr. Manager (Fin), NTPC Ltd.
Digitally signed by Rahul Kumar, Sr. Manager (Fin), NTPC Ltd.
Date: 2024.05.28 12:29:50 +05'30'

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

Kudgi Super Thermal Power Station (Stage 01)

S.No.	Particulars	Unit	December-2023
			LDO
A)	OPENING QUANTITY		
1	OPENING QUANTITY OF OIL	(KL)	3918.63
2	VALUE OF STOCK		31,94,99,051.76
B)	QUANTITY		
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)	-
C)	PRICE		
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.)	-
D)	TRANSPORTAION		
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.)	-
E)	TOTAL COST		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	81533.46
19	BLENDING RATIO/(IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	81533.46
F)	QUALITY		
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)	9398

As per our report of even date

For M/s Goyal Parul and Co.

Chartered Accountants

FRN: 016750N

Digitally signed by SANCHIT AGRAWAL

Date: 2024.08.23 14:48:42 +05'30'

357

Digitally signed by
Rahul Kumar,
Sr. Manager (Fin),
NTPC Ltd.
Date: 2024.05.28
12:30:04 +05'30'

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited			
Name of the generating Station		Kudgi STPP-STAGE 01			
Month		January-2024			
SL	Particulars	Unit	COAL DOMESTIC (NTPC MINES)	COAL-DOMESTIC	COAL - IMPORTED
A)	OPENING QUANTITY				
1	Opening Stock of coal	MT	15557.48	298358.79	41115.22
2	Value of Stock	Rs.	92207340.90	1893512283.90	515613582.06
B)	QUANTITY				
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	12087.18	695293.33	109555.84
3.01	- Qty Received (Pit Head)	MT	0.00	0.00	109555.84
3.02	- Qty Received (Non Pit Head)	MT	12087.18	695293.33	0.00
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	0.00	0.00	0.00
5	Coal supplied by Coal/Lignite Company (3+4)	MT	12087.18	695293.33	109555.84
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	96.70	5562.35	219.11
6.01	- Normative Loss (Pit Head)	MT	0.00	0.00	219.11
6.02	- Normative Loss (Non Pit Head)	MT	96.70	5562.35	0.00
7	Net Coal / Lignite supplied (5 - 6)	MT	11990.48	689730.98	109336.73
C)	PRICE				
8	Amount charged by the Coal / Lignite Company	Rs.	54582180.00	2695217375.02	1343961829.06
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	0.00	0.00	0.00
10	Handling, Sampling and such other Similar charges	Rs.	80621.05	503410074.60	0.00
11	Total Amount charged (8 +9+10)	Rs.	54662801.05	3198627449.62	1343961829.06
D)	TRANSPORTATION				
12	Transportation charges by Rail / Ship / Road Transport	Rs.	16177059.00	1258976172.40	0.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00	0.00	0.00
14	Demurrage charges, if any	Rs.	56931.00	3274843.00	0.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00	0.00	0.00
16	Total transportation charges (12+/- 13 - 14 + 15)	Rs.	16120128.00	1255701329.40	0.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	70782929.05	4454328779.02	1343961829.06
E)	TOTAL COST				
18	Landed Cost of Coal/Lignite (2+17) / (1+7)	Rs./MT	5916.60	6424.36	12359.93
19	Blending Ratio (Domestic/Imported)	%	3.06	76.94	20.00
20	Weighted average cost of Coal /Lignite (Including biomass)	Rs./MT	7595.91		
20.10	Weighted average cost of Coal /Lignite (Excluding biomass)	Rs./MT	7595.91	7595.91	7595.91
F)	QUALITY				
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4601	3578	0
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4601	3745	0
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0	0	5000
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0	0	5000
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	3983		
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	3983	3983	3983
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3540	2886	0
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3585	3014	0
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0	0	4861
29	GCV of Imported coal supplied as received at station	kCal/Kg	0	0	4786
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3355		
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3355	3355	3355

Submitted On :18.04.2024

Rahul Kumar,
Sr. Manager
(Fin), NTPC
Ltd.
Digitally signed by Rahul Kumar, Sr. Manager (Fin), NTPC Ltd. Date: 2024.08.23 14:48:59 +05'30'

As per our report of even date
For M/s Goyal Parul and Co.
Chartered Accountants
FRN: 016750N

Digitally signed
by SANCHIT
AGRAWAL
Date: 2024.08.23
14:48:59 +05'30'

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

Kudgi Super Thermal Power Station (Stage 01)

S.No.	Particulars	Unit	January-2024
			LDO
A)	OPENING QUANTITY		
1	OPENING QUANTITY OF OIL	(KL)	3590.63
2	VALUE OF STOCK		29,27,56,077.02
B)	QUANTITY		
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)	-
C)	PRICE		
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.)	-
D)	TRANSPORTAION		
12	TRANSPORTATION CHARGES BY RAIL/ROAD/SHIP	(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.)	-
E)	TOTAL COST		
18	LANDED COST OF OIL(2+17)/(1+7)	Rs./KL	81533.46
19	BLENDED RATIO(/IMPORTED)		100.00%
20	WEIGHTED AVERAGE COST OF OIL	Rs./KL	81533.46
F)	QUALITY		
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)	9398

As per our report of even date

For M/s Goyal Parul and Co.

Chartered Accountants

FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL

Date: 2024.08.23 359

14:49:18 +05'30'

Digitally signed by
Rahul Kumar, Sr.
Manager (Fin), NTPC
Ltd.
Date: 2024.08.28
12:02:11 +05'30'

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited			
Name of the generating Station		Kudgi STPP-STAGE 01			
Month		February-2024			
SL	Particulars	Unit	COAL-DOMESTIC (NTPC MINES)	COAL-DOMESTIC	COAL-IMPORTED
A) OPENING QUANTITY					
1	Opening Stock of coal	MT	5117.96	424714.77	4001.95
2	Value of Stock	Rs.	30280931.95	2728518938.05	49463808.79
B) QUANTITY					
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	0.00	560896.21	192410.95
3.01	- Qty Received (Pit Head)	MT	0.00	0.00	192410.95
3.02	- Qty Received (Non Pit Head)	MT	0.00	560896.21	0.00
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	0.00	0.00	0.00
5	Coal supplied by Coal/Lignite Company (3+4)	MT	0.00	560896.21	192410.95
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	0.00	4487.17	384.82
6.01	- Normative Loss (Pit Head)	MT	0.00	0.00	384.82
6.02	- Normative Loss (Non Pit Head)	MT	0.00	4487.17	0.00
7	Net Coal / Lignite supplied (5 - 6)	MT	0.00	556409.04	192026.13
C) PRICE					
8	Amount charged by the Coal / Lignite Company	Rs.	0.00	2153581289.00	2353787327.59
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	0.00	0.00	0.00
10	Handling, Sampling and such other Similar charges	Rs.	0.00	270472378.63	0.00
11	Total Amount charged (8 +9+10)	Rs.	0.00	2424053667.63	2353787327.59
D) TRANSPORTATION					
12	Transportation charges by Rail / Ship / Road Transport	Rs.	0.00	1005844331.00	0.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00	0.00	0.00
14	Demurrage charges, if any	Rs.	0.00	2351899.00	0.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00	0.00	0.00
16	Total transportation charges (12+/- 13 - 14 + 15)	Rs.	0.00	1003492432.00	0.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	0.00	3427546099.63	2353787327.59
E) TOTAL COST					
18	Landed Cost of Coal/Lignite (2+17) / (1+7)	Rs./MT	5916.60	6274.50	12259.73
19	Blending Ratio (Domestic/Imported)	%	1.36	78.64	20.00
20	Weighted average cost of Coal /Lignite (Including biomass)	Rs./MT	7466.61		
20.10	Weighted average cost of Coal /Lignite (Excluding biomass)	Rs./MT	7466.61	7466.61	7466.61
F) QUALITY					
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	4601	3696	0
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	0	3750	0
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0	0	5000
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0	0	5000
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	3993		
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	3993	3993	3993
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	3559	2969	0
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	0	3143	0
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0	0	4807
29	GCV of Imported coal supplied as received at station	kCal/Kg	0	0	4989
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3458		
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3458	3458	3458

Submitted On :18.04.2024

Rahul Kumar, Sr. Manager (Fin), NTPC Ltd. Digitally signed by Rahul Kumar, Sr. Manager (Fin), NTPC Ltd. DN: cn=Rahul Kumar, o=NTPC Ltd., email=rahul.kumar@nptcltd.com

For general reports of work done for M/s. Goyal Pers. and Co. Chartered Accountants. 1100 100000

Digitally signed by SANCHIT AGRAWAL Date: 2024.08.23 14:49:36 +05'30'

Details of Sourcewise fuel for computation of Energy Charges

Company	NTPC Limited
Name of the generating Station	Kudgi STPP(STAGE 01)
Month	February-2024

SL	Particulars	Unit	LDO	HFO	HSD
A)	OPENING QUANTITY				
1	Opening Stock Of Oil	KL	2650.630	0.000	0.000
2	Value Of Stock	Rs.	216114625.23	0.00	0.00
B)	QUANTITY				
3	Quantity Of Oil Supplied By Oil Company	KL	2465.140	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	2465.140	0.000	0.000
6	Normative Transit & Handling Losses	KL	0.000	0.000	0.000
7	Net Oil Supplied (5 - 6)	KL	2465.140	0.000	0.000
C)	PRICE				
8	Amount Charged By The Oil Company	Rs.	196834603.00	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
11	Total Amount Charged (8 +9+10)	Rs.	196834603.00	0.00	0.00
D)	TRANSPORTATION				
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.	196834603.00	0.00	0.00
E)	TOTAL COST				
18	Landed Cost Of Oil (LDO/HFO) (2+17) / (1+7)	Rs.	80720.84	0.00	0.00
19	Blending Ratio		1.000	0.000	0.000
20	Weighted Average Cost Of Oil	Rs.	80720.84		
F)	QUALITY				
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	9308	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
30	Weighted Average GCV Of Oil	Kcal/Ltr	9308		

As per our report of even date
For M/s Goyal Parul and Co.
Chartered Accountants
FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL
Date: 2024.08.23
14:49:54 +05'30'

Rahul Kumar, Sr. Manager
(Fin), NTPC Ltd.

Submitted on :01.03.2024

Details of Sourcewise fuel for computation of Energy Charges

Company		NTPC Limited			
Name of the generating Station		Kudgi STPP-STAGE 01			
Month		March-2024			
SL	Particulars	Unit	COAL DOMESTIC (NTPC MINES)	COAL-DOMESTIC	COAL - IMPORTED
A)	OPENING QUANTITY				
1	Opening Stock of coal	MT	0.00	421184.01	53628.08
2	Value of Stock	Rs.	0.00	2642720522.82	657465726.29
B)	QUANTITY				
3	Quantity of Coal /Lignite supplied by Coal / Lignite Company	MT	4096.96	522982.77	240644.40
3.01	- Qty Received (Pit Head)	MT	0.00	0.00	240644.40
3.02	- Qty Received (Non Pit Head)	MT	4096.96	522982.77	0.00
4	Adjustment (+/-) in quantity supplied made by Coal / Lignite Company	MT	1090.95-	0.00	0.00
5	Coal supplied by Coal/Lignite Company (3+4)	MT	3006.01	522982.77	240644.40
6	Normative transit & Handling losses (for Coal /Lignite based projects)	MT	24.05	4183.86	481.29
6.01	- Normative Loss (Pit Head)	MT	0.00	0.00	481.29
6.02	- Normative Loss (Non Pit Head)	MT	24.05	4183.86	0.00
7	Net Coal / Lignite supplied (5 - 6)	MT	2981.96	518798.91	240163.11
C)	PRICE				
8	Amount charged by the Coal / Lignite Company	Rs.	10161582.00	1896428199.58	3002944828.57
9	Adjustment (+ / -) in amount charged by coal / Lignite Company	Rs.	2746669.42-	0.00	0.00
10	Handling, Sampling and such other Similar charges	Rs.	81896.59	662075326.39	0.00
11	Total Amount charged (8 +9+10)	Rs.	7496809.17	2558503525.97	3002944828.57
D)	TRANSPORTATION				
12	Transportation charges by Rail / Ship / Road Transport	Rs.	14263870.00	970931523.00	0.00
13	Adjustment (+/-) in amount charged by railways / transport company	Rs.	0.00	0.00	0.00
14	Demurrage charges, if any	Rs.	9355.00	1627564.00	0.00
15	Cost of diesel in transporting Coal through MGR system, if applicable	Rs.	0.00	0.00	0.00
16	Total transportation charges (12+/- 13 - 14 + 15)	Rs.	14254515.00	969303959.00	0.00
17	Total amount charged for Coal / Lignite supplied including transportation (11 + 16)	Rs.	21751324.17	3527807484.97	3002944828.57
E)	TOTAL COST				
18	Landed Cost of Coal/Lignite (2+17) / (1+7)	Rs./MT	7294.30	6564.51	12459.23
19	Blending Ratio (Domestic/Imported)	%	0.00	80.00	20.00
20	Weighted average cost of Coal /Lignite (Including biomass)	Rs./MT	7743.45		
20.10	Weighted average cost of Coal /Lignite (Excluding biomass)	Rs./MT	7743.45	7743.45	7743.45
F)	QUALITY				
21	GCV of Domestic coal of the opening coal stock as per bill of coal company	kCal/Kg	0	3726	0
22	GCV of Domestic coal supplied as per bill of coal company	kCal/Kg	4560	3797	0
23	GCV of Imported coal of the opening coal stock as per bill of coal company	kCal/Kg	0	0	5000
24	GCV of Imported coal supplied as per bill of coal company	kCal/Kg	0	0	5000
25	Weighted average GCV of Coal /Lignite as billed (Including biomass)	kCal/Kg	4012		
25.10	Weighted average GCV of Coal /Lignite as billed (Excluding biomass)	kCal/Kg	4012	4012	4012
26	GCV of Domestic coal of the Opening stock as received at station	kCal/Kg	0	3068	0
27	GCV of Domestic coal/biomass supplied as received at station	kCal/Kg	3585	3283	0
28	GCV of Imported coal of the Opening stock as received at station	kCal/Kg	0	0	4985
29	GCV of Imported coal supplied as received at station	kCal/Kg	0	0	4975
30	Weighted average GCV of coal/ Lignite as Received (Including biomass)	kCal/Kg	3545		
30.10	Weighted average GCV of coal/ Lignite as Received (Excluding biomass)	kCal/Kg	3545	3545	3545

Submitted On :23.04.2024

Digitally signed
by Rahul Kumar,
Sr. Manager
(Fin), NTPC
Ltd.
Date: 2024.08.28
12:31:15 +05:30'

As per our report of even date
For M/s Goyal Parul and Co.
Chartered Accountants
FRN: 016750N

Digitally signed
by SANCHIT
AGRAWAL
Date: 2024.08.23
14:50:16 +05'30'

Details of Sourcewise fuel for computation of Energy Charges

Company	NTPC Limited
Name of the generating Station	Kudgi STPP(STAGE 01)
Month	March-2024

SL	Particulars	Unit	LDO	HFO	HSD
A)	OPENING QUANTITY				
1	Opening Stock Of Oil	KL	4850.770	0.000	0.000
2	Value Of Stock	Rs.	391558306.92	0.00	0.00
B)	QUANTITY				
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
C)	PRICE				
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
11	Total Amount Charged (8 +9+10)	Rs.	0.00	0.00	0.00
D)	TRANSPORTATION				
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 In Transporting 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
E)	TOTAL COST				
18	Landed Cost Of Oil (LDO/HFO) (2+17) / (1+7)	Rs.	80720.86	0.00	0.00
19	Blending Ratio		1.000	0.000	0.000
20	Weighted Average Cost Of Oil	Rs.	80720.86		
F)	QUALITY				
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	9308	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
30	Weighted Average GCV Of Oil	Kcal/Ltr	9308		

As per our report of even date
For M/s Goyal Parul and Co.
Chartered Accountants
FRN: 016750N

Digitally signed by
SANCHIT AGRAWAL
Date: 2024.08.23
14:50:32 +05'30'

Rahul
Kumar, Sr.
Manager
(Fin), NTPC
Ltd.
Digitally signed by Rahul
Kumar, Sr. Manager (Fin),
NTPC Ltd.
Date: 2024.08.23 14:50:32
+05'30'