

**Application for Approval of  
True up for FY 2022-23,  
Annual Performance Review of FY  
2023-24 and ARR of FY 2024-25 of  
Distribution Business of Steel  
Authority of India Limited-Bokaro  
Steel Limited**

**Submitted Before  
Hon'ble Jharkhand Electricity  
Regulatory Commission**



SL. No. 2647  
Date 28/2/24

**AFFIDAVIT VERIFYING THE PETITION**

**BEFORE THE JHARKHAND STATE ELECTRICITY REGULATORY**

**COMMISSION, RANCHI**

Case No. \_\_\_\_ of \_\_\_\_ (year)



**IN THE MATTER OF:**

Approval under Section 86 of the Electricity Act, 2003 and JSERC (Terms & Conditions for determination of Distribution Tariff) Regulations 2020 for filing of the True up Petition for FY 2022-23, Annual Performance Review of FY 2023-24, and ARR & Tariff of FY 2024-25 for the Licensee.

**AND**

**IN THE MATTER OF:**

Steel Authority of India, Bokaro (hereinafter referred to as "SAIL-BSL" which shall mean for the purpose of this Petition, the Licensee), a company incorporated under Section 617 of the Companies Act, 1956 and having its main office at Bokaro.

I, Aman Nath Singh Son of Late Parminder Singh aged 55 yrs residing at Sector 1/c, A-72, Bokaro, District Bokaro, Jharkhand do hereby solemnly affirm, and state as follow that.

1. I am working as General Manager, TA (Electrical) in the office of the Petitioner and am duly authorised by the petitioner to swear this affidavit.

That I solemnly affirm at Bokaro on 28 day of Feb 2024 that

- (i) The contents of the above petition are true to my knowledge, and I believe that no part of it is false, and no material has been concealed there from.
- (ii) That the statements made in Chapter 01 to 09 of the petition are true to my knowledge and those made in Chapter 01 to 09 are based on information derived from the records of the case which I believe to be true, and rest of the paragraphs are by way of submissions.





Identified before me by:

A. Singh  
28.02.2024  
DEPONENT

### VERIFICATION

I, Amannath Singh do hereby solemnly affirm that the contents of above affidavit are true to the best of my knowledge, and nothing has been concealed there from.

Verified at Bokaro on 28 day of Feb 2024.

[Signature]  
DEPONENT

SRI SMT. Amannath Singh  
ON DULY IDENTIFIED BY THE  
ADVOCATE SRI SMT. Rajesh Kumar  
SOLEMNLY AFFIRMED BEFORE  
ME.



[Signature] 28/02/2024  
S. D. K. Mahto  
NOTARY PUBLIC  
Bokaro (Jharkhand)  
Regn No -703/16J



**STEEL AUTHORITY OF INDIA LIMITED  
BOKARO STEEL PLANT  
TOWN ADMINISTRATION DEPARTMENT  
BOKARO STEEL CITY**

REF No.

Date:

2024

**To,**

**The Secretary,  
Jharkhand State Electricity Regulatory Commission,  
1st Floor, Jharkhand State Housing Board Old Building  
Harmu, Housing Colony, Ranchi – 834002**

**Sub:** Submission of True up for FY 2022-23 Annual Performance Review of FY 2023-24 and ARR of FY 2024-25 by SAIL-BSL (Steel Authority of India Ltd: Bokaro Steel Ltd)

Dear Sir,

We would like to submit True up for FY 2022-23 Annual Performance Review of FY 2023-24 and ARR of FY 2024-25 in one original and six copies with all the annexures, as per format prescribed under JSERC (Terms and conditions for Determination of Distribution Tariff) Regulations, 2020.

We also attach herewith a receipt of payment made to the Hon'ble Commission for an amount of Rs.20,000,00/- (Rupees Twenty Lakhs only), towards filing of this petition according to JSERC (Conduct of Business) Regulations, 2016. We have processed Demand Draft for the total payable fees amount, details of which are as below:

Demand Draft is in favour of Jharkhand State Electricity Regulatory Commission, Ranchi, DD No. 19786900000200000055016 dated 1.2.2024 with the amount of Rs.20,000,00/- (Rupees Twenty Lakhs only).

We request the Hon'ble Commission to kindly acknowledge the receipt of above-mentioned payment towards submission of petition.

Thanking You

Yours faithfully,

General Manager (TA Electrical),  
SAIL-BSL

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**Petition to**  
**JHARKHAND STATE ELECTRICITY REGULATORY**  
**COMMISSION,**

**Ranchi**



**True up for FY 2022-23, Annual Performance Review of**  
**FY 2023-24, and ARR & Tariff of FY 2024-25**

**Submitted By**  
**SAIL, BOKARO**

**BEFORE THE JHARKHAND STATE ELECTRICITY REGULATORY  
COMMISSION, RANCHI**

Filing No.....

Case No.....

IN THE MATTER OF:

Approval under Section 86 of the Electricity Act, 2003 and JSERC (Terms & Conditions for determination of Distribution Tariff) Regulations 2020 for filing of the True up Petition for FY 2022-23, Annual Performance Review of FY 2023-24, and ARR & Tariff of FY 2024-25

AND

IN THE MATTER OF Steel Authority of India, Bokaro (hereinafter referred to as "SAIL-BSL" which shall mean for the purpose of this Petition, the Licensee), a company incorporated under Section 617 of the Companies Act, 1956 and having its main office at Bokaro.

**Details of Enclosures:**

---

1. Certified Audited Accounts of SAIL BSL for FY 2022-23.
2. SAP Data of Energy Sales, No. of Consumers and connected load for FY 2022-23.
3. Energy Meter data from bills raised by DVC and energy exported to township from steel plant FY 2022-23.
4. Electricity Bills raised by DVC to SAIL BSL for FY 2022-23.
5. SAP Data of Energy Sales, No. of Consumers and connected load for FY 2023-24.
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8. Supporting for CAPEX and Capitalisation in FY 2022-23, FY 2023-24 and FY 2024-25
9. Petition forms and formats of truing up years for FY 2022-23, APR from FY 2023-24 and Tariff from FY 2024-25

**AFFIDAVIT VERIFYING THE PETITION**  
**BEFORE THE JHARKHAND STATE ELECTRICITY REGULATORY**  
**COMMISSION, RANCHI**  
**Case No. \_\_\_\_\_ of \_\_\_\_\_ (year)**

IN THE MATTER OF:

Approval under Section 86 of the Electricity Act, 2003 and JSERC (Terms & Conditions for determination of Distribution Tariff) Regulations 2020 for filing of the True up Petition for FY 2022-23, Annual Performance Review of FY 2023-24, and ARR & Tariff of FY 2024-25 for the Licensee.

AND

IN THE MATTER OF:

Steel Authority of India, Bokaro (hereinafter referred to as "SAIL-BSL" which shall mean for the purpose of this Petition, the Licensee), a company incorporated under Section 617 of the Companies Act, 1956 and having its main office at Bokaro.

I, Amarnath Singh, Son of Late Rammurat Singh, aged 55 residing at Q. No. 72, Sector-I-C, Bokaro Steel City, Police Station: Sector I, District Bokaro, Jharkhand do hereby solemnly affirm, and state as follow that.

1. I am working as General Manager, TA (Electrical) in the office of the petitioner and am duly authorised by the petitioner to swear this affidavit.
2. That I solemnly affirm at Bokaro on 28 day of February 2024 that
  - (i) The contents of the above petition are true to my knowledge, and I believe that no part of it is false, and no material has been concealed there from.
  - (ii) That the statements made in Chapter 01 to 09 of the petition are true to my knowledge and those made in Chapter 01 to 09 are based on information derived from the records of the case which I believe to be true, and rest of the paragraphs are by way of submissions.

Identified before me by:

**DEPONENT**

**VERIFICATION**

I, Amarnath Singh, do hereby solemnly affirm that the contents of above affidavit are true to the best of my knowledge, and nothing has been concealed there from.

Verified at Bokaro on 28<sup>th</sup> day of February, 2024.

**DEPONENT**



**BEFORE THE JHARKHAND STATE ELECTRICITY REGULATORY  
COMMISSION, RANCHI**

Filing No.....

Case No.....

IN THE MATTER OF:

Approval under Section 86 of the Electricity Act, 2003 and JSERC (Terms & Conditions for determination of Distribution Tariff) Regulations 2020 for filing of the True up Petition for FY 2022-23, Annual Performance Review of FY 2023-24, ARR & Tariff of FY 2024-25 for the Licensee.

AND

IN THE MATTER of Steel Authority of India, Bokaro (hereinafter referred to as "SAIL-BSL" which shall mean for the purpose of this Petition the Licensee), a company incorporated under Section 617 of the Companies Act, 1956 and having its main office at Bokaro.

The Petitioner most respectfully submits as under: -

1. That Steel Authority of India, Bokaro is a company incorporated in the year 1964 under Section 617 of the Companies Act, 1956 and is a wholly owned unit of Steel Authority of India, New Delhi. Bokaro Steel City in the district of Bokaro, Jharkhand is contiguous to Bokaro Steel City service area of SAIL-BSL.
2. That with the Electricity Act 2003 opening the sector for power distribution, as per the provisions of Section 14 of Electricity Act 2003, Distribution License has been granted by Hon'ble Jharkhand state Electricity Regulatory Commission (hereinafter "JSERC" or "Hon'ble Commission" or "State Commission") to SAIL-BSL
3. That the Hon'ble Commission has granted Power Distribution License (No.01 of 2005-06) to SAIL-BSL w.e.f. 28.7.2004 for the aforementioned area. Prior to date 28.07.2004, SAIL-BSL was a sanction holder under section 28 of the Electricity Act 1910, granted by the then undivided State of Bihar and accordingly it began the activity related to the distribution of power in the said area.
4. That pursuant to the enactment of the Electricity Act, 2003, SAIL-BSL is required to submit its ARR and Tariff Petitions as per procedures outlined in Section 61, 62 and 64, of Electricity Act 2003, and the governing regulations thereof.

5. That the present Petition is being filed before the Hon'ble Commission for approval of the True up for FY 2022-2023 for the Licensee as per the Electricity Act 2003.
6. That the present Petition is being filed before the Hon'ble Commission for approval of the Annual Performance Review of FY 2023-24 and ARR & Tariff of FY 2024-25 for the Licensee as per the Electricity Act 2003.
7. That this application has been prepared in accordance with Section 86 of the Electricity Act 2003 and has taken into consideration the provisions of the JSERC (Terms and conditions for determination of Distribution Tariff) Regulation, 2020 for True Up of FY 2022-23, Annual Performance Review of year FY 2023-24 and for ARR & Tariff Schedule for FY 2024-25 notified by the Hon'ble Commission.

### **Prayers to the Commission:**

The Petitioner SAIL- BSL respectfully prays to the Hon'ble Commission:

1. To admit the Petition for truing up of FY 2022-23 in accordance with Regulation 13.3 of the JSERC (Terms & Conditions for determination of Distribution Tariff) Regulations 2020.
2. To admit in Petition for Annual Performance Review of year FY 2023-24 accordance with Regulation 13.2 of the JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2020.
3. To allow SAIL BSL to file Annual Performance Review petition for FY 2023-24 based on unaudited account.
4. To condone the delay in filing the present Petition on account of reasons beyond the control of the Petitioner.
5. To approve the deviation from the norms for certain parameters prescribed in the JSERC (Terms & Conditions for determination of Distribution Tariff) Regulations 2020, and provisions thereof, as sought in this True up Petition for FY 2022-23.
6. To approve the deviation from the norms for certain parameters prescribed in the JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2020, and provisions thereof, as sought in this Annual Performance Review of FY 2023-24, ARR & Tariff of FY 2024-25 for the Licensee.
7. To approve the True up Petition for FY 2022-23 in accordance with Regulation 13.3 of the JSERC (Terms & Conditions for determination of Distribution Tariff) Regulations 2020.
8. To approve the Annual Performance Review of FY 2023-24, ARR & Tariff of FY 2024-25 for the Licensee in accordance the JSERC (Terms & Conditions for determination of Distribution Tariff) Regulations 2020.
9. To approve category wise tariff proposed for FY 2024-25.
10. To treat Steel Plant of SAIL as consumer of SAIL-BSL from the next control period subject to approval from SAIL Management.
11. To condone any error/omission and to give opportunity to rectify the same.
12. To permit SAIL- BSL to make further submissions, addition and alteration to this Petition as may be necessary from time to time.
13. To pass any other order as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.

Petitioner

SAIL- BSL Bokaro

Dated:



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**LIST OF ABBREVIATIONS**

A&G	Administrative and General
ATE	Hon'ble Appellate Tribunal of Electricity
ARR	Annual Revenue Requirement
APR	Annual Performance Review
CAGR	Compound Annual Growth Rate
CAIFI	Customer Average Interruption Frequency Index
CWIP	Capital Work in Progress
CPI	Consumer Price Index
DPS	Delayed Payment Surcharge
DNW	Distribution Network
DS	Domestic Service
DS HT	Domestic Service High Tension
DVC	Damodar Valley Corporation
ERP	Enterprise Resource Planning
ETL	Electro-Technical laboratory
FAS	Financial Accounting System
FY	Financial Year
GFA	Gross Fixed Assets
GoI	Government of India
HT	High Tension
JSEB	Jharkhand State Electricity Board
JSERC	Jharkhand State Electricity Regulatory Commission
LT	Low Tension
kV	Kilovolt
kVA	Kilovolt-ampere
kW	Kilowatt
kWh	Kilowatt-hour
MU	Million Units
NTI	Non-Tariff Income
MoM	Minutes of Meeting
O&M	Operations and Maintenance
PLR	Prime Lending Rate
PPA	Power Purchase Agreement
R&M	Repair and Maintenance
RoE	Return on Equity
RPO	Renewable Purchase Obligation
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SAIL	Steel Authority of India Limited
SBI	State Bank of India

SERC	State Electricity Regulatory Commission
SLM	Straight Line Method
TA	Town Administration
WPI	Wholesale Price Index

## 1 INTRODUCTION

### 1.1 Background

- 1.1.1 The Steel Authority of India Limited, Bokaro Steel Plant (hereinafter referred to as “SAIL-BSL” or “the Petitioner”) is a company incorporated in the year 1964 under the provisions of the Companies Act, 1956 and is a wholly owned subsidiary of Steel Authority of India Limited, New Delhi.
- 1.1.2 SAIL-BSL is the sanction holder of power supply in Bokaro Steel City under Section 28(1) of the erstwhile Indian Electricity Act 1910 and has been managing the power distribution in Bokaro steel city since its inception. Post the enactment of the Electricity Act, 2003, as per the provisions of Section 14 of the Act, SAIL BSL has been granted Distribution Licensee status by the State Commission (No.01 of 2005-06) w.e.f. July 28, 2004.
- 1.1.3 The area of supply of the Petitioner, including the Bokaro Steel Plant and the Bokaro township, is the whole of the area bounded as follows:
- North: River Damodar
- South: River Garga
- East: River Garga
- West: Bokaro Steel City Railway Station
- 1.1.4 The Town Administration department of SAIL-BSL is responsible for providing various municipal services to Bokaro Steel City, including horticulture, water supply, construction and maintenance of roads etc. Under this, the Town Administration Electrical Department (TA-Electrical) manages the power distribution system of the licensed area.
- 1.1.5 SAIL-BSL is buying power from Damodar Valley Corporation (DVC), another Government of India Undertaking, under power purchase agreement (PPA). The Power received from DVC is at 220 kV at 220/132 kV main receiving substation at Bokaro Steel plant from where it is further distributed for end-use in plant and township.
- 1.1.6 The licensed electricity distribution business is a part of the overall integrated steel production business. Therefore, all the expenses for the complete electrical distribution business have been accounted in the accounts of the Steel Plant right from the inception, which is audited by Statutory Auditors and thereafterby C&AG of India.



- 1.1.7 As per the provisions of Section 62 of the Electricity Act, 2003 the distribution licensee requires to furnish details as may be specified by the State Commission for determination of distribution tariff.
- 1.1.8 As per Regulation 13.3 of the JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2020 (herein referred to as “Tariff Regulations, 2020”) provides that a distribution licensee shall file the True up of Aggregate Revenue Requirement and corresponding tariff adjustments as per the timelines specified in the Section A24 of the Regulations.
- 1.1.9 As per Regulation 13.2 of the JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2020 (herein referred to as “Tariff Regulations, 2020”) provides that a distribution licensee shall Annual Performance Review report as part of annual review on actual performance as per the timelines specified in the Section A24 of these Regulations.
- 1.1.10 As per Regulation 8.2 of the JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2020 (herein referred to as “Tariff Regulations, 2020”) provides that along with Annual Performance Review Filing, the Licensee shall also claim revised ARR for the following year based on the truing up and annual performance review of previous year/s.
- 1.1.11 Based on the above premise, this Petition presents the True up for FY 2022-23 depicting the actual cost incurred in FY 2022-23 and the calculation of revenue Surplus/Gap from existing tariff that should pass on to the consumers.
- 1.1.12 Based on the above premise, this Petition presents the Annual Performance Review for FY 2023-24 depicting the actual cost of Power purchase incurred in FY 2023-24 and the estimated cost for FY 2023-24 and the calculation of expected revenue Surplus/Gap from existing tariff that should pass on to the consumers.
- 1.1.13 Based on the above premise, this Petition presents the Revised ARR for FY 2024-25 depicting the revised cost estimation FY 2024-25 and the calculation of expected revenue Surplus/Gap from existing tariff that should pass on to the consumers.
- 1.1.14 It is submitted that, the existing legacy of high distribution losses in several pockets of the licensed area and regulatory disallowances have led to the poor financial condition of SAIL-BSL. SAIL-BSL is committed towards improving the electricity availability in its area of operation while achieving the operational turnaround for a sustained business model in future. Some of the measures are being undertaken and activities are being carried out at a considerable level to achieve the goal of becoming a utility with sustainable operations.

## **2 APPROACH FOR THE PRESENT FILING**

### **2.1 Regulation on Terms and Conditions of Tariff:**

2.1.1 The True-up Petition for FY 2022-23, Annual Performance Review for FY 2023-24 and ARR & Tariff for FY 2024-25 are based on the provisions of the following Acts and Policies of the Government of India and principles outlined in the relevant regulations notified by the Jharkhand State Electricity Regulatory Commission:

1. Provisions of Electricity Act 2003;
2. Provisions of the National Electricity Policy;
3. Provisions of the National Tariff Policy;
4. Principles laid down in the JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2020;

2.1.2 The Hon'ble Commission has issued the Tariff Regulations, 2020 which lays down the principles of filing the Periodic Review by the Utility. Regulation A13 of Tariff Regulations, 2020 provides principles of filing of the True up Petition for FY2022-23, APR for FY2023-24.

2.1.3 Further, Regulation A10 of the Tariff Regulations, 2020 provides the principle for the determination of ARR *inter-alia* containing the Operation and Maintenance cost, gross fixed assets, depreciation, interest on loans, interest on working capital, return on equity and bad debts. Accordingly, the present Petition is being filed in respect to ARR in Tariff Regulations, 2020.

### **2.2 Data/Information for True up, APR and ARR**

2.2.1 The True up Petition for FY 2022-23 is based on the audited accounts for FY 2022-23, by taking into consideration of the provision of JSERC Distribution Tariff Regulation 2020.

2.2.2 The APR and revised ARR for FY 2023-24 and FY 2024-25 respectively are based on the approved forecast of ARR and expected revenue from tariff and charges, if additional information not previously known or available to it at the time the forecast was developed may result in significant over/under recovery as per the provision of Tariff Regulation 2020.

### **2.3 Allocation of Assets and Costs**

2.3.1 The SAIL-BSL in compliance to the directives of the Hon'ble Commission has prepared accounts for its Electricity Business, being duly verified and audited by a Chartered Accountant. The segregation and allocation of costs are based on audited accounts of the Petitioner for its Electricity Business. The cost data is captured through the Financial Accounting System maintained on the SAP platform and

separate cost centers that have been created through which identification of directly allocable expenditures has been provided.

### 3 TRUING UP FOR FY 2022-23

- 3.1.1 The Hon'ble Commission notified the Tariff Regulations, 2020 on 12<sup>th</sup> November 2020 for the Control Period from FY 2021-22 to FY 2025-26. Regulation 13.3 of Tariff Regulations, 2020 specifies the provision for True up of Aggregate Revenue Requirement and corresponding tariff adjustments as per the timelines specified in the Section A 24 of these Regulations.
- 3.1.2 In this Chapter, SAIL-BSL has submitted the actual expenditure occurred for Truing up for Controllable and Uncontrollable items for the FY 2022-23, as per provisions under Regulation A7 of Tariff Regulations, 2020. The relevant extract from the Regulation specified below:

*7.1 The Licensee shall submit along with the application for truing up, category-wise and voltage-wise sales, contracted demand and number of consumers, source-wise power purchase quantum and cost, details of capital expenditure, additional capitalization, sources of financing, operation and maintenance expenditure, actual loan portfolio with the interest paid along with other components of ARR, for each year of the Control Period, on the basis of annual Audited Accounts as per the Timelines stipulated in Section A 24.*

*7.2 Where after the truing up, the revenue recovered exceeds the trued-up value approved by the Commission under these Regulations, the surplus amount shall be treated as specified in Clause 7.4 of these Regulations.*

*7.3 Where after the truing up, the revenue recovered is less than the trued-up value approved by the Commission under these Regulations, the gap amount shall be treated as specified in Clause 7.4 of these Regulations.*

*7.4 The amount under-recovered or over-recovered, along with simple interest at the rate equal to Bank Rate as on April 01 of the respective year plus 350 basis points, shall be carried forward to the Tariff approved for the subsequent years:*

*The Provided that no carrying cost on the duration of delay shall be allowed on unrecovered gap if the Licensee fails to submit the Petitions as per the timelines stipulated in Section A 24*

*Provided further that if such gap is large, and it is not feasible to recover the same in one year alone, the Commission may take a view to create a regulatory asset, as per the guidelines provided in Clause 8.2.2 of the Tariff Policy, 2016:*

*Provided further that any adverse financial impact on account of variation in uncontrollable items due to lapse on part of the Licensee or its suppliers/contractors shall not be allowed in truing up.*

*7.5 The Commission, to ensure tariff stability, may include the trued-up costs in the subsequent Control Period's ARR instead of including in the year succeeding the relevant year of the Control Period.*

- 3.1.3 SAIL-BSL humbly submits that the True up Petition for FY 2022-23 has been prepared based on the certified audited accounts annexed as **Annexure A** by taking into consideration of the provisions of Tariff Regulations, 2020.

### **3.2 Treatment of the Steel Plant**

- 3.2.1 SAIL- BSL is having a power purchase agreement with Damodar Valley Corporation (DVC) for the supply of power for its distribution business at 220 kV level. SAIL-BSL humbly submits that till December 2016 power was drawn at 132 kV and thereafter the power is being drawn at 220 kV level. The 220/132 kV sub-station is maintained by the Distribution network (DNW) team of SAIL-BSL.
- 3.2.2 In the past, SAIL-BSL in its provisional Tariff Order dated September 2011 has also submitted, only the energy sales of township under the power purchase expense. Further, the Hon'ble Commission has approved the same citing that previous methodology was followed for the power purchase computation. The relevant extract from the order is below:

*"5.33 With regards to availability of power, as was mentioned in the previous Tariff Order, the Petitioner has submitted that it has only one source of power purchase - Damodar Valley Corporation (DVC). The Power Purchase Agreement (PPA) has been entered into with DVC in April, 2001 with a contract demand of 200 MVA. A portion of the power procured from DVC is used to meet the energy requirement of the Bokaro township while the rest of power is consumed in the Bokaro Steel Plant. In line with the approach adopted in its previous Tariff Order, the Commission has only considered the quantum of power sent to the township for calculating the power purchase cost of the Petitioner."*

- 3.2.3 However, in the Tariff Order dated 3rd August 2012, SAIL-BSL has submitted the energy sales of Steel plant as a consumer of licensed business. Further, the tariff for Steel Plant was proposed to charge as the Average Power Purchase cost (APPC) of DVC. The relevant extract from the order is below:

*5.126 The Petitioner, in its tariff petition, has considered the Steel Plant as a consumer of the licensed business ....*

*5.127 With respect to the categorization and tariff applicability of the Steel Plant, the Petitioner has proposed to charge a **tariff equal to the average power purchase cost for electricity supplied to the Steel Plant.***

- 3.2.4 Accordingly, the Hon'ble Commission has considered the Steel Plant as the consumer of SAIL-BSL and included energy sales of Steel plant in its sales and power procurement. However, the Hon'ble Commission has considered the tariff for Steel Plant as the HTS tariff of SAIL-BSL. The relevant extract from the order dated 3rd August 2012 is below:

*5.128 The total power procured by the Petitioner from DVC is utilised not only for meeting the power requirements of the Bokaro township, but also the energy requirement of the Steel Plant owned by the Petitioner. Hitherto, the Steel Plant is not being considered a consumer of the electricity distribution business and the power purchase cost of the pooled power is apportioned on the basis of unit share for Steel Plant and power distribution business of the Petitioner.*

*5.129 However, considering the treatment of the sales to the Steel Plant by the Petitioner, the Commission agrees that the Steel Works of the Petitioner shall henceforth be treated as a consumer of the electricity distribution business.*

*5.130 With respect to the categorization and tariff applicability of the Steel Plant, the Commission observes that power to Steel Plant is being supplied at 132 kV from the Petitioner's network. Therefore, **the Steel Plant is to be treated as an HTS consumer of the Petitioner and the tariff applicable to it shall be the tariff applicable to the HTS category. This is also in line with the treatment of other steel works of other distribution licensees in the State.***

- 3.2.5 In view of above, the Hon'ble Commission has used the similar methodology for computation of revenue from Steel plant in the Tariff Order dated 03.09.2014, 07.06.2018 and 08.01.2021. Also, in the recent Tariff Order dated 22.06.2023, the Hon'ble Commission has adopted similar methodology of considering steel plant as HTS consumer at 132 KV for calculating its normative revenue. The relevant extract from the latest Tariff Order dated 22<sup>nd</sup> June 2023 is as below:

*5.3. The Petitioner submitted that it has been drawing power at 220 kV level from DVC. The 220/132 kV sub-station is maintained by DNW which further distributes power to Plant and township through different feeders. **The Petitioner submitted that the determination of the ARR by the Hon'ble Commission including the revenue from steel plant at HTS tariff, had notionally created surplus with the Petitioner, while in actuality there was no surplus on account of sale of power to the steel plant. The Petitioner***

*further submitted that they are not raising any bill to steel plant, and the steel plant is not paying any electricity charges at tariff under HTS category to the Petitioner. The Petitioner is purchasing power from the steel plant at the PPA rate submitted by the Petitioner, in this Petition.....*

***Commission's Analysis***

*..... 5.7 The Commission continued the methodology of considering steel plant as HTS consumer in the truing up of FY 2016-17 to FY 2018-19 and Suo-Motu Order on ARR of FY 2020-21 dated January 08, 2021.*

*5.8 In accordance with the above, the Commission finds no merit in the claims made by the Petitioner, and as per the precedent, the Steel Plant has been considered as HT consumer of Electricity Distribution Business of the Petitioner.*

- 3.2.6 Accordingly, the Hon'ble Commission has approved a revenue surplus against a revenue Gap as claimed by SAIL-BSL for the period of FY 2019-20 and FY 2020-21. During MYT Control period the Hon'ble Commission has again approved a revenue surplus against the projected revenue gap as claimed by SAIL-BSL during FY 2021-22 to FY 2025-26. In view of such surplus, the Hon'ble Commission has disapproved the tariff hike as claimed by SAIL-BSL for FY 2021-22, FY 2022-23 and FY 2023-24.
- 3.2.7 In this petition, SAIL-BSL humbly submits that, the determination of the ARR by the Hon'ble Commission including the revenue from steel plant at HTS tariff had notionally created surplus with SAIL-BSL, while in actual there was no surplus on account of sale of power to the steel plant.
- 3.2.8 SAIL-BSL further submits that, it is not raising any bill to steel plant and steel plant is not paying any electricity charges at tariff under HTS category. Hence, treating Steel Plant as the consumer of SAIL-BSL would not be practically possible with immediate effect.
- 3.2.9 However, in view of the methodology adopted by the Hon'ble Commission for treatment to the steel plant, SAIL-BSL humbly submits that for implementation of the methodology requires structural changes in the billing process upon approval from SAIL Board which was also submitted in the Tariff Petition filed dated 02<sup>nd</sup> November 2023 and also deliberated the same during in the public hearing dated 02<sup>nd</sup> February 2024.
- 3.2.10 SAIL-BSL also humbly submits that regarding the above matter internal inter departmental discussions are going at SAIL-BSL. Further, upon approval from the SAIL-BSL management, the proposal would be put to the SAIL Board for their approval. Thus, it is humbly submitted that SAIL-BSL may treat Steel Plant as the



consumer of SAIL-BSL from the next control period subject to approval from SAIL board.

- 3.2.11 Further, the parameters approved by the Hon'ble Commission under MYT Order dated 22<sup>nd</sup> June 2023 are considering steel plant as a consumer of SAIL-BSL and hence, overall ARR is on higher side. Whereas SAIL-BSL in the present petition is submitting the truing up, APR and Tariff Petition based on energy sales for township only and not of steel plant and accordingly, overall ARR components are computed and submitted herewith for the consideration of the Hon'ble Commission.

### 3.3 Energy Sales

#### Past Energy Sales/Consumption

- 3.3.1 SAIL-BSL humbly submits, the No. of Consumers, Energy Sales and Connected load, for Township and Steel Plant for FY 2022-23 based on duly verified audited report of SAIL-BSL annexed as **Annexure A**. The Category-wise approved No. of consumer for FY 2022-23 in MYT Order and actual No. of Consumer for FY 2022-23 are as under Table 1:

**Table 1: Category-wise No. of Consumers for FY 2022-23**

Category	FY 22-23	
	MYT Order	Actual
DS-LT	28368	29326
DS-HT	5	5
CS	1939	1914
LTIS	34	37
HTS	22	24
HT/LT	656	656
<b>Township Total</b>	<b>31024</b>	<b>31962</b>
<b>Steel Plant</b>	<b>1</b>	<b>1</b>
<b>GRAND TOTAL</b>	<b>31025</b>	<b>31963</b>

- 3.3.2 The Category-wise approved Connected Load for FY 2022-23 in MYT Order and actual connected load for FY 2022-23 is as under Table 2:

**Table 2: Category-wise Connected Load for FY 2022-23**

Category	Unit	FY 2022-23	
		MYT Order	Actual
DS-LT	kW	96,982.00	92,404.44



<b>DS-HT</b>	<b>kVA</b>	4,815.00	4,815.00
<b>CS</b>	<b>kW</b>	24,953.00	22,207.00
<b>LTIS</b>	<b>HP</b>	1,012.00	853.00
<b>HTS-11 KV</b>	<b>kVA</b>	7,353.00	7,793.00
<b>HT/LT Utilities</b>	<b>KW</b>	34,163.00	34,163.00
<b>Steel Plant</b>	<b>MVA</b>	45.00	45.00

- 3.3.3 The Hon'ble Commission has adopted the methodology for the classification of HT/LT categories in its True-up Order for FY 2016-17 to FY2018-19 and Suo-Motu Order on ARR of FY 2020-21, dated 08<sup>th</sup> January 2021. The relevant extracts from the Order are as follow:

*“For the purpose of comparison sales to HT/LT Utilities have been shown separately. However, no such category has been approved by the Commission and the sales under this head have been reclassified into NDS & SS for the purpose of calculation of revenue.”*

- 3.3.4 Accordingly, SAIL-BSL submits the information of Category-wise approved energy sales in MYT Order and actual Energy sales for FY 2022-23 as under Table 3:

**Table 3: Category-wise Energy Sales for FY 2022-23 (MUs)**

<b>Category</b>	<b>FY 2022-23</b>	
	<b>MYT Order</b>	<b>Actual</b>
<b>DS-LT</b>	101.84	101.88
<b>DS-HT</b>	6.13	6.52
<b>CS</b>	16.31	16.67
<b>LTIS</b>	0.45	0.45
<b>HTS</b>	11.30	9.78
<b>HT/LT</b>	63.33	61.16
<b>Township Total</b>	<b>199.36</b>	<b>196.47</b>
<b>Steel Plant</b>	<b>1248.34</b>	<b>1422.23</b>
<b>Grand Total</b>	<b>1447.70</b>	<b>1618.70</b>

- 3.3.5 With regards to Energy Sales for the FY 2022-23, the Petitioner submits as below:

1. Majority of SAIL-BSL residential consumers are the employees of SAIL-BSL itself and staying in the allotted quarters. It was observed that the recruitment was stalled in the COVID period. However, post COVID, the recruitment has begun in the SAIL at all India level and further new employees are recruited in SAIL-BSL. Hence, there is an increase observed in no. of consumers in the DS-LT category. Accordingly, energy sales if DS-LT consumers have also increased.
2. Further, in the CS category the energy sales have increased by 5% which is majorly due to opening of economic activities post COVID period.
3. The Consumption of HT/LT utility is considered as same as approved by Hon'ble Commission in MYT Order.
4. Overall, the total billed consumption for the township is consistent with the projections of MYT Order.

**3.3.6 SAIL-BSL requests the Hon'ble Commission to approve the actual energy sales for FY 2022-23, as shown in the Table 3 above.**

### **3.4 Distribution Loss**

3.4.1 Distribution Loss for FY 2021-22 to FY 2025-26 approved by the Commission vide the MYT Order dated 22.06.2023 as shown in the Table 4 below:

**Table 4: Approved Distribution Loss for FY2021-22 to FY2025-26**

Consumer Category	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
<b>Distribution Loss to Township (%)</b>	10.00%	10.00%	10.00%	10.00%	10.00%

3.4.2 SAIL-BSL humbly submits that the actual distribution loss for FY 2022-23 as 36.12%. The key reason behind the significantly high losses is theft of electricity through unauthorized means in the rural areas. SAIL-BSL has made several efforts to control such unauthorized usage of electricity and the issues encountered, steps undertaken have been summarized below:

3.4.3 It is observed that, there are some areas which do not come under the Licensed area of SAIL- BSL, are consuming electricity by hooking from SAIL- BSL's distribution system. These consumers are expected to use the supply of DVC distribution licensee, however, due to the contiguous area of supply with DVC, these consumers are illegally consuming the supply from SAIL- BSL distribution network.

- 3.4.4 The officials of SAIL-BSL are in the process of disconnecting these illegal connections and discussing with DVC Distribution Licensee to provide connections to such consumers falling their area of supply.
- 3.4.5 SAL-BSL has also formed groups consisting of senior officials along with CISF team and visiting the local areas to check illegal connections and hooking. These officials are conducting time-bound raids in the township for illegal connections. Details of the roster and photographs are annexed as **Annexure G**.
- 3.4.6 Further, as a permanent solution, SAIL-BSL is planning to take concrete measures for distribution loss reduction in the Control period of FY 2021-22 to FY 2025-26 as discussed below:

**Smart metering for reduction in losses.**

- 3.4.7 SAIL-BSL is committed for reduction of the distribution losses in the township. At present, the consumers of SAIL-BSL are connected with the analog meters and SAIL-BSL has appointed meter readers for meter readings. Few of the challenges in the existing meters are listed below:
- a) Insufficient manpower for meter reading, causing average billing for some of the consumers.
  - b) Electricity theft by bypassing the energy meter.
  - c) Delay in billing leading to outstanding dues.
- 3.4.8 Hence, SAIL-BSL has proposed for smart meters which would help in overcoming the above-mentioned challenges. It is submitted that SAIL-BSL is planning to install smart meters for all the consumers. A copy of E note sheet on approval of Implementation of Smart meter/ Advance Metering Infrastructure in BSL Township dated 28th July 2022, is enclosed as **Annexure H**. SAIL-BSL humbly pray before Hon'ble Commission to allow SAIL-BSL to approach separately to the Hon'ble Commission in next tariff petition for the CAPEX approval of Installation of Smart Meters, after the Stage I approval.

**Planning of underground cabling of LT network along with laying of Aerial Bunch Cable.**

- 3.4.9 In this view, an internal meeting was held at TA Electrical department level with the concerned officials to know their opinion on the matter. It was highlighted in the meeting that to reduce the non-technical distribution loss because of illegal connection/theft of power /pilferage, SAIL-BSL may propose to install underground cables which is one of the prevailing practices followed in India as suggested in the

Forum of Regulators Report on “Best practices and strategies for distribution loss reduction”.

- 3.4.10 Further, Central Electricity Authority has also acknowledged the fact that in the underground cabling system, it is generally impossible to have illegal connection by tapping the conductor for theft of power.
- 3.4.11 Hence, it was decided in the meeting that the concerned officials would prepare a detailed plan for implementation of Underground of LT Network along with the tentative timelines and cost estimate for Stage I approval from the SAIL-BSL Management. The copy of the MoM of the discussion is attached as an **Annexure I** of this petition.
- 3.4.12 Accordingly, SAIL-BSL humbly pray before Hon’ble Commission to allow SAIL-BSL to approach separately to the Hon’ble Commission in next tariff petition for the CAPEX approval of Installation of Smart Meters, after the Stage I approval.
- 3.4.13 Further, SAIL-BSL is striving hard to reduce distribution losses and has been timely introducing new initiatives to check the same, but on an overall basis the situation is largely uncontrollable due to legacy issues.
- 3.4.14 However, SAIL-BSL is committed to reduce the distribution loss level under the specified level determined by the Hon’ble Commission and believe that the actual loss level would come down only upon implementation of such initiatives.
- 3.4.15 Hence, in view of above where situation is largely uncontrollable, SAIL-BSL request Hon’ble Commission to approve a higher distribution loss as provided below:

**Table 5: Distribution loss for SAIL-BSL for the FY 2022-23**

Particulars	FY 2022-23	
	MYT Order	Actual
Distribution Loss of Township	10.00%	36.82%

- 3.4.16 **SAIL-BSL requests the Hon’ble Commission to approve the actual distribution loss for Township for FY 2022-23, as shown in the Table 5 above.**

### **3.5 Energy Balance**

- 3.5.1 The Hon'ble Commission had approved the distribution loss for the Steel plant as negligible in the MYT Order dated 07<sup>th</sup> June 2018, because the energy is supplied to the Steel Plant is primarily at 220 kV voltage level after December 2016.

3.5.2 SAIL-BSL humbly submits that energy requirement for Steel Plant has been taken as the actual energy consumption of the Steel Plant. Further, for the township, the actual a distribution loss based on actual energy sales, as discussed in the earlier section & the energy purchased at the township periphery for FY 2022-23 annexed as **Annexure F1 and F2**.

3.5.3 Accordingly, SAIL-BSL has computed the Energy Balance for FY 2022-23 and, as under Table 6:

**Table 6: Energy Balance for FY 2022-23**

Particulars	Unit	FY 2022-23	
		MYT Order	Actual
<b>Energy Sales – Township</b>	<b>MUs</b>	199.36	196.47
<b>Distribution Losses (Township)</b>	<b>%</b>	10.00%	36.82%
<b>Energy required at township periphery</b>	<b>MUs</b>	221.52	310.95
<b>Steel Plant consumption</b>	<b>MUs</b>	1248.34	1422.23
<b>Total Energy Required at SAIL-BSL Periphery</b>	<b>MUs</b>	<b>1469.85</b>	<b>1733.18</b>

3.5.4 SAIL-BSL requests the Hon’ble Commission to approve the Energy Balance for FY 2022-23, as shown in the Table 6 above.

### 3.6 Power Procurement Plan

3.6.1 SAIL-BSL is in the power purchase agreement with the Damodar Valley Corporation (DVC) as annexed in **Annexure D**, which is a power generating company under the aegis of the Government of India and supplies power to them in accordance with the tariff approved in the MYT Order by the Commission for FY 2022-23.

3.6.2 As per the Order dated 20<sup>th</sup> June 2018 of this Hon’ble Commission in Case No. 07 of 2016, SAIL-BSL is exempted from Renewable Purchase Obligation (RPO) for the energy procured from DVC vide of JSERC dated. The relevant extracts are as follow:

*“ ...The petitioner (SAIL, Bokaro Steel Plant), Bokaro Steel City is exempted from complying with the Renewable Purchase Obligation for the part of the power consumption which the petitioner is purchasing from DVC to the extent that it has to be complied by the DVC.”*

3.6.3 SAIL-BSL has computed final power purchase cost based the average power purchase rate (Rs/kWh) of the monthly power purchase bills of DVC that is charged to the Steel Plant annexed as **Annexure C1** for FY 2022-23

3.6.4 Accordingly, SAIL-BSL has computed actual Power Procurement Cost for FY 2022-23, as under Table 7:

**Table 7: Power Procurement Cost for FY 2022-23**

Particulars	Unit	FY 2022-23	
		MYT Order	Actual
<b>Total Power Purchase</b>	<b>MUs</b>	1469.85	1733.18
<b>Power Purchase - Township</b>	<b>MUs</b>	221.52	310.95
<b>Power Purchase - Plant</b>	<b>MUs</b>	1248.34	1422.23
<b>Per Unit power purchase cost</b>	<b>Rs/kWh</b>	4.52	4.33
<b>Total Power Purchase Cost</b>	<b>Rs. Crore</b>	664.81	750.11
<b>Power Purchase Cost - Township</b>	<b>Rs. Crore</b>	<b>100.19</b>	<b>134.58</b>

3.6.5 SAIL-BSL requests the Hon'ble Commission to approve the actual Power Purchase cost for township for FY 2022-23, as shown in the above Table 7.

### 3.7 Operation and Maintenance Costs

3.7.1 The O&M expenses for FY 2022-23 is calculated by considering the actual O&M expenses incurred by TA-Electrical department based on the Clause 10.5 of JSERC Regulations,2020. The relevant extract from the Regulations is detailed as below:

*“10.5. The O&M expenses permissible towards ARR of each year of the Control Period shall be approved based on the formula shown below:*

*$O\&M_n = (R\&M_n + EMP_n + A\&G_n) + \text{Terminal Liabilities}$*

*Where, R&M<sub>n</sub> – Repair and Maintenance Costs of the Licensee for the nth year; EMP<sub>n</sub> – Employee Costs of the Licensee for the nth year excluding terminal liabilities;*

*A&G<sub>n</sub> – Administrative and General Costs of the Licensee for the nth year.”*

3.7.2 The O&M expense incurred by DNW and ETL and are based on the ratio of energy transferred to the TA-Electrical to the total energy received (distribution capacity ratio).

### Employee Expenses:

3.7.3 SAIL-BSL submits that amount to wages and salaries for officers and staff who are directly engaged in the electricity distribution business and employee expenses incurred on DNW and of ETL proportionately in the ratio of distribution capacity of TA-Electrical Department to the total capacity. The actual employee expenses have been less as the pay revision has not been implemented.

**R&M expenditure:**

3.7.4 SAIL-BSL submits that for distribution network, R&M expenses includes expenditure on repairs and maintenance of distribution lines, power and distribution transformers, substation equipment, civil maintenance, spares, consumables, service contracts, complaints management etc. The expenditure has been considered on the basis of purchase orders identified by TA-Electrical. Similarly, expenses with regard to DNW and ETL have been considered based on distribution capacity ratio.

**A&G expenses:**

3.7.5 SAIL-BSL submits that, A&G expenses includes items of expenditure incurred directly for managing the distribution business in licensed area. A&G expenses includes regulatory and legal charges, consultancy charges, travel expenses, printing and stationery, press advertisement, telephone and mobile expenses, insurance premium, training, hired vehicle expenses, rent rates and taxes etc.

3.7.6 SAIL-BSL submits that the O&M costs are taken duly verified and audited reports and these expenses have been computed after considering total expenses on this account for TA-Electrical. Similarly, expenses with regard to DNW and ETL have been considered based on distribution capacity ratio.

3.7.7 Accordingly, SAIL-BSL submits the Operating and Maintenance cost for FY 2022-23, as under Table 8:

**Table 8: O&M Expense for FY 2022-23 (Rs. Crore)**

Particulars	FY 2022-23	
	MYT Order	Actual
<b>Emp. Expenses</b>	8.81	9.51
<b>R&amp;M Expenses</b>	3.67	4.19
<b>A&amp;G Expenses</b>	2.63	5.66
<b>O&amp;M Expenses</b>	15.11	19.36

3.7.8 SAIL-BSL requests the Hon'ble Commission to consider the actual O&M cost for township for FY 2022-23, as shown in the Table 8 above.

### 3.8 Sharing of Gain/Losses

#### O&M Expenses

- 3.8.1 The relevant provisions of JSERC Regulations, 2020 stipulating the incentive and penalty framework with the overall aim to incentivise better performance and penalise poor performance, compared to the performance norms/benchmarks specified by the Commission.

*6.49. The gains/losses shall be computed on aggregate basis for controllable items such as Operation & Maintenance Expenses (excluding Terminal Liabilities), Distribution Losses and Collection Efficiency considered collectively on annual basis. The computations shall be based on the data submitted by the Licensee in the Annual Performance Review and audited annual accounts and shall be subject to prudence check by the Commission.*

*6.50 In case of aggregate gains, the aggregate gain shall be shared between the Licensee and the consumers in the ratio of 50:50 respectively.*

*6.51 The gains to be shared shall be passed on to the consumers through Tariff during the Annual Performance Review for each year of the Control Period.*

*6.52 In case of any loss on account of underperformance with respect to the controllable parameters, the Licensee shall bear the entire losses and no proportion of losses shall be passed on to the consumers.*

- 3.8.2 The O & M expense of SAIL-BSL is higher than the norms specified for SAIL-BSL in the MYT Order dated 23<sup>rd</sup> June 2022. SAIL-BSL submits that the expenditure incurred for O & M expenses were controllable in nature which is not shared with the beneficiaries in line with the Regulation 6.52 of Tariff Regulations, 2020.

**Table 9: Sharing of gain/loss for O&M Expense for FY 2022-23 (Rs. Crore)**

Particulars	FY 2022-23		
	MYT Order	Actual	Aggregate loss Share
O&M Expenses	15.12	19.36	(4.25)

### 3.9 Gross Fixed Assets

- 3.9.1 SAIL-BSL submits that observing growth in the energy consumption. Hence, capacity enhancement of township substation and augmentation of 11kV distribution system is planned. The augmentation of SAIL-BSL 11kV distribution system shall be done by redistributing the electrical loads of large sectors and shifting the part of the load from existing feeder to new feeder being created under the present scheme.



- 3.9.2 Accordingly, the Hon'ble Commission had approved the CAPEX for the feeder augmentation in the Tariff Order dated 22<sup>nd</sup> June 2023. It is submitted that at the time of MYT Order the Hon'ble Commission has approved the CAPEX of Rs. 7.80 Crore for FY 2022-23 after scrutinising the supporting documents submitted by SAIL-BSL during the MYT Petition filling.
- 3.9.3 SAIL-BSL humbly submits that in actual it has done, an expense of Rs. 10.58 Crore during FY 2022-23. A payment advice from the contractor along with the cost benefit analysis regarding the feeder augmentation is annexed as **Annexure L** of this petition. However, SAIL-BSL intends to capitalise and put to use the entire project in FY 2023-24 ensuring the timely completion as per the tentative project schedule.
- 3.9.4 **Thus, SAIL-BSL has not submitted any capitalisation for feeder augmentation scheme during FY 2022-23.**
- 3.9.5 SAIL-BSL submits that, the Arterial lights (Main Road Lights) of SAIL-BSL had been installed more than 30 years back. These lights require frequent repair/maintenance for their upkeep. Further, the old electrical infrastructure such as electric poles and cables are prone to frequent breakdown. Hence, SAIL-BSL has planned to replace the older Arterial lights by octagonal poles with LED Fixtures in the township.
- 3.9.6 Accordingly, the Hon'ble Commission had approved the installation of Arterial lights (Main Road Lights) in the Tariff Order dated 22<sup>nd</sup> June 2023. It is submitted that the Hon'ble Commission had approved the CAPEX of Rs. 2.12 Crs. for FY 2022-23 after scrutinising the supporting documents submitted by SAIL-BSL during the MYT Petition filling.
- 3.9.7 SAIL-BSL humbly submits that in actual it has done, an expense of Rs. 2.08 Crs. during FY 2022-23. A payment advice from the contractor along with the cost benefit analysis regarding the Arterial lights is annexed as **Annexure K** of this petition. However, SAIL-BSL intends to capitalise and put to use the entire project in FY 2023-24 ensuring the timely completion as per the tentative project schedule.
- 3.9.8 **Thus, SAIL-BSL has not submitted any capitalisation for installation of Arterial lights scheme during FY 2022-23.**
- 3.9.9 SAIL-BSL humbly submits that it has claimed the CAPEX of hydraulic access platform and procurement of wires and cables under R&M expense duly certified by the auditors as Annexed in **Annexure A**.
- 3.9.10 Further, SAIL-BSL has decapitalised some of the assets which are of minor in nature which amounts to Rs. 0.49 Crore.

3.9.11 Accordingly, SAIL-BSL has claimed no capitalisation and only the de capitalisation as detailed below:

**Table 10: Gross Fixed Asset (GFA) for FY 2022-23 (Rs. Crore)**

Particulars	FY 2022-23	
	MYT Order	Actual
Opening GFA	48.24	45.52
Capitalization during the Year	11.49	0.00
De-Capitalization during the Year	0.00	0.49
Closing GFA	59.73	45.03

3.9.12 SAIL-BSL requests the Hon'ble Commission to approve the actual GFA for township for FY 2022-23, as shown in the Table 10 above.

### 3.10 Consumer Contribution, Grants and Subsidies

3.10.1 Regulation 10.11, 10.28 and 10.34 of the Tariff Regulations, 2020, specifies the methodology to deal with Consumer Contribution, Grants and Subsidies for FY 2023-24. The relevant extracts are as follow:

*"10.11 The amount funded through Consumer Contribution, Grants or Deposit Works for connection to the distribution system of the Licensee shall be deducted from the original cost of the scheme for the purpose of calculating the amount under debt and equity under these Regulations.*

*10.28 The above interest computation shall exclude interest on loan amount, normative or otherwise, to the extent of capital cost funded by Consumer Contribution, Grants or Deposit Works carried out by Distribution Licensee*

*10.34 Depreciation shall be calculated every year on the amount of original cost of the fixed assets as admitted by the Commission:*

*Provided that depreciation shall not be allowed on assets funded by Consumer Contribution and Capital Subsidies/Grants. Provision for replacement of such assets shall be made in the Capital Investment Plan."*

3.10.2 SAIL-BSL humbly submits that there are no consumer contributions/grants towards GFA creation and accordingly the same has not been considered for computation of GFA and depreciation thereon.

3.10.3 Accordingly, SAIL-BSL submits the Hon'ble Commission that there is not any Consumer Contribution, Grants or Subsidies for FY 2022-23.

### 3.11 Depreciation

3.11.1 Regulations 10.36 to 10.39 of the Tariff Regulations, 2020, specifies the determination of depreciation for the FY 2021-22. The relevant extracts are as follow:

*10.36 Depreciation shall be calculated annually, based on the straight-line method at the rates specified at Appendix-I. The base value for the purpose of depreciation shall be original cost of the asset: Provided that the Distribution Licensee shall ensure that once the individual asset is depreciated to the extent of seventy (70) percent of the Book Value of that asset, remaining depreciable value as on March 31 of the year closing shall be spread over the balance useful life of the asset.*

*10.39 The Commission may, in the absence of the Fixed Assets Register, calculate Depreciation (%) arrived by dividing the Depreciation and the Average Gross Fixed Assets as per the latest available Audited Accounts of the Distribution Licensee. The Depreciation (%) so arrived shall be multiplied by the Average GFA approved by the Commission for the relevant Financial Year to arrive at the Depreciation for that Financial Year.*

3.11.2 SAIL-BSL has computed the depreciation as per the Straight-Line Method and has considered depreciation rates as specified in Tariff Regulation, 2020.

3.11.3 Accordingly, SAIL-BSL has computed Depreciation for FY2022-23, as under:

**Table 11: Depreciation for FY 2022-23 (Rs. Crore)**

Particulars	FY 2022-23	
	MYT Order	Actual
<b>Opening Gross Block</b>	48.24	45.52
<b>Additional Capitalization</b>	11.49	0.00
<b>Closing Gross Block</b>	59.73	45.03
<b>Average Gross Block</b>	53.98	45.28
<b>Rate of Depreciation</b>	4.22%	4.22%
<b>Depreciation</b>	2.28	1.91

3.11.4 SAIL-BSL requests the Hon'ble Commission to approve the actual Depreciation for township for FY 2022-23, as shown in the Table 11 above.

### 3.12 Interest on Loan

3.12.1 Regulation 10.16 and 10.17 of the Tariff Regulations, 2020, specify the Debt: Equity ratio for determination of Interest on Loan and Return on Equity for the FY 2021-22. The relevant extracts are as follow:

*“10.16. Existing Schemes - In case of capital expenditure schemes capitalised prior to April 01, 2021, the debt-equity ratio as allowed by the Commission for determination of tariff for the period ending March 31, 2021 shall be considered.*

*10.17 New Schemes – For capital expenditure schemes capitalised after April 01, 2021:*

*a) A normative debt-equity ratio of 70:30 shall be considered for the purpose of determination of Tariff;*

*b) In case the actual equity employed is in excess of 30%, the amount of equity for the purpose of tariff determination shall be limited to 30%, and the balance amount shall be considered as normative loan;*

*c) In case the actual equity employed is less than 30%, the actual debt-equity ratio shall be considered;*

*d) The premium, if any raised by the Licensee while issuing share capital and investment of internal accruals created out of free reserve, shall also be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal accruals are actually utilized for meeting capital expenditure.”*

3.12.2 Regulation 10.26 of the Tariff Regulations 2020, specifies the rate of interest on loan capital. The relevant extracts are as follow:

*“10.26. The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the Licensee:*

*Provided that if there is no actual loan for a particular year but normative loan is still outstanding, then the rate of interest shall be considered on normative basis and shall be equal to the Bank Rate as on April 01 of the respective year of the Control Period plus 200 basis points”.*

3.12.3 SAIL-BSL humbly submits that, it has not availed any loan from external agencies and financing to distribution operation of SAIL-BSL licensee is done through its own equity funding. Accordingly, it has considered the normative debt 70% for computation. SAIL-BSL has prepared the debt schedule by considering the figure of closing debt as per the schedule of FY 2022-23.

3.12.4 The base rate of SBI, applicable for FY 2022-23 as 7.00%. Further, for the purpose of considering interest on loan, a rate of interest of 9.00%, has been computed considering SBI base rate dated 15<sup>th</sup> March 2022 plus 200 basis points.

3.12.5 Accordingly, SAIL-BSL has computed the Interest on Loan for FY 2022-23, as under:

**Table 12: Interest on Loan for FY 2022-23 (Rs. Crore)**

Particulars	FY 2022-23	
	MYT Order	Actual
Net Loan-Opening	18.35	16.50
Additions during the year	8.04	0.00
Repayment during the Year	2.28	1.91
Net Loan- closing	24.11	14.59
Average Loan	21.23	15.54
Interest on Loan (%)	9.00%	9.00%
Interest on Loan	1.91	1.40

3.12.6 SAIL-BSL requests the Hon'ble Commission to approve the normative Interest on Loan for township for FY 2022-23, as shown in the Table12 above.

### 3.13 Interest on Working Capital

3.13.1 Regulation 10.31 of the Tariff Regulations, 2020, specifies the methodology to calculate the Interest on Working Capital. The relevant extracts are as follow:

*“6.30. Working capital for Retail Supply of Electricity for the Control Period shall consist of:*

*a) Maintenance spares at 1% of Opening GFA for Retail Supply Business; plus*

*b) Two months equivalent of the expected revenue from sale of electricity at the prevailing tariffs; minus*

*c) Amount held as security deposits under Clause (a) and Clause (b) of subsection (1) of Section 47 of the Act from consumers and Distribution System Users net of any security held for Wheeling Business; minus*

*d) One-month equivalent of cost of power purchased including the Inter-State and Intra-State Transmission Charges and Load Despatch Charges, based on the annual power procurement plan.*

3.13.2 Further, Regulation 10.32 of the Tariff Regulations 2020, specifies the rate of Interest on Working capital. The relevant extracts are as follow:

*“10.32 Rate of interest on working capital shall be equal to the Bank Rate as on September 30 of the financial year in which the MYT Petition is filed plus 350 basis points. At the time of true up, the interest rate shall be adjusted as per the actual rate prevailing on April 01 of the financial year for which truing up exercise has been undertaken.”*

3.13.3 As per the above provisions of Tariff Regulations 2020, SAIL-BSL has considered the working capital requirement for FY 2022-23. The base rate of SBI, applicable for FY 2022-23 as 7.00%. Further, for the purpose of considering interest on working capital, a rate of interest of 10.50%, has been computed considering SBI base rate dated 15<sup>th</sup> March 2022 plus 350 basis points. Accordingly, SAIL-BSL has considered the Interest on Working capital for FY 2022-23 as under:

**Table 13: Interest on Working Capital for FY 2022-23 (Rs. Crore)**

Particulars	FY 2022-23	
	MYT Order	Actual
<b>Maintenance spares 1% of opening GFA</b>	0.48	0.46
<b>2 Months Revenue</b>	123.47	14.28
<b>Less: 1 month of power purchase cost</b>	-55.40	-11.21
<b>Total Working Capital</b>	68.55	3.52
<b>S.B.I. base rate</b>	<b>10.50%</b>	<b>10.50%</b>
<b>Interest in Working Capital in Rs. Core</b>	<b>7.20</b>	<b>0.37</b>

3.13.4 SAIL-BSL requests the Hon’ble Commission to approve the normative Interest on Working Capital for township for FY 2022-23, as shown in the Table 13 above.

### 3.14 Return on Equity

3.14.1 Regulation 10.19 of the Tariff Regulation 2020 specifies the methodology to calculate the Return on Equity. The relevant extracts are as follow:

*“10.19. The rate of return on equity shall be 14.50% (post-tax) for the Control Period.”*

*10.20. Return on equity shall be allowed on equity employed in assets in use considering the following:*

- Equity employed in accordance with Clause 10.16 of these Regulations on assets (in use) capitalised as on the beginning of the year; and*

b) Average 50% of the equity projected to be employed in accordance with Clause 10.17 of these Regulations on assets (in use) commissioned during the year.

3.14.2 SAIL-BSL has considered the opening of equity for FY 2022-23 as the closing equity of FY 2021-22. Further, the average rate of return of 14.50 % has been applied to arrive at the return on equity.

3.14.3 Accordingly, SAIL-BSL has computed the Return on Equity for FY 2022-23, as under:

**Table 14: Return on Equity for FY 2022-23 (Rs. Crore)**

Particulars	FY 2022-23	
	MYT Order	Actual
Opening Equity	14.47	13.49
Additions	3.45	0.00
Closing Equity	17.91	13.49
Average Equity	16.19	13.49
Rate of Return	14.50%	14.50%
Return on Equity	2.35	1.96

3.14.4 SAIL-BSL requests the Hon'ble Commission to approve the normative Return on Equity for township for FY 2022-23, as shown in the above Table 14 above.

### 3.15 Summary of ARR for FY 2022-23

3.15.1 SAIL-BSL submits the actual ARR for FY 2022-23 based on the certified audited report is summarized in the table below:

**Table 15: Summary of ARR components for FY 2022-23 (Rs. Crore)**

Particulars		FY 2022-23	
		MYT Order	Actual
Power Purchase Cost (Township Only)	1	100.19	134.58
Power Purchase Cost (including Steel Plant)	2	664.81	750.11
Employee Cost	3	8.81	9.51

<b>R&amp;M Expenses</b>		3.67	4.19
<b>A&amp;G Expenses</b>		2.63	5.66
<b>Depreciation</b>		2.28	1.91
<b>Interest on Loan</b>		1.91	1.40
<b>Return on Equity</b>		2.35	1.96
<b>Interest on Working Capital</b>		7.20	0.37
<b>Sharing of Gain&amp; Losses</b>			-4.25
<b>Total Annual Revenue Requirement (Township Only)</b>	<b>4 = (1+3)</b>	<b>129.04</b>	<b>155.32</b>
<b>Total Annual Revenue Requirement (including Steel Plant also)</b>	<b>5= (4+2)</b>	<b>693.66</b>	<b>770.85</b>

3.15.2 Further, as per Regulation 6.8 of the JSERC (Power Regulatory Accounting) Regulations, 2020. The allocation ratios considered as per the Regulations is tabulated below:

**Table 16: Segregation of Distribution Assets**

<b>Particulars</b>	<b>Share of Supply Business</b>	<b>Share of Wire Business</b>
Power Purchase (Including PGCIL & RLDC Charges)	100%	0%
Employee Expenses	40%	60%
A&G Expenses	50%	50%
R&M Expenses	10%	90%
Depreciation	10%	90%
Interest Cost	10%	90%
Interest on Working Capital	90%	10%
Return on Equity	10%	90%
Interest on Security Deposit	100%	0%
Non-Tariff Income	90%	10%
Taxes on Income	10%	90%



3.15.3 Considering the general principle of segregation of assets as specified in the above table, SAIL-BSL has computed the Wheeling ARR and Retail Supply ARR for FY 2021-22 are summarized in the table below:

**Table 17: Summary of ARR for Retail Supply and Wheeling for FY 2022-23 (Rs. Crore)**

Particulars	FY 2022-23			
	MYT Order	Actual	MYT Order	Actual
	Retail		Wheeling	
PPC (Township Only)	100.19	134.58	0.00	0.00
PPC (including Steel Plant)	664.81	750.11	0.00	0.00
Employee Cost	3.52	3.80	5.29	5.71
R&M Expenses	0.37	0.42	3.30	3.77
A&G Expenses	1.32	2.83	1.32	2.83
Depreciation	0.23	0.19	2.05	1.72
Interest on Loan	0.19	0.14	1.72	1.26
Return on Equity	0.23	0.20	2.11	1.76
Interest on Working Capital	6.48	0.33	0.72	0.04
Sharing of Gains/losses		-4.25	0.00	0.00
<b>Total ARR (Excl. Steel Plant)</b>	<b>112.53</b>	<b>138.24</b>	<b>16.51</b>	<b>17.08</b>

3.15.4 SAIL-BSL requests the Hon'ble Commission to approve the actual ARR for township for FY 2022-23, as shown in the Table 17 above.

### 3.16 Revenue at Existing Tariff for FY 2022-23

3.16.1 Based on the duly verified audited account the revenue from sale of power at existing tariff for FY 2022-23 is as under:

**Table 18: Total revenue at existing tariff for FY 2022-23 (Rs. Crores)**

Category	FY 2022-23
Total Revenue	85.68

### 3.17 Summary of Revenue Surplus/Gap

3.17.1 Based on the actual revenue from sale of power at existing tariff, the revenue (surplus)/gap are calculated as under:

**Table 19: Summary of revenue (Surplus)/Gap for FY 2022-23 (Rs. Crore)**

Particulars	FY 2022-23
Annual Revenue Requirement	155.32
Revenue from Distribution of Electricity	85.68
Revenue (Surplus)/Gap for the year	69.64

## 4 ANNUAL PERFORMANCE REVIEW OF FY 2023-24

### 4.1 Background

#### 4.1.1 The provision of Regulation A8 of Tariff Regulations, 2020 for Annual Performance Review detailed as below:

*“8.1. The Licensee shall submit along with the application for Annual Performance Review, details of category-wise and voltage-wise sales, contracted demand and number of consumers, source-wise power purchase quantum and cost, details of capital expenditure, additional capitalization, sources of financing, operation and maintenance expenditure, actual loan portfolio with the interest paid along with other components of ARR incurred/projected to be incurred for the year under review, as per the timelines stipulated in Section A 24.*

.....

*8.3. The Scope of the Annual Performance Review shall be comparison of the approved expenses vis-à-vis revised estimates for the year(s) and shall comprise the following:*

*a) Comparison of Approved Capital Expenditure and Capitalisation vis-à-vis revised estimates by the Licensee based on the latest actual data available.*

*b) Comparison of Sales and Power Purchase required to meet the requisite Sales approved by the Commission vis-à-vis the revised estimates by the Licensee based on the latest actual data available.*

*c) Comparison of Other Expenses such as Interest on Loan, Interest on Working Capital, Return on Equity, Depreciation and O&M Expenses approved by the Commission vis-à-vis the revised estimates by the Licensee based on the latest actual data available.*

*d) Computation of the sharing of gains and losses on account of controllable factors for the previous year.*

*e) Approved Revenue vis-à-vis revised estimates based on the latest actual data available.*

*f) Any other Expenses/Revenues impacting ARR.”*

#### 4.1.2 Accordingly, SAIL-BSL submits its APR for FY 2023-24 in this section of the present petition.

- 4.1.3 For the purpose of present petition, SAIL-BSL has considered the actual available data to first half of FY 2023-24, the energy sales, Connected Load and No. of Consumers the data for 6 months was available at the time of petition filling.
- 4.1.4 Also, the power purchase cost is computed based on the DVC bills issued during FY 2023-24 for April to September month and the energy sales at township periphery taking actual distribution loss for April to September month in consideration.
- 4.1.5 In view of the above SAIL BSL humbly prays before Hon'ble Commission to approve the APR of FY 2023-24 as submitted in this section and allow SAIL BSL to file truing up petition of FY 2023-24 before Hon'ble Commission as per the schedule of Tariff Regulations, 2020.

## 4.2 Energy Sales

- 4.2.1 SAIL-BSL humbly submits, the actual No. of Consumers, Energy Sales, and Connected load, for Township and Steel Plant for FY 2023-24 based on the data available in the SAP. The Category-wise No. of consumer for FY 2023-24 are as under in Table 20:

**Table 20: Category-wise No. of Consumers for FY 2023-24**

Category	FY 2023-24	
	MYT Order	Estimated (Apr-Mar)
<b>DS-LT</b>	28652	29907.42
<b>DS-HT</b>	5	5
<b>CS</b>	1959	1781.64
<b>LTIS</b>	34	32.24
<b>HTS</b>	23	25.25
<b>HT/LT</b>	656	656
<b>Township Total</b>	31329	32407.55
<b>Steel Plant</b>	1	1
<b>GRAND TOTAL</b>	31330	32408.55

- 4.2.2 The category-wise actual connected load for FY 2023-24 is as under in Table 21:

**Table 21: Category-wise Connected Load for FY 2023-24**

Category	FY 2023-24	
	MYT Order	Estimated (Apr-Mar)
<b>DS-LT</b>	97,952	98,932
<b>DS-HT</b>	4,815	4,565
<b>CS</b>	25,453	22,126
<b>LTIS</b>	1,023	821
<b>HTS</b>	7,721	9,978
<b>HT/LT</b>	34,163	18,210
<b>Steel Plant</b>	45	45

4.2.3 The actual category-wise Energy Sales for FY 2023-24 is as under in Table 22:

**Table 22: Category-wise Energy Sales for FY 2023-24 (MUs)**

Category	FY 2023-24	
	MYT Order	Estimated (Apr-Mar)
<b>DS-LT</b>	105.27	105.96
<b>DS-HT</b>	6.20	6.72
<b>CS</b>	17.66	17.51
<b>LTIS</b>	0.45	0.45
<b>HTS</b>	11.86	9.78
<b>HT/LT</b>	65.23	65.23
<b>Township Total</b>	<b>206.68</b>	<b>205.65</b>
<b>Steel Plant</b>	<b>1373.17</b>	<b>1373.17</b>
<b>GRAND TOTAL</b>	<b>1578.82</b>	<b>1578.82</b>

4.2.4 SAIL-BSL submits that, the No. of Consumers, energy sales and Connected Load for the period of April 2023 to September 2023 is based on the unaudited accounts.

4.2.5 Further, the No. of Consumers, energy sales and Connected Load for the period of October 2023 to March 2024 is projected based on the 2 Year CAGR from FY 2021 to FY 2023, taking base as FY 2022-23.

4.2.6 **SAIL-BSL requests the Hon'ble Commission to approve the projected energy sales for FY 2023-24 based on the unaudited report, as shown in the Table 21 above.**

### 4.3 Distribution Loss

4.3.1 In the above section, SAIL-BSL submits unaudited billed energy in the township and the power purchase at township periphery upto Sep 2023 as annexed in **Annexure E and F2**. Further, for the period of October 2023 to March 2024, SAIL-BSL has estimated the billed energy in the township and the power purchase at township periphery to tune the distribution loss as 10% for the period of FY 2023-24.

4.3.2 SAIL-BSL submits that it is committed to reduce the distribution loss level under the specified level determined by the Hon'ble Commission. Accordingly, it has taken concrete steps in this regard such as smart meter and laying LT underground cables as discussed in Para 3.4.7 to 3.4.11.

4.3.3 At present both of these initiatives are under discussion stage at higher management level. SAIL-BSL humbly pray before Hon'ble Commission to allow SAIL-BSL to approach separately to the Hon'ble Commission in next tariff petition for the CAPEX approval, after the Stage I approval.

4.3.4 SAIL-BSL humbly submits that the actual loss level would come down only upon implementation of such initiatives. Hence, SAIL-BSL request Hon'ble Commission to approve the actual distribution loss for FY 2023-24 as provided below:

**Table 23: Distribution loss for SAIL-BSL for the FY 2023-24**

Particulars	FY 2023-24	
	MYT Order	Estimated (April. - March)
<b>Distribution Loss of Township</b>	10.00%	10.00%

4.3.5 **SAIL-BSL requests the Hon'ble Commission to approve the distribution loss for the FY 2022-24, as shown in the above Table 23. Any deviation shall be claimed at the time of Truing-up.**

### 4.4 Energy Balance

4.4.1 SAIL-BSL has arrived at the Energy Balance for FY 2023-24 is based on the actual unaudited sales and distribution loss as discussed in the above Sections.

4.4.2 Further, SAIL-BSL considered the distribution loss only on the Township and not on the steel plant consumption.

4.4.3 Accordingly, SAIL-BSL has submitted the Energy Requirement for the FY 2023-24, as under:

**Table 24: Energy Balance for FY 2023-24**

Particulars	Unit	FY 2023-24	
		MYT Order	Estimated (April. -March)
Energy Sales – Township	MUs	206.67	205.65
Distribution Losses (Township)	%	10.00%	10.00%
Energy required at township periphery	MUs	229.63	228.50
Steel Plant consumption	MUs	1373.17	1373.17
<b>Total Energy Required at SAIL- BSL Periphery</b>	<b>MUs</b>	<b>1602.80</b>	<b>1601.67</b>

4.4.4 SAIL-BSL requests the Hon’ble Commission to approve the Energy Balance for FY 2023-24, as shown in the Table 24 above. Any deviation shall be claimed at the time of Truing-up.

#### 4.5 Power Purchase Cost

4.5.1 As discussed in the Para 3.6.1 that SAIL-BSL is in the power purchase agreement with the DVC and intends to continue the same during the FY 2023-24 for procurement of power.

4.5.2 SAIL-BSL is exempted from RPO for the energy procured from DVC vide Case No. 07 of 2016 of JSERC dated 20.06.2018. The relevant extracts are as follow:

*“The petitioner (SAIL, Bokaro Steel Plant), Bokaro Steel City is exempted from complying with the Renewable Purchase Obligation for the part of the power consumption which the petitioner is purchasing from DVC to the extent that it has to be complied by the DVC.”*

4.5.3 Based on the actual energy bills of DVC to SAIL-BSL up to September 2023 based on the actual Energy bills as Annexed as **Annexure C1 and C2**, the rate of Rs. 5.28 /kWh is computed. Further, the per unit power purchase rate for the next 6 month i.e.

October 2023 to March 2024 is considered as an average power purchase rate of of last 6 month, i.e. April 2023 to September 2023.

- 4.5.4 Accordingly, SAIL-BSL has submitted the Power Purchase Cost for the FY 2023-24 based on the projected energy received at the township Periphery, as under:

**Table 25: Power Procurement Cost for FY 2023-24**

Particulars	Unit	FY 2023-24	
		MYT Order	Estimated (Apr-March)
<b>Total Power Purchase</b>	<b>MUs</b>	1602.80	1601.67
<b>Power Purchase - Township</b>	<b>MUs</b>	229.63	228.50
<b>Power Purchase - Plant</b>	<b>MUs</b>	1373.17	1373.17
<b>Per Unit power purchase cost</b>	<b>Rs/kWh</b>	4.52	5.28
<b>Total Power Purchase Cost</b>	<b>Rs. Crore</b>	724.47	845.13
<b>Power Purchase Cost - Township</b>	<b>Rs. Crore</b>	103.79	120.57

- 4.5.5 SAIL-BSL requests the Hon'ble Commission to approve the estimated Power Purchase cost for township for FY 2023-24, as shown in the above Table 25. Any deviation shall be claimed at the time of Truing-up.

#### 4.6 Operation and Maintenance Costs

- 4.6.1 The Regulation 10.3 to 10.7 of the Tariff Regulations 2020 specifies the methodology for the determination of O&M expenses for the Control Period from FY 2021-22 to FY 2025-26. The relevant extract from the Regulation is as below:

*“10.3 Operation and Maintenance (O&M) Expenses shall include:*

- a) Salaries, wages, pension contribution and other employee costs;*
- b) Administrative and General Expenses;*
- c) Repairs and Maintenance Expenses.*

*10.4 The O&M Expenses for the Base Year of the Control Period shall be approved by the Commission taking into account the audited accounts of FY 2015-16 to FY 2019-20, Business Plan filed by the Licensee, estimates of the*



*actual for the Base Year, prudence check and any other factor considered appropriate by the Commission;*

*10.5 The O&M expenses permissible towards ARR of each year of the Control Period shall be approved based on the formula shown below:*

$$\mathbf{O\&Mn = (R\&Mn + EMPn + A\&Gn) + Terminal Liabilities}$$

*Where,*

*R&Mn – Repair and Maintenance Costs of the Licensee for the nth year;*

*EMPn – Employee Costs of the Licensee for the nth year excluding terminal liabilities;*

*A&Gn – Administrative and General Costs of the Licensee for the nth year.*

*10.6: The above components shall be computed in the manner specified below:*

$$\mathbf{R\&Mn = K * GFA * (INDXn / INDXn-1)}$$

*Where,*

*‘K’ is a constant (expressed in %) governing the relationship between R&M costs and Gross Fixed Assets (GFA) and shall be calculated based on the % of R&M to GFA of the preceding year of the Base Year in the MYT Order after normalising any abnormal expenses ‘GFA’ is the opening value of the gross fixed asset of the nth year;*

$$\mathbf{EMPn + A\&Gn = [(EMPn-1)*(1+Gn) + (A\&Gn-1)]*(INDXn/ INDXn-1)}$$

*Where,*

*EMPn-1 – Employee Costs of the Licensee for the (n-1)th year excluding terminal liabilities;*

*A&Gn-1 – Administrative and General Costs of the Licensee for the (n-1)th year excluding legal/litigation expenses;*

*INDXn – Inflation factor to be used for indexing the employee cost and A&G cost.*

*This will be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding year before the base year;*

*Gn – is a growth factor for the nth year and it can be greater than or lesser than zero based on the actual performance. Value of Gn shall be determined by the Commission in the MYT Order for meeting the additional manpower*

*requirement based on the Distribution Licensee's Filing, benchmarking and any other factor that the Commission feels appropriate;*

$$INDX_n = 0.55 * CPI_n + 0.45 * WPI_n;$$

*10.7 The Distribution Licensee, in addition to the above details shall also submit the detailed break-up of the Legal/Litigation Expenses for the previous Years (FY 2015-16 to FY 2019-20) along with the details and documentary evidence of incurring such expenses. The Commission shall approve the legal expenses as per the relevant provisions of the Jharkhand State Litigation Policy based on the necessary documentary evidence submitted for the Control Period and shall carry out due prudence check of legal expenses at the time of truing up."*

- 4.6.2 SAIL- BSL has integrated its various processes relating to inventory management, procurement and contracts, project management, Human Resources viz. payroll, leave management, performance management and finance & accounts through implementation of Enterprise Resource Planning (ERP) Software which has brought about a positive paradigm shift in the manner in which business is conducted. All transactions related to the above processes are conducted online thus bringing about a quantum improvement in efficiency and eliminating time consuming manual or repetitive transactions while enhancing the checks and balances that are so necessary now a days.
- 4.6.3 It is submitted that the employee costs are dependent upon many factors, such as the growth in economy in general and the sector in particular, requirement and availability of personnel with the requisite skill sets, etc. It may be further appreciated that in order to obtain commitment from the personnel, outstanding performance, loyalty, etc., which are a critical pre-requisite for any organization, especially a service utility, the organization must meet the rational needs of the personnel. Market equivalent salaries and growth are hygiene factors for retaining the employees and it is imperative to meet these as a first step towards building a committed, loyal and performing workforce.
- 4.6.4 SAIL-BSL has made its projections for the FY 2023-24 based on Regulation 10.6 of the Tariff Regulations, 2020. The escalation factor has been estimated in line with Regulation 10.6 whereby the Wholesale Price Index (WPI) and Consumer Price Index (CPI) for FY 2022-23 have been computed and a weighted average rate has been arrived at by giving 45% weightage to WPI and 55% weightage to CPI. Inflation factor has been computed as per applicable rates of WPI and CPI and is arrived at 5.20%.
- 4.6.5 The R&M expenditure incurred by the distribution licensee is a function of the network condition of the licensee. The network condition would depend on the condition of the assets and subsequent augmentation/ strengthening/ capex

undertaken by the Licensee. Benchmarking with other utilities in other State jurisdictions for the R&M expenditure therefore may not provide an appropriate indication. The K factor need to be customized for each distribution licensee considering the above and may vary across years based on the capital expenditure in the previous years together with expenditure incurred during the year. Accordingly, the K factor if computed as 7.17% as per Regulation 10.6 of Tariff Regulation 2020.

4.6.6 The estimated Operating and Maintenance cost for FY 2023-24, as under:

**Table 26: O&M Expense for FY 2023-24 (Rs. Crore)**

Particulars	FY 2023-24	
	MYT Order	Estimated (Apr-March)
<b>Emp. Expenses</b>	9.35	8.41
<b>R&amp;M Expenses</b>	3.82	3.82
<b>A&amp;G Expenses</b>	2.79	5.00
<b>O&amp;M Expenses</b>	15.96	17.24

4.6.7 **SAIL-BSL requests the Hon'ble Commission to approve estimated Operations & Maintenance for the FY 2023-24, as shown in the above Table 26. Any deviation from the estimated sales shall be claimed at the time of Truing-up.**

#### **4.7 Gross Fixed Assets**

4.7.1 The Hon'ble Commission has approved the installation of Arterial lights (Main Road Lights) in the Tariff Order dated 22.06.2023. It is submitted that the Hon'ble Commission has approved the CAPEX of Rs. 2.12 Crore for FY 2023-24 after scrutinising the supporting documents submitted by SAIL-BSL during the MYT petition filling.

4.7.2 SAIL-BSL humbly submits that in actual it has made a payment of Rs. 2.08 Crore during FY 2022-23 and Rs. 1.34 Crore during FY 2023-24 (till Sep 2023). A payment advice from the contractor along with the cost benefit analysis regarding the Arterial lights is annexed as **Annexure K** of this petition.

4.7.3 SAIL-BSL submits that, the Arterial lights scheme is not put to use in FY 2022-23. However, SAIL-BSL intends to capitalise the left-over project in FY 2023-24 ensuring the timely completion as per the tentative project schedule.

4.7.4 **Thus, SAIL-BSL submits that the capitalisation of whole scheme of Rs. 4.24 Crore in FY 2023-24 only.**

- 4.7.5 The Hon'ble Commission has also approved the CAPEX for the feeder augmentation in the Tariff Order dated 22.06.2023. It is submitted that at the time of MYT Order the Hon'ble Commission has approved the CAPEX of Rs. 7.80 Crore for FY 2023-24 after scrutinising the supporting documents submitted by SAIL-BSL during the MYT petition filling.
- 4.7.6 SAIL-BSL humbly submits that in actual it has made a payment of Rs. 10.58 Crore during FY 2022-23 and Rs. 2.71 Crore during FY 2023-24 (till Sep 2023). A payment advice from the contractor along with the cost benefit analysis regarding the feeder augmentation is annexed as **Annexure L** of this petition.
- 4.7.7 SAIL-BSL submits that, the Arterial lights scheme is not put to use in FY 2022-23. However, SAIL-BSL intends to capitalise the left-over project in FY 2023-24 ensuring the timely completion as per the tentative project schedule.
- 4.7.8 **Thus, SAIL-BSL submits that the capitalisation of whole scheme of Rs. 15.60 Crore in FY 2023-24 only.**
- 4.7.9 The Hon'ble Commission has also approved Rs. 0.57 Crore. for 30 No's of High Mast Towers with LED Fixture in BSL township in FY 2023-24. Further, SAIL-BSL has finalised the contract agreement with the vendor. The Contract agreement copy is annexed as **Annexure M** of this Petition.
- 4.7.10 SAIL-BSL humbly submits that in actual it has made a payment of Rs. 0.98 Crore during FY 2023-24 (till Sep 2023). A payment advice from the contractor along with the cost benefit analysis regarding the 30 high mast is annexed as **Annexure M** of this petition.
- 4.7.11 Further, SAIL-BSL intends to capitalise the left-over project in FY 2023-24 ensuring the timely completion as per the tentative project schedule.
- 4.7.12 **Thus, SAIL-BSL submits that the capitalisation of whole scheme of Rs. 1.13 Crore in FY 2023-24 only.**

**Table 27: Scheme-wise summary of Payment made by SAIL-BSL till September 2023 (Rs. Crore)**

Particulars (Rs. Cr.)	FY 2022-23	FY 2023-24 (till Sep 23)	Total
	A	B	A+B
11KV Feeder Augmentation in BSL Township	10.58	2.71	13.29
Installation of Arterial Lights with LED Fixtures in BSL township	2.08	1.34	3.43

30 No's of High Mast Towers with LED Fixture in BSL township	-	0.98	0.98
<b>Total</b>	<b>12.66</b>	<b>5.03</b>	<b>17.69</b>

4.7.13 **SAIL-BSL humbly submits that the above scheme is likely to be capitalised and put to use in FY 2023-24.**

4.7.14 Accordingly, SAIL-BSL has claimed capitalisation of the above scheme in FY 2023-24 as detailed below:

**Table 28: Gross Fixed Asset (GFA) for FY 2023-24 (Rs. Crore)**

Particulars	FY 2023-24	
	MYT Order	Estimated
<b>Opening GFA</b>	59.73	45.03
<b>Capitalization during the Year</b>	11.49	20.97
<b>Closing GFA</b>	71.21	66.00

4.7.15 Also, SAIL-BSL humbly submits before the Hon'ble Commission that SAIL-BSL not capitalised any amount for Procurement of cables, wiring and other materials.

4.7.16 **SAIL-BSL requests the Hon'ble Commission to approve GFA for the FY 2023-24, as shown in the above Table 27 Any deviation shall be claimed at the time of Truing-up based on the audited report.**

#### **4.8 Consumer Contribution, Grants and Subsidies**

4.8.1 Regulation 10.11, 10.28 and 10.34 of the Tariff Regulations, 2020, specifies the methodology to deal with Consumer Contribution, Grants and Subsidies for FY 2023-24.

4.8.2 SAIL-BSL humbly submits that there are no consumer contributions/grants towards GFA creation and accordingly the same has not been considered for computation of GFA and depreciation thereon.

4.8.3 **SAIL-BSL submits the Hon'ble Commission that there is no any Consumer Contribution, Grants or Subsidies for FY 2023-24.**

#### **4.9 Depreciation**

4.9.1 Regulations 10.36 to 10.39 of the Tariff Regulations, 2020, specifies the determination of depreciation for the Control Period from FY 2021-22 to FY 2025-26.

- 4.9.2 SAIL-BSL has considered the opening Gross Fixed Assets of FY 2023-24 as the closing balance of FY 2022-23. Based on the Opening GFA of FY 2022-23, the additions in GFA for FY 2022-23 has been added to arrive at the closing GFA figures for the FY 2023-24 Further, the depreciation rate of 4.22 % has been considered as approved by the Commission in MYT Order.
- 4.9.3 The computation of depreciation is based on the Straight-Line Method as prescribed in the Tariff Regulations, 2020 issued by the Hon'ble Commission.
- 4.9.4 Accordingly, SAIL-BSL has projected the Depreciation for the FY 2023-24, as under:

**Table 29: Depreciation for FY 2023-24 (Rs. Crore)**

Particulars	FY 2023-24	
	MYT Order	Estimated (April.-March)
<b>Opening Gross Block</b>	59.73	45.03
<b>Additional Capitalization</b>	11.49	20.97
<b>Closing Gross Block</b>	71.21	66.00
<b>Average Gross Block</b>	65.47	55.52
<b>Rate of Depreciation</b>	4.22%	4.22%
<b>Depreciation</b>	2.76	2.34

- 4.9.5 **SAIL-BSL requests the Hon'ble Commission to approve the Depreciation for township for FY 2023-24, as shown in the above Table 28. Any deviation shall be claimed at the time of Truing-up.**

#### **4.10 Interest on Loan**

- 4.10.1 Regulation 10.26 of the Tariff Regulations 2020 specifies the rate of interest on loan capital.
- 4.10.2 SAIL-BSL has prepared the debt schedule by considering the figure of closing debt as per the schedule of FY 2023-24. The base rate of SBI after 15.03.2023 was 8.50%. Further, for the purpose of estimating interest on loan capital, a rate of interest of 10.50% which is 8.50% as on 01.04.2023 plus 200 basis points has been considered.
- 4.10.3 Accordingly, SAIL-BSL has projected the Interest on Loan for the FY 2023-24, as under:

**Table 30: Interest on Loan for FY 2023-24 (Rs. Crore)**

Particulars	FY 2023-24	
	MYT Order	Estimated (April. -March)
Net Loan-Opening	24.11	14.59
Additions during the year	8.04	14.68
Repayment during the Year	2.76	2.34
Net Loan- closing	29.39	26.93
Average Loan	26.75	20.76
Interest on Loan (%)	0.09	9.00%
Interest on Loan	2.41	1.87

4.10.4 SAIL-BSL requests the Hon'ble Commission to approve the Interest on Loan for township for FY 2023-24, as shown in the Table 29 above. Any deviation shall be claimed at the time of Truing-up.

#### 4.11 Interest on Working Capital

4.11.1 Regulation 10.32 of the Tariff Regulations 2020 specifies the rate of Interest on Working capital. The Rate of interest on working capital shall be equal to the Bank Rates on September 30 of the financial year in which the MYT Petition is filed plus 350 basis points.

4.11.2 In view of above, as the MYT Petition was filed on 30.03.2022. Hence, the base rate of SBI as on 30.09.2021 is considered for computation of interest on working capital. The base rate of SBI after 30.09.2021 was 7.00 %. Further, for the purpose of estimating interest on loan capital, a rate of interest of 10.50% which is 7.00% plus 350 basis points has been considered.

4.11.3 Accordingly, SAIL-BSL has estimated the Interest on Working capital for the FY 2023-24, as under:

**Table 31: Interest on Working Capital for FY 2023-24 (Rs. Crore)**

Particulars	FY 2023-24	
	MYT Order	Estimated (April. -March)

<b>Maintenance spares 1% of opening GFA</b>	0.60	0.45
<b>2 Months Revenue</b>	134.49	16.96
<b>Less: 1 month of power purchase cost</b>	-62.83	-10.05
<b>Total Working Capital</b>	72.26	7.36
<b>S.B.I. base rate</b>	10.50%	12.05%
<b>Interest on Working Capital in Rs. Core</b>	7.59	0.89

4.11.4 SAIL-BSL requests the Hon'ble Commission to approve Interest on Working Capital for township for FY 2023-24, as shown in the above Table 30. Any deviation shall be claimed at the time of Truing-up.

#### 4.12 Return on Equity

4.12.1 Regulation 10.19 of the Tariff Regulation 2020 specifies the methodology to calculate the Return on Equity.

4.12.2 SAIL-BSL considered the opening of equity for FY 2023-24 as the closing equity of FY 2022-23. Further, the average rate of return of 14.50 % has been applied to arrive at the return on equity. Accordingly, SAIL-BSL has estimated RoE for the FY 2023-24, as under in Table 31:

**Table 32: Return on Equity for FY 2023-24 (Rs. Crore)**

Particulars	FY 2023-24	
	MYT Order	Estimated (April. -March)
<b>Opening Equity</b>	17.91	13.49
<b>Additions</b>	3.45	6.29
<b>Closing Equity</b>	21.36	19.78
<b>Average Equity</b>	19.64	16.64
<b>Rate of Return</b>	14.50%	14.50%
<b>Return on Equity</b>	2.85	2.41



#### 4.13 Summary for ARR of FY 2023-24

4.13.1 The estimated ARR for FY 2023-24 is summarized in the Table 32 below:

**Table 33: Summary of estimated ARR for the FY 2023-24 (Rs. Crore)**

Particulars		FY 2023-24	
		MYT Order	Estimated (April.-March)
<b>Power Purchase Cost (Township Only)</b>	<b>1</b>	103.79	120.57
<b>Power Purchase Cost (including Steel Plant)</b>	<b>2</b>	724.47	845.13
<b>Employee Cost</b>	<b>3</b>	9.35	8.41
<b>R&amp;M Expenses</b>		4.76	3.82
<b>A&amp;G Expenses</b>		2.79	5.00
<b>Depreciation</b>		2.76	2.34
<b>Interest on Loan</b>		2.41	1.87
<b>Return on Equity</b>		2.85	2.41
<b>Interest on Working Capital</b>		7.59	0.89
<b>Total Annual Revenue Requirement (Township Only)</b>	<b>4 = (1+3)</b>	<b>135.36</b>	<b>145.31</b>
<b>Total Annual Revenue Requirement (including Steel Plant)</b>	<b>5= (2+4)</b>	<b>756.04</b>	<b>869.98</b>

4.13.2 SAIL-BSL requests the Hon'ble Commission to approve Annual Revenue Requirement for the FY 2023-24, as shown in the above Table 32. Any deviation shall be claimed at the time of Truing-up.

#### 4.14 Revenue at Existing Tariff

4.14.1 Based on the actual revenue from sale of power of FY 2023-24 at existing tariff of SAIL-BSL for township is as under:

**Table 34: Total revenue at existing tariff for FY 2023-24 (Rs. Crores)**

Particulars	FY 2023-24
-------------	------------

	MYT Order	Estimated (April. -March)
<b>Total Revenue</b>	806.91	101.75

#### 4.15 Summary of Revenue Surplus/Gap

4.15.1 Based on the actual proposed revenue from sale of power at existing tariff of FY 2023-24, the revenue (surplus)/gap are estimated as under for FY 2023-24:

**Table 35: Summary of revenue (Surplus)/Gap for FY 2023-24 (Rs. Crore)**

Particulars	FY 2023-24	
	MYT	Estimated (April. - March)
<b>Annual Revenue Requirement</b>	786.24	145.31
<b>Revenue from Distribution of Electricity</b>	806.91	101.75
<b>Revenue (Surplus)/Gap for the year</b>	(20.67)	43.57

## 5 REVISED ARR PROJECTION FOR FY 2024-25

5.1.1 The Regulation 6.2 (b) of Tariff Regulations, 2020 provides for projection of Annual Revenue Requirement (ARR) for each year of the Control Period. In this Chapter, SAIL-BSL has projected the ARR for FY 2024-25.

### 5.2 Energy sales

5.2.1 The methodology adopted by the Petitioner to project the sales during FY 2024-25 is outlined below:

1. CAGR of energy sales of past 2 years from FY 2020-21 to FY 2022-23 are the most recent data and provides true picture of COVID-19 recovery.
2. Hence, 2-year CAGR based on consumer categories from FY 2020-21 to FY 2022-23 is considered for projection of sales for all the categories.
3. CAGR is applied on category-wise sales of from FY 2024-25.
4. Where the CAGR is (+), the same is considered for the purpose of projection;
5. Where the CAGR is (-), no increase is considered for projections;
6. For Steel Plant and HT/LT utility, the energy sale is considered as same as approved in MYT Order for FY 2024-25.
7. With the enhanced efforts of the Petitioner towards theft reduction and improvement in the quality of supply, the sales are not projected to reduce during FY 2024-25.
8. The impact of externalities is captured through appropriate reduction/increase in the CAGR rate, as necessary.

5.2.2 Assumed category wise CAGR for projection is outlined below:

**Table 36: Category-wise CAGR assumed for projections of No. of Consumers  
Connected Load for**

Category	Energy Sales		No. of Consumers		Connected Load	
	2 Year CAGR from FY21 to FY23	Assumed growth	2 Year CAGR from FY21 to FY23	Assumed growth	2 Year CAGR from FY21 to FY23	Assumed growth
DS-LT	3.40%	4.00%	2.69%	2.00%	1.00%	1.00%
DS-HT	4.27%	3.00%	0.00%	0.00%	0.00%	0.00%
CS	9.45%	5.00%	0.37%	1.00%	23.91%	6.00%
LTIS	0.20%	0.00%	4.32%	4.00%	-7.22%	0.00%
HTS	-22.83%	0.00%	9.54%	1.00%	8.11%	0.00%
HT/LT	-	As per MYT	-	As per MYT	-	As per MYT

5.2.3 It is submitted that based on the data available with SAIL-BSL, the aforesaid approach to project sales may be the best possible approach yielding the closest possible results. Any deviation in the actual numbers shall be considered while truing up for the respective years.

5.2.4 The projected category-wise No. of Consumer for FY 2024-25 is as under:

**Table 37: Projected category-wise No. of Consumers for the FY 2024-25**

Consumer Category	FY 2024-25	
	MYT Order	Estimated
DS-LT	28939	30506
DS-HT	5	5
CS	1979	1800
LTIS	34	34
HTS	24	26
HT/LT	656	656
<b>Township Total</b>	<b>31637</b>	<b>33027</b>
Steel Plant	1	1
<b>GRAND TOTAL</b>	<b>31638</b>	<b>33028</b>

5.2.5 The projected category-wise Energy Sales for FY 2024-25 is as under:

**Table 38: Projected Category-wise Energy Sales for the FY 2024-25 (MUs)**

Consumer Category	FY 2024-25	
	MYT Order	Estimated
DS-LT	108.83	110.20
DS-HT	6.27	6.92
CS	19.12	18.38
LTIS	0.45	0.45
HTS	12.45	9.78
HT/LT	67.19	67.19
<b>Township Total</b>	<b>214.31</b>	<b>212.92</b>

<b>Steel Plant</b>	<b>1510.49</b>	<b>1510.49</b>
<b>GRAND TOTAL</b>	<b>1579.85</b>	<b>1579.85</b>

5.2.6 The projected category-wise connected load for the FY 2024-25 is as under:

**Table 39: Projected Category-wise Connected Load for the FY 2024-25**

Consumer Category	Units	FY 2023-24	
		MYT Order	Estimated
DS-LT	kW	98,932	98,932
DS-HT	kVA	4,815	4,815
CS	kW	25,963	23,540
LTIS	HP	1,034	853
HTS	kVA	8,108	7,793
HT/LT	kW	36,596	35,188
Steel Plant	MVA	45	45

5.2.7 SAIL-BSL requests the Hon'ble Commission to approve the No. of Consumers, Energy Sales and Connected load, for Township and Steel Plant for the FY 2024-25, as shown in the Tables 38 above. Any deviation shall be claimed at the time of Truing-up of the FY 2024-25.

### 5.3 Distribution loss

5.3.1 SAIL-BSL has projected distribution loss for the entire for FY 2023-24 in line with the estimated loss for the township as approved by the Hon'ble Commission in MYT Order for FY 2024-25. Accordingly, the projected distribution loss for FY 2024-25 is as under:

**Table 40: Projected Distribution loss for SAIL-BSL FY 2024-25**

Consumer Category	FY2024-25	
	MYT Order	Estimated
Distribution loss	10.00%	10.00%

**5.3.2 SAIL-BSL requests the Hon'ble Commission to approve the distribution loss for the entire control period, as shown in the Table 39 above. Any deviation shall be claimed at the time of Truing-up of the respective year.**

#### **5.4 Energy Balance**

5.4.1 SAIL-BSL has arrived at the Energy Balance for FY 2024-25 based on the projected sales and Distribution Loss as discussed in the above section. SAIL-BSL considered the distribution loss only on the Township.

5.4.2 SAIL-BSL humbly submits that the energy requirement for Steel Plant has been taken as the projected energy consumption of the Steel Plant in the MYT Order. Further, for the township, a distribution loss discussed in the earlier section is added to the projected energy sales of the township for FY 2024-25.

5.4.3 Accordingly, SAIL-BSL has projected the Energy Requirement for FY 2024-25, as under:

**Table 41: Projected Energy Balance for FY 2024-25**

Consumer Category	Units	FY 2024-25	
		MYT Order	Estimated
Energy Sales – Township	MUs	214.31	212.92
Distribution Losses (Township)	%	10.00%	10.00%
Energy required at township periphery	MUs	238.12	236.58
Energy required for Steel Plant consumption	MUs	1510.49	1510.49
<b>Total Energy Required at SAIL-BSL Periphery</b>	<b>MUs</b>	<b>1748.61</b>	<b>1747.07</b>

**5.4.4 SAIL-BSL requests the Hon'ble Commission to approve Energy Balance for FY 2024-25, as shown in the Table 40 above. Any deviation shall be claimed at the time of Truing-up of the respective year.**

#### **5.5 Power Procurement Plan**

5.5.1 As discussed in the earlier chapter that SAIL-BSL is in the power purchase agreement with the DVC which is a power generating company under the aegis of

the Government of India and supplies power to them in accordance with the tariff fixed by the State Commission. Further, SAIL-BSL intends to continue the same during FY 2024-25 for procurement of power and it has initiated the process for the same.

- 5.5.2 SAIL-BSL is exempted from RPO for the energy procured from DVC vide Case No. 07 of 2016 of JSERC dated 20.06.2018. The relevant extracts are as follow:

*“ ...The petitioner (SAIL, Bokaro Steel Plant), Bokaro Steel City is exempted from complying with the Renewable Purchase Obligation for the part of the power consumption which the petitioner is purchasing from DVC to the extent that it has to be complied by the DVC.”*

- 5.5.3 Accordingly, SAIL-BSL has projected the Power Procurement Cost by escalating the per unit power purchase of FY 2023-24 with 4% CAGR as approved by the Hon'ble Commission in the MYT Order dated 22.06.2023, as under:

**Table 42: Projected Power Procurement Plan for FY 2024-25**

Particulars	Unit	FY 2024-25	
		MYT Order	Estimated
Total Power Purchase	MUs	1748.61	1747.07
Power Purchase - Township	MUs	238.12	236.58
Power Purchase - Plant	MUs	1510.49	1510.49
Per unit power purchase cost	Rs./kWh	4.70	5.49
Total Power Purchase Cost	Rs. Crore	821.85	958.73
Power Purchase Cost - Township	Rs. Crore	111.92	129.83
Power Purchase Cost - Plant consumption	Rs. Crore	709.93	828.90

- 5.5.4 SAIL-BSL requests the Hon'ble Commission to approve Power Procurement Plan for FY 2024-25, as shown in the Table 41 above. Any deviation shall be claimed at the time of Truing-up of the respective year.

## 5.6 Operation and Maintenance Costs

- 5.6.1 Regulations 10.3 to 10.7 of the Tariff Regulations 2020 specifies the methodology for the determination of O&M expenses for the Control Period from FY 2021-22 to FY 2025-26 as discussed in Para 4.6.1 of this Petition.
- 5.6.2 Accordingly, employee expenses are projected based on Regulation 10.6 of the Tariff Regulations, 2020. For the projection years, the escalation factor has been taken as computed for FY 2023-24 in Para 4.6.4. Further, the Growth factor is considered as 0% as it was not determined by the Commission in MYT Order, as per the Regulation 10.6 b) of Tariff Regulation, 2020.
- 5.6.3 The R&M expenditure incurred by the distribution licensee is a function of the network condition of the licensee. The network condition would depend on the condition of the assets and subsequent augmentation/ strengthening/ capex undertaken by the Licensee. Benchmarking with other utilities in other State jurisdictions for the R&M expenditure therefore may not provide an appropriate indication. The K factor need to be customized for each distribution licensee considering the above and may vary across years based on the capital expenditure in the previous years together with expenditure incurred during the year. Accordingly, the K factor if computed as 7.17% as per Regulation 10.6 of Tariff Regulation 2020.
- 5.6.4 Accordingly, SAIL-BSL has projected the O & M cost for the FY 2024-25, as under:

**Table 43: Projected O&M Expense for FY2024-25(Rs. Crore)**

Particulars	FY 2024-25	
	MYT Order	Estimated
R&M Expenses	9.92	8.41
Employee Expenses	5.42	4.74
A & G Expenses	2.96	5.00
<b>Total O&amp;M Expenses</b>	<b>18.30</b>	<b>18.15</b>

- 5.6.5 SAIL-BSL requests the Hon'ble Commission to approve Operations & Maintenance for the entire control period, as shown in the Table 42 above. Any deviation from the projected sales shall be claimed at the time of Truing-up of the respective year.



## 5.7 Gross Fixed Assets

- 5.7.1 SAIL-BSL has submitted the CAPEX and Capitalisation for the Feeder augmentation, Arterial lights and High Mast Light for FY 2023-24 in the Para 4.7 of this Petition.
- 5.7.2 SAIL-BSL humbly submits that the Hon'ble Commission in the MYT Order dated 22.06.2023, has approved a minor CAPEX for Procurement of cables, wiring and other materials. Accordingly, SAIL-BSL has considered the procurement of cables, wiring and other materials as approved by the Hon'ble Commission in the MYT Order.
- 5.7.3 Further, Hon'ble Commission in the Tariff Order dated 22.06.2023, also acknowledged the CAPEX for Underground LT Network development, Installation of Smart meter, and Installation of Energy saving dimmable LED streetlights (Smart Street light Solution) and allowed SAIL-BSL for approval of these schemes in the subsequent tariff petition.
- 5.7.4 Accordingly, SAIL-BSL submits the CAPEX and Capitalisation for Smart Street light Solution for the digital transformation in SAIL-BSL for harnessing the potential of latest advances in the field of IoT/AI/ML.
- 5.7.5 In this regard, an Expression of Interest was floated to capture relevant projects across different areas. Further, multiple projects were selected on the basis of cost, quality and benefits. The work order and the implementation schedule of the scheme is annexed in **Annexure N** of this petition. Till now smart streetlight are installed at 200 nodes and under testing phase.
- 5.7.6 **Accordingly, SAIL-BSL humbly submits before the Hon'ble Commission to approve the CAPEX and Capitalisation of Rs. 0.50 Crore during FY 2024-25 as funded through SAIL-BSL internal funds.**
- 5.7.7 SAIL-BSL humbly prays before the Hon'ble Commission the current earthing infrastructure in the substations is antiquated and significantly depleted, resulting in damages to transformers and consumer equipment. Further, the same issue was raised by some consumers during the public hearing dtd. 02.02.2024.
- 5.7.8 Accordingly, to address these issues, SAIL BSL intends to adopt new technology in the form of chemical earthing, known for its extended lifespan and minimal maintenance requirements.
- 5.7.9 The primary objective of the proposed scheme is to implement an extensive electrical grounding system within the 11kV substations and to establish a comprehensive lightning protection system for public buildings. Additionally, this scheme anticipates a reduction in power fluctuations through the provision of proper earthing

mechanisms. This proposed scheme arises from the existence of 250 substations in the township, installed during the construction phase of BSL Township. Each of these substations necessitates 08 earthings, crucial for ensuring the safety of transformers and associated equipment at consumer premises.

5.7.10 In this regard, SAIL-BSL has proposed AMR Schemes vide Scheme no. AMR/STG-1/ TE-Electrical/6499/686. The estimated cost of the project is Rs. 4.48 Crore, which is to be completed within 12 months from the date of contract. SAIL-BSL submits that it would perform the mentioned project in FY 2024-25. However, the actual Y-O-Y capitalization of the project will be claimed during the true up petitions. The Copy of in Principal Stage-I approval is annexed as **Annexure O**.

5.7.11 Further, SAIL-BSL humbly, prays before the Hon'ble Commission to allow SAIL-BSL to approach separately to the Hon'ble Commission in next tariff petition for the CAPEX approval of Installation of Smart Meters and Underground of LT network after the Stage I approval as discussed in Para 3.4.7 to 4.4.11.

**Table 44: Projected Gross Fixed Asset (GFA) for FY 2024-25 (Rs. Crore)**

Particulars	FY 2024-25	
	MYT Order	Estimated
Opening GFA	71.21	66.60
Additional Capital expenditure	1.00	5.49
Closing GFA	72.21	71.99

5.7.12 **SAIL-BSL requests the Hon'ble Commission to approve GFA for the entire control period, as shown in the Table 43 above. Any deviation shall be claimed at the time of Truing-up of the respective year.**

## 5.8 Consumer Contribution, Grants and subsidies

5.8.1 Regulation 10.11, 10.28 and 10.34 of the Tariff Regulations, 2020, specifies the methodology to deal with Consumer Contribution, Grants and Subsidies for FY 2024-25.

5.8.2 SAIL-BSL humbly submits that there are no consumer contributions/grants towards GFA creation and accordingly the same has not been considered for computation of GFA and depreciation thereon.

5.8.3 **SAIL-BSL requests the Hon'ble Commission to consider that, there is no Consumer Contribution, Grants and Subsidies for FY 2024-25. Any deviation shall be claimed at the time of Truing-up of FY 2024-25.**

## 5.9 Depreciation

5.9.1 Regulations 10.34 to 10.40 of the Tariff Regulations, 2020, specifies the determination of depreciation for FY 2024-25. The relevant extracts are as follow:

*“10.36 Depreciation shall be calculated annually, based on the straight-line method at the rates specified at **Appendix-I** of the regulation. The base value for the purpose of depreciation shall be original cost of the asset...*

*10.39 The Commission may, in the absence of the Fixed Assets Register, calculate Depreciation (%) arrived by dividing the Depreciation and the Average Gross Fixed Assets as per the latest available Audited Accounts of the Distribution Licensee. The Depreciation (%) so arrived shall be multiplied by the Average GFA approved by the Commission for the relevant Financial Year to arrive at the Depreciation for that Financial Year.”*

5.9.2 SAIL-BSL has considered the Gross Fixed Assets of FY 2024-25 as the closing balance of FY 2023-24. Based on the Opening GFA of FY 2022-23, the additions in GFA for the FY 2024-25 has been added to arrive at the closing GFA figures for the FY2024-25. Further, the depreciation rate of 4.22 % has been considered as per the rates provided in Appendix 1 of the Tariff Regulations, 2020.

5.9.3 The computation of depreciation is based on the Straight-Line Method as prescribed in the Tariff Regulations, 2020 issued by the Hon’ble Commission.

5.9.4 Accordingly, SAIL-BSL has projected the Depreciation for the Control Period, as under:

**Table 45: Projected Depreciation for FY 2024-25 (Rs. Crore)**

Particulars	FY 2024-25	
	MYT Order	Estimated
Opening Gross Block	71.21	66.00
Additional Capitalisation	1.00	5.99
Closing Gross Block	72.21	71.99
Average Gross Block	71.71	69.00

Rate of depreciation	4.22%	4.22%
<b>Depreciation</b>	3.03	2.91

**5.9.5 SAIL-BSL requests the Hon'ble Commission to approve depreciation for FY 2024-25, as shown in the table 44 above. Any deviation shall be claimed at the time of Truing-up of FY 2024-25.**

## **5.10 Interest on Loan**

**5.10.1** Regulation 10.16 and 10.17 of the Tariff Regulations, 2020, specify the debt-to-equity ratio for determination of Interest on Loan and Return on Equity for FY 2024-25. The relevant extracts are as follow:

*“10.16 Existing Schemes - In case of capital expenditure schemes capitalised prior to April 01, 2021, the debt-equity ratio as allowed by the Commission for determination of tariff for the period ending March 31, 2021 shall be considered.*

*10.17 New Schemes – For capital expenditure schemes capitalised after April 01, 2021:*

- a) A normative debt-equity ratio of 70:30 shall be considered for the purpose of determination of Tariff;*
- b) In case the actual equity employed is in excess of 30%, the amount of equity for the purpose of tariff determination shall be limited to 30%, and the balance amount shall be considered as normative loan;*
- c) In case the actual equity employed is less than 30%, the actual debt-equity ratio shall be considered...”*

*“10.26. The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the Licensee:*

*Provided that if there is no actual loan for a particular year but normative loan is still outstanding, then the rate of interest shall be considered on normative basis and shall be equal to the Bank Rate as on April 01 of the respective year of the Control Period plus 200 basis points...”*

**5.10.2** SAIL-BSL has prepared the debt schedule by considering the figure of closing debt as per the schedule of FY 2023-24. The base rate of SBI after 15.03.2023 was 8.50%. Further, for the purpose of estimating interest on loan capital, a rate of interest of 10.50% which is 8.50% plus 200 basis points has been considered.

**5.10.3** Accordingly, SAIL-BSL has projected the Interest on Loan for FY 2024-25, as under:

**Table 46: Projected Interest on Loan for FY 2024-25 (Rs. Crore)**

Particulars	FY 2024-25	
	MYT Order	Estimated
Net Loan-Opening	29.39	26.93
Additions during the year	0.70	4.19
Repayment during the year	3.03	2.91
Net Loan-Closing	27.06	28.21
Average Loan	28.23	27.57
Weighted Average Rate of Interest on Loan (%)	9.00%	9.00%
<b>Interest on Loan</b>	2.54	2.48

5.10.4 SAIL-BSL requests the Hon'ble Commission to approve Interest on Loan Capital for FY 2024-25, as shown in the table 45 above. Any deviation shall be claimed at the time of Truing-up of FY 2024-25.

#### 5.11 Interest on Working Capital

5.11.1 Regulation 10.31 of the Tariff Regulations, 2020, specifies the methodology to calculate the Interest on Working Capital. The relevant extracts are as follow:

*“10.31: Working capital for the Retail Supply of Electricity for the Control Period shall comprise:*

- a) Maintenance spares at 1% of Opening GFA for Retail Supply Business; plus*
- b) Two months equivalent of the expected revenue from sale of electricity at the prevailing tariffs; minus*
- c) Amount held as security deposits under Clause (a) and Clause (b) of subsection (1) of Section 47 of the Act from consumers and Distribution System Users net of any security held for Wheeling Business; minus*
- d) One-month equivalent of cost of power purchased including the Inter-State and Intra-State Transmission Charges and Load Despatch Charges, based on the annual power procurement plan.”*

5.11.2 Further, regulation 10.32 of the Tariff Regulations 2020, specifies the rate of Interest on Working capital. The relevant extracts are as follow:

*“10.32 Rate of interest on working capital shall be equal to the Bank Rate as on September 30 of the financial year in which the MYT Petition is*

*filed plus 350 basis points. At the time of true up, the interest rate shall be adjusted as per the actual rate prevailing on April 01 of the financial year for which truing up exercise has been undertaken.”*

5.11.3 In view of above, as the MYT Petition was filed on 30.03.2022. Hence, the base rate of SBI as on 30.09.2021 is considered for computation of interest on working capital. The base rate of SBI after 30.09.2021 was 7.00 %. Further, for the purpose of estimating interest on loan capital, a rate of interest of 10.50% which is 7.00% plus 350 basis points has been considered.

5.11.4 Accordingly, SAIL-BSL has projected the Interest on Working capital for FY 2024-25, as under:

**Table 47: Projected Interest on Working Capital for FY 2024-25 (Rs. Crore)**

Particulars	FY 2024-25	
	MYT Order	Estimated
Maintenance spares 1% of GFA	0.71	0.66
2 Months Revenue	146.57	22.84
Less: 1 month of power purchase cost	(71.29)	(10.82)
Working capital	75.99	12.68
Interest rate	10.50%	12.05%
<b>Interest on working capital</b>	<b>7.98</b>	<b>1.53</b>

5.11.5 SAIL-BSL requests the Hon'ble Commission to approve Interest on Working Capital for FY 2024-25, as shown in the table 46 above. Any deviation shall be claimed at the time of Truing-up of FY 2024-25.

## 5.12 Return on Equity

5.12.1 Regulation 10.19 of the Tariff Regulation 2020 specifies the methodology to calculate the Return on Equity. The relevant extracts are as follow:

*“10.19: The rate of return on equity shall be 14.50% (post-tax) for the Control Period.*

*10.20: Return on equity for each year shall be allowed on equity employed in assets in use considering the following:*

*Equity employed in accordance with **Clause 10.16** of these Regulations on assets (in use) capitalised as on the beginning of the year; and 50% of*

*the equity projected to be employed in accordance with **Clause 10.17** of these Regulations on assets (in use) commissioned during the year.”*

5.12.2 SAIL-BSL considered the opening of equity for FY 2024-25 as the closing equity of FY 2023-24. Further, the average rate of return of 14.50 % has been applied to arrive at the return on equity. Accordingly, SAIL-BSL has projected RoE for FY 2024-25, as under:

**Table 48: Projected Return on Equity for FY 2024-25 (Rs. Crore)**

Particulars	FY 2024-25	
	MYT Order	Estimated
Opening Equity	21.36	19.78
Additions during year	0.30	1.80
Closing equity	21.66	21.58
Average Equity	21.51	20.68
Rate of Return	14.50%	14.50%
<b>Return on Equity</b>	<b>3.12</b>	<b>3.00</b>

5.12.3 SAIL-BSL requests the Hon'ble Commission to approve Return on Equity for FY 2023-24, as shown in the table 47 above. Any deviation shall be claimed at the time of Truing-up of FY 2024-25.

### 5.13 Summary for ARR of FY 2024-25

5.13.1 The projected ARR for each year of FY 2024-25 is summarized in the table below:

**Table 49: Summary of Projected ARR for FY 2024-25 (Rs. Crore)**

Particulars		FY 2024-25	
		MYT Order	Actual
<b>Power Purchase Cost (Township Only)</b>	<b>1</b>	111.92	129.83
<b>Power Purchase Cost (including Steel Plant)</b>	<b>2</b>	821.85	958.73
<b>Employee Cost</b>	<b>3</b>	9.92	8.41

<b>R&amp;M Expenses</b>		5.42	4.74
<b>A&amp;G Expenses</b>		2.96	5.00
<b>Depreciation</b>		3.03	2.91
<b>Interest on Loan</b>		2.54	2.48
<b>Return on Equity</b>		3.12	3.00
<b>Interest on Working Capital</b>		7.98	1.53
<b>Total Annual Revenue Requirement (Township Only)</b>	<b>4 = (1+3)</b>	<b>146.88</b>	<b>157.89</b>
<b>Total Annual Revenue Requirement (including Steel Plant)</b>	<b>5= (2+4)</b>	<b>856.81</b>	<b>986.80</b>

**5.13.2** SAIL-BSL requests the Hon'ble Commission to approve Annual Revenue Requirement for FY 2024-25, as shown in the table 48 above. Any deviation shall be claimed at the time of Truing-up of FY 2024-25.

#### 5.14 Revenue at Existing and Proposed Tariff

5.14.1 The Revenue from sale of power for FY 2024-25 at existing tariff is depicted below:

**Table 50: Revenue for FY2024-25 at existing tariff**

<b>Consumer Category</b>	<b>Total billed amount at existing tariff (in Crore)</b>	<b>Average Billing Rate (Rs/kWh)</b>	<b>Existing cross subsidy</b>
<b>DS-LT</b>	38.74	3.52	47%
<b>DS-HT</b>	2.37	3.43	46%
<b>CS</b>	14.01	7.62	103%
<b>LTIS</b>	0.36	8.01	108%
<b>HTS</b>	7.80	7.97	107%
<b>HT/LT</b>	43.58	6.49	87%
<b>Township Total</b>	<b>106.85</b>	<b>5.02</b>	



## 5.15 Summary of Revenue Surplus/Gap

5.15.1 Based on the projected aggregate revenue requirement (ARR) computed in the previous section for FY 2024-25 and the revenue from sale of power at existing tariff, the revenue (surplus)/gap are calculated:

**Table 51: Revenue (Surplus)/Gap for FY 2024-25 (Rs. Crore)**

Particulars	FY 2024-25	
	MYT Order	Estimated
Annual Revenue Requirement	890.40	157.89
Revenue from Retail sales at Existing Tariff	879.40	106.85
<b>Revenue (Surplus)/Gap for year</b>	<b>11.00</b>	<b>51.04</b>

5.15.2 The above revenue gap has been estimated at the current tariffs prevailing in the SAIL-BSL's area of supply. It is however submitted that the computed revenue at existing tariff is inadequate to meet the projected annual revenue requirement of the Petitioner for the said period.

## 6 REVENUE GAP AND ITS TREATMENT

### 6.1 Treatment of Revenue Gap

6.1.1 The Revenue Gap/ Surplus of SAIL-BSL for FY 2022-23, FY 2023-24, FY 2024-25 is summarised in table below:

**Table 52: Revenue (Surplus)/Gap for FY 2022-23, FY 2023-24 & FY 2024-25 (Rs. Crore)**

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Annual Revenue Requirement	155.32	145.31	157.89
Revenue from Retail sales at Existing Tariff	85.68	101.75	106.85
<b>Revenue (Surplus)/Gap for year</b>	69.64	43.57	51.04

6.1.2 The above revenue gap has been estimated at the current tariffs prevailing in the SAIL BSL's area of supply. It is however submitted that the computed revenue at existing tariff is inadequate to meet the projected annual revenue requirement of the Petitioner for the said period. This is because, the existing tariff is based on FY 2017-18 ARR projections and practically there is no tariff increase during last 7 years. Hence, SAIL-BSL is proposing upward revision of Tariff for FY 2024-25.

6.1.3 SAIL-BSL proposes a Tariff Hike of 15% on Fixed Charge and 30% of Energy Charge. SAIL-BSL has also compared its proposed tariff with other DISCOMs of Jharkhand. It is observed that for the Domestic category the tariff is in comparable with other utilities.

6.1.4 Considering, SAIL-BSL is a PSU, almost 90% of the consumers are under Domestic category which includes the employees of SAIL-BSL. Hence, it is important to provide reasonable tariff to these consumers. And at the same time the present revenue gap at existing tariff should also be considered while determination of the Tariff.

6.1.5 The Revenue from sale of power for FY 2024-25 at proposed tariff is depicted below:

**Table 53: Revenue for FY 2024-25 at Proposed tariff**

Consumer Category	Total billed amount at existing tariff (in Crore)	Average Billing Rate (Rs/kWh)	Existing cross subsidy
DS-LT	49.85	4.52	61%

<b>DS-HT</b>	3.04	4.39	59%
<b>CS</b>	17.86	9.72	131%
<b>LTIS</b>	0.45	9.96	134%
<b>HTS</b>	9.71	9.93	134%
<b>HT/LT</b>	56.12	8.35	113%
<b>Township Total</b>	137.03	6.44	

6.1.6 **Considering the unique consumer mix of SAIL-BSL compared to other similar utilities in Jharkhand. SAIL-BSL humbly prays to commission to approve the proposed tariff hike in FY 2024-25 in the view of present financial condition of SAIL-BSL.**

## 6.2 Creation of Regulatory Assets

6.2.1 As per JSERC Tariff Regulation, 2020:

*“7.4 The amount under-recovered or over-recovered, along with simple interest at the rate equal to Bank Rate as on April 01 of the respective year plus 350 basis points, shall be carried forward to the Tariff approved for the subsequent years: Provided that no carrying cost on the duration of delay shall be allowed on unrecovered gap if the Licensee fails to submit the Petitions as per the timelines stipulated in Section A 24: Provided further that if such gap is large, and it is not feasible to recover the same in one year alone, the Commission may take a view to create a regulatory asset, as per the guidelines provided in Clause 8.2.2 of the Tariff Policy, 2016:”*

6.2.2 In the present petition, petitioner proposed a tariff hike of around 30% in energy charge and 15% in fixed charge for all the consumer categories in FY 2024-25 to recover the past and expected Revenue Gap till FY 2023-24.

6.2.3 Further, SAIL-BSL submits that, there is still a considerable revenue gap after incorporating tariff hike for FY 2024-25. Therefore, SAIL-BSL humbly submits the Hon’ble Commission to allow creation of Regulatory Asset for the revenue gap in line with provisions under Tariff Regulation 2020 as shown in the table below.

**Table 54: Proposed Regulatory Assets (Rs. Crores)**

Particulars		Rs. Crore
<b>Revenue Gap/(Surplus) in FY 2022-23</b>	<b>a</b>	<b>69.64</b>
<b>Expected Revenue Gap/(Surplus) during FY 2023-24</b>	<b>b</b>	<b>43.57</b>

<b>Expected Revenue Gap/(Surplus) at Proposed Tariff during FY 2024-25</b>	<b>c</b>	<b>51.04</b>
<b>Proposed Regulatory Asset</b>	<b>a+b+c</b>	<b>164.25</b>

- 6.2.4 Accordingly, the Petitioner requests the Hon'ble Commission to approve the Regulatory assets worth Rs. 164.25 Crores as shown in the Table 52 above and provide an appropriate recovery mechanism to recover the Regulatory Assets as per the provisions of Tariff Regulations and guidelines of Tariff Policy.

## 7 TARIFF PHILOSOPHY

### 7.1 ARR for Retail and Wheeling Supply

7.1.1 Regulation 6.8 of Tariff Regulations, 2020 specifies the methodology for allocation of its assets for wheeling and retail supply tariff. SAIL BSL has used the approved segregation as specified in the tariff regulation, 2020 for calculation of wheeling and retail supply of tariff. The relevant segregation is as follow:

**Table 55: Segregation of assets as per tariff regulation, 2020**

Particulars	Share of Supply Business	Share of Wires Business
O&M Cost		
Employee cost	40%	60%
A&G Expense	50%	50%
R&M Cost	10%	90%
Power purchase (Including PGCIL & RLDC Charges)	100%	0%
Interest on security deposit	100%	0%
Interest Cost	10%	90%
Interest on working capital	90%	10%
Taxes on Income	10%	90%
Depreciation	10%	90%
Return on Equity	10%	90%
Less: Non-Tariff/Other Income	90%	10%

7.1.2 Considering the general principle of segregation of assets as specified in the above table, SAIL-BSL has projected the Wheeling ARR and Retail Supply ARR for FY 2024-25 are summarized in the Table below:

**Table 56: Summary of Projected ARR for Retail Supply and Wheeling for FY 2024 – 25 (Rs. Crore)**

Particulars	Retail Supply		Wheeling	
	MYT	Estimated	MYT	Estimated

Power purchase cost (Township)	111.92	129.83	0.00	0.00
Power purchase cost (including Steel Plant)	821.85	958.73	0.00	0.00
Employee cost	3.97	3.36	5.95	5.05
R&M Cost	0.54	0.47	4.88	4.26
A&G Expense	1.48	2.50	1.48	2.50
Depreciation	0.30	0.29	2.72	2.62
Interest on Loan	0.25	0.25	2.29	2.23
Return on Equity	0.31	0.30	2.81	2.70
Interest on working capital	7.18	1.38	0.80	0.15
<b>Total ARR (Township Only)</b>	<b>835.89</b>	<b>967.28</b>	<b>20.92</b>	<b>19.51</b>

7.1.3 **SAIL-BSL requests the Hon'ble Commission to approve the Annual Revenue Requirement for the Retail Supply and Wheeling for FY 2024-25 as shown in the Table 54 above.**

## 7.2 Wheeling Charges

7.2.1 As per Regulation 6.2. b) of the Tariff Regulations, 2020, SAIL-BSL is required to compute the Wheeling Tariff for the first year of the ensuing Control Period. The relevant extracts are as follow:

*6.2 b) Licensees' forecast of expected wheeling tariff and retail supply tariff for each year of the Control Period, based on reasonable assumptions of the underlying financial and operational parameters, as submitted in the Business plan;*

7.2.2 The existing wheeling charge is Rs. 0.42/kWh. Considering the input energy for Township for FY 2024-25 as 236.58.41 MUs and Wheeling ARR as Rs.19.51 Crores for FY 2024-25, the SAIL-BSL has computed Wheeling Charge for FY 2024-25 as below:

**Table 57: Proposed Wheeling Charge for FY 2024-25**

Financial Year	Existing Wheeling Charge	Proposed Wheeling Charge
<b>FY 2024-25</b>	0.24	0.82

7.2.3 **SAIL-BSL requests the Hon'ble Commission to approve the Wheeling Charge for the for FY 2024-25 as shown in the Table 55 above.**

### 7.3 Cross Subsidy Surcharge

7.3.1 Regulation 10.62 of Tariff Regulations, 2020 specifies the methodology for computation of cross subsidy surcharge. The relevant extract is shown below:

*“The surcharge payable by consumers opting for open access on the network of the Licensee will be determined by the Commission as per the following formula:*

$$S = T - [C / (1 - (L / 100)) + D + R]$$

*Where,*

*S is the surcharge;*

*T is the Tariff payable by the relevant category of consumers, including reflecting the Renewable Purchase Obligation;*

*C is the per unit weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligation;*

*D is the aggregate of transmission, distribution and wheeling charge applicable to the relevant voltage level;*

*L is the aggregate of transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level;*

*R is the per unit cost of carrying regulatory assets:*

*Provided that the surcharge shall not exceed 20% of the tariff applicable to the category of the consumers seeking open access.”*

7.3.2 SAIL-BSL has considered the Voltage wise losses at 10.00% for LT Category & 3% for the HT Category for the FY 2024-25 for the computation of voltage wise cost of supply, as SAIL-BSL has not implemented the voltage wise cost of Supply.

7.3.3 Accordingly, petitioner has computed the Cross-subsidy surcharge for various consumer categories as tabulated below:

**Table 58: Cross subsidy Surcharge for FY 2024-25**

Consumer Category	Voltage Level	T Tariff payable (ABR)	C Power Purchase cost	L System losses for applicable voltage	D Wheeling charge (Incl. transmission charges)	S Cross subsidy surcharge (Rs/kWh)	Proposed CSS 20% of T (ABR) in (Rs./kWh)
DS-LT	LT	4.52	5.49	10.00%	0.82	1.52	0.90
DS-HT	HT	4.39	5.49	3%	0.82	1.38	0.88
CS	LT	9.72	5.49	10.00%	0.82	6.71	1.94

LTIS	LT	9.96	5.49	10.00%	0.82	6.95	1.99
HTS	HT	9.93	5.49	3%	0.82	6.92	1.99
<b>HT/LT</b>	LT	8.35	5.49	10.00%	0.82	5.34	1.67

7.3.4 From the above table, it can be seen that, the CSS is higher than 20% of T i.e., ABR for respective category. Hence as per the proviso of Regulation 10.62 of the Tariff Regulations 2020, the CSS limited to 20% of the ABR is proposed as shown in the last column of the above Table 57 for FY 2024-25.

7.3.5 **SAIL-BSL requests the Hon'ble Commission to approve the CSS for the for FY 2024-25 as shown in the Tables 57 above.**



## 8 TARIFF SCHEDULE FOR FY 2024-25

### 8.1 Domestic Service (DS-LT and DS-HT)

#### Applicability

- 8.1.1 This Tariff schedule shall apply to all residential premises for domestic use for household electric appliances such as Radios, Fans, Televisions, Desert Coolers, Air Conditioner, etc. and including Motors pumps for lifting water for domestic purposes and other household electrical appliances not covered under any other schedule.
- 8.1.2 This rate is also applicable for supply to religious institutions such as Temples, Gurudwaras, Mosques, Church and Burial/Crematorium grounds and other recognised charitable institutions, where no rental or fees are charged whatsoever. If any fee or rentals are charged, such institution will be charged under Commercial services category.

#### Category of Services

- (a) Domestic Service – LT(DS-LT): For Urban areas covered by notified Area Committee /municipality / Municipal Corporation / All District Town / All sub-divisional Town /All Block Headquarters / Industrial Area / contiguous sub-urban area all market places urban or rural and for connected load upto 85.044 kW.
- (b) Domestic service – HT (DS-HT): This Schedule shall apply for Domestic Connection in Housing Colonies / Housing Complex / Houses of multi storied buildings purely for residential use for single point metered supply, with power supply at 11 kV voltage level and load above 85.044 kW.

#### Service Character

- (i) For DS-LT: AC, 50 Cycles, Single Phase at 230 Volts for installed load up to 4 kW upto 85.044 kW.
- (ii) For DS-HT: AC, 50 Cycles, at 11 kV for installed load above 85.044 kW

#### Tariff

**Table 59: Proposed Tariff for Domestic Services Consumer Category for FY 2024-25**

Consumer Category	Fixed Charge/Demand Charge		Energy Charge	
	Unit	Rate	Unit	Rate
DS-LT	Rs. /Connection /Month	90	Rs./ kWh	4.23
DS-HT	Rs./kVA/Month	90	Rs./kVAh	3.64

### Delayed Payment Surcharge:

8.1.3 For Domestic Service category, the delayed payment surcharge will be at the rate of 1.5% per month and part thereof. The due date for making payment of energy bills or other charges shall be fifteen days from the date of serving of bill.

## 8.2 Commercial Service (CS)

### Applicability

8.2.1 This schedule shall apply to all consumers, using electrical energy for light, fan and power loads for non-domestic purposes like shops, hospitals (govt. or private), nursing homes, clinics, dispensaries, restaurants, hotels, clubs, guest houses, marriage houses, public halls, show rooms, workshops, central air-conditioning units, offices (govt. or private), commercial establishments, cinemas, X-ray plants, schools and colleges (govt. or private), boarding/lodging houses, libraries (govt. or private), research institutes (govt. or private), railway stations, fuel – oil stations, service stations (including vehicle service stations), All India Radio / T.V. installations, printing presses, commercial trusts / societies, Museums, poultry farms, banks, theatres, common facilities in multi-storied commercial office/buildings, Dharmshalas, and such other installations not covered under any other tariff schedule.

### Service Category:

8.2.2 Commercial Service CS, Urban: For Urban Areas covered by Notified Areas Committee / municipality / Municipal Corporation / All District Town / All Sub-divisional Town / All Block Hqrs. /Industrial Area & Contiguous Sub-urban area, market place rural or urban & connected load up to 85.044 kW.

### Service Character:

8.2.3 CS: AC 50 Cycles, Single phase at 230 Volts or Three Phase at 400 Volts for load upto 85.044 kW

### Tariff:

**Table 60: Proposed Tariff for Commercial Consumer Category for FY 2024-25**

Consumer Category	Demand Charge		Energy Charge
	Unit	Rate	Rate (Rs./kWh)
CS	Rs./kW/Month	150	7.41

### Delayed Payment Surcharge

8.2.4 For Commercial Category, the Delayed Payment Surcharge will at the rate of 1.5% per month and part thereof. The due date for making payment of energy bills or other charges shall be fifteen days from the date of serving of bill.

### 8.3 Low Tension Industrial Services (LTIS)

#### Applicability:

8.3.1 This schedule shall apply to all industrial units applying for a load of less than or equal to 100 kVA (or equivalent in terms of HP or kW). The equivalent HP for 100 kVA shall be 114 HP and the equivalent kW for 100 kVA shall be 85.044 kW.

#### Service Character:

8.3.2 AC, 50 Cycles, Single Phase supply at 230 Volts or 3 Phase Supply at 400 volts. Demand Based tariff/Installation based tariff for sanctioned load upto 85.044 kW.

#### Tariff:

**Table 61: Proposed Tariff for Low Tension Industrial Consumer Category for FY 2024-25**

Consumer Category	Demand Charge		Energy Charge
	Unit	Rate	Rate (Rs./kVAh)
LTIS-Installation Based	Rs./HP/Month	175	5.98

8.3.3 **Installation Based Tariff:** All consumers under this category and opting for Installation based tariff shall be required to pay fixed charges per HP as per the applicable tariff rates for this category. If the inspecting officer during the inspection of premises finds excess load (more than 114 HP) then the inspecting officer has to serve one month notice to the consumer for regularization of excess load (above 114 HP). After the expiry of the said one month, the inspecting officer will inspect the premises again and if he still finds un-regularized load in the premises, action may be taken as per law.

#### Delayed Payment Surcharge

8.3.4 For Low tension industrial and medium power category, the Delayed Payment Surcharge will at the rate of 1.5% per month and part thereof. The due date for making payment of energy bills or other charges shall be fifteen days from the date of serving of bill.

#### Power Factor Penalty

8.3.5 Power Factor Penalty will be applicable in case of maximum demand meters. In case average power factor in a month for a consumer falls below 0.85, a penalty @ 1% for every 0.01 fall in power factor from 0.85 to 0.60; plus 2% for every 0.01 fall below 0.60 to 0.30 (up to and including 0.30) shall be levied on both demand and energy charges; plus 3% for every 0.01 fall below 0.30.

#### **Power Factor Rebate**

8.3.6 Power Factor rebate will be applicable in case of maximum demand meters. In case average power factor as maintained by the consumer is more than 85%, a rebate of 1% and if power factor is more than 95%, a rebate of 2% on demand and energy charges shall be applicable.

### **8.4 High Tension Voltage Supply Services (HTS)**

#### **Applicability:**

8.4.1 The schedule shall apply for consumers having contract demand above 100 kVA.

#### **Service Character:**

8.4.2 50 Cycles, 3 Phase at 6.6 kV / 11 kV / 33 kV / 132 kV / 220 kV / 400 kV

8.4.3 The billing demand shall be the maximum demand recorded during the month or 75% of the contract demand, whichever is higher. In case higher actual demand is recorded for three continuous months, the same shall be considered as the basis for new contract demand of future months provided consumer gets into a new Agreement for the revised contracted demand after payment of necessary charges as applicable. The penalty on exceeding contract demand shall be 1.5 times the normal charges for actual demand exceeding 110% of the contracted demand both on energy commensurate to exceeded demand and exceeded demand; For the purpose of calculating the penal charges exceed demand shall be the difference of the actual demand and Contract Demand.

#### **Tariff:**

**Table 62: Proposed Tariff for High Tension Services Consumer Category for FY 2024-25**

Consumer Category	Demand Charge		Energy Charge
	Unit	Rate	Rate (Rs./kVAh)
HTS	Rs./kVA/Month	345	6.63

### Voltage Rebate

Consumer Category	Voltage Rebate
HT - 33 kV	3.00%
HTS - 132 kV	5.00%
HTS - 220 kV	5.50%
HTS - 400 kV	6.00%

### Load Factor Rebate

Load Factor	Load Factor Rebate
40 - 60%	Nil
60 - 70%	7.5%
70 - 100%	10%

### Delayed Payment Surcharge

- 8.4.4 For High tension service category, the Delayed Payment Surcharge will be charged on a weekly basis at the rate of 0.4% per week. The due date for making payment of energy bills or other charges shall be fifteen days from the date of serving of bill. The bill should be generated and delivered on monthly basis. In case, the licensee defaults in generating and delivering bills on monthly basis, DPS will not be charged for the period of default by licensee.

### Power Factor Penalty

- 8.4.5 Power Factor Penalty will be applicable in case of maximum demand meters. In case average power factor in a month for a consumer falls below 0.85, a penalty @ 1% for every 0.01 fall in power factor from 0.85 to 0.60; plus 2% for every 0.01 fall below 0.60 to 0.30 (up to and including 0.30) shall be levied on both demand and energy charges; plus 3% for every 0.01 fall below 0.30.

### Power Factor Rebate

- 8.4.6 Power Factor rebate will be applicable in case of maximum demand meters. In case average power factor as maintained by the consumer is more than 85%, a rebate of 1% and if power factor is more than 95%, a rebate of 2% on demand and energy charges shall be applicable.

### TOD Tariff for HTS Consumers

8.4.7 TOD tariff proposed for HTS Consumers is given below-

Off Peak Hours: 00: 00 Hrs to 08:00 Hrs and 20:00 Hrs to 24:00 Hrs. 85% of normal rate of energy charge. Peak Hours: 08:00 Hours to 20:00 Hours: 120% of normal rate of energy charge.

**8.5 Additional Clauses applicable across all Tariff Category**

**Statutory Levy**

8.5.1 Electricity Duty and any other duty shall be levied as per the Electricity Duty Act, 1948 (amended upto date) and other prevailing regulations as made applicable from time to time.

**Billing Maximum Demand for HT Consumers**

8.5.2 The billing demand shall be the maximum demand recorded during the month or 75% of the contract demand, whichever is higher. In case higher actual demand is recorded for three continuous months, the same shall be considered as the basis for new contract demand of future months provided consumer gets into a new Agreement for the revised contracted demand after payment of necessary charges as applicable.

8.5.3 The penalty on exceeding contract demand shall be 1.5 times the normal charges for actual demand exceeding 110% of the contracted demand both on energy commensurate to exceeded demand and exceeded demand;. For the purpose of calculating the penal charges exceed demand shall be the difference of the actual demand and Contract Demand.

**Installation of Shunt capacitors**

8.5.4 All consumers having aggregate inductive load greater than 3 HP (2.2 kW) and above (except domestic and street-lights), shall install capacitors of required kVAR rating provided in the following table:

Rating of individual inductive load in HP	kVAR rating of LT capacitors
3 to 5	1
5 to 7.5	2
7.5 to 10	3
10 to 15	4

15 to 20	6
20 to 30	7
30 to 40	10
40 to 50	10-15
50 to 100	20-30

- 8.5.5 For existing consumer, the Petitioner should first serve one month's notice to all such consumers who do not have or have defective shunt capacitors. In case the consumers do not get the capacitor installed/replaced within the notice period, the consumer shall be levied a surcharge at 5% on the total billed amount charge, till they have installed the required capacitors. No new connection shall be released for any consumer having aggregate inductive load greater than 3 HP (2.2 kW) unless the capacitors of suitable rating are installed.

### **Dishonoured Cheque**

- 8.5.6 In the event of dishonoured cheque for payment against a particular bill, the Licensee shall charge a minimum of 300 Rs or 0.5% of the billed amount, whichever is higher. The DPS shall be levied extra as per the applicable terms and conditions of DPS for the respective category.

### **Sale of energy**

- 8.5.7 No consumer shall be allowed to sell the electricity purchased from the Licensee to any other person/ entity.

### **Conversion factors**

- 8.5.8 The following shall be the conversion factors, as and where applicable: (PF=0.85):

1 Kilowatt (KW) = 1.176 Kilovolt ampere (kVA)

1 Kilowatt (KW) = 1 / 0.746 Horsepower (HP)

Horsepower (1 HP) = 0.878 Kilovolt ampere (KVA)

## 9 COMPLINACE OF DIRECTIVES

### Earlier Directives

#### 9.1 Segregation of Accounts of the Electricity Distribution Business and Audit of Accounts:

- 9.1.1 SAIL has an integrated Steel Production Business, and the Company has been incorporated under the Companies Act. It prepares the Audited Annual Accounts as a statutory requirement since inception. Further, the licensed Electricity Distribution Business i.e., SAIL- BSL is a part of this overall integrated Steel Production business.
- 9.1.2 The standalone audited accounts for FY 2022-23 include all the details of revenues, costs, assets, liabilities, reserves, and provisions pertaining to SAIL-BSL electricity distribution business only. SAIL-BSL submits that the majority of expenses for distribution business has been booked on actual basis as incurred for the electricity distribution segment.
- 9.1.3 SAIL-BSL acknowledge the directive of Hon'ble Commission and has prepared accounts for its Electricity Business duly certified by the statutory auditors while claiming truing up of completed years. The copy of the Audited Accounts is enclosed as **Annexure A** of this Petition.

#### 9.2 Employee Details

- 9.2.1 SAIL-BSL has employees including officers and staff who are directly engaged in the SAIL-BSL's electricity distribution business. Further, it includes expenses number of wages and salaries for officers and staff who are directly engaged in the SAIL-BSL's electricity distribution business.
- 9.2.2 SAIL-BSL acknowledge the directive of Hon'ble Commission and has submitted the total employee expense pertaining to electricity distribution business duly certified by the Auditor in the Audited Accounts is enclosed as **Annexure A** of this Petition.
- 9.2.3 Further, in Compliance to the directives of the Hon'ble Commission in the Tariff Order dated 22.02.2024, SAIL-BSL is in preparation of providing detailed breakup of all its employee (TA Electrical) and their expense for FY 2022-23 duly verified and audited by a Chartered Accountant.
- 9.2.4 SAIL-BSL humbly prays before Hon'ble Commission to allow SAIL-BSL to submit certified employee details for FY 2022-23 BSL within 2 weeks of filling the Petition.



### **9.3 Maintenance of Fixed Asset Register**

- 9.3.1 SAIL-BSL acknowledge the directive of Hon'ble Commission and accordingly, prepared the Fixed Assets Register for the township which encompasses all the assets of SAIL-BSL pertains to electricity distribution business with certain allocation matrix. The copy of the Audited Accounts is enclosed as **Annexure A** of this Petition.

### **9.4 Cost of supply**

- 9.4.1 In order to calculate losses at various voltage levels to determine the category wise cost of supply, SAIL-BSL has taken an initiative to install smart meters and CT/PT sets at strategic points within substation network. The Smart meter initiative is under the advance stage of technical specification finalisation. Further, upon technical specification finalisation, the Stage I approval of the scheme shall happen. Accordingly, SAIL-BSL will be in a position to calculate the category wise cost of supply only after installation of such CTs /PTs and smart meters.
- 9.4.2 SAIL-BSL acknowledge the directive of Hon'ble Commission for submission of detailed plan for the cost of study. However, SAIL BSL humbly submits that the cost of supply study can only be done upon implementation of Smart meter initiative.
- 9.4.3 SAIL-BSL requests Hon'ble Commission to allow them to submit the detailed plan regarding category wise cost of supply in upcoming years upon finalisation of Smart meter scheme.

### **9.5 Energy Audit & T&D Loss Reduction Plan**

- 9.5.1 SAIL-BSL acknowledges the directive of Hon'ble Commission and notes that a detailed feeder wise the energy audit is required to assess the high loss pockets and feeder wise/cluster wise loss reduction.
- 9.5.2 However, before initiation of energy audit for the township, the installation of feeder level energy meters is necessary. Furthermore, in this regard SAIL-BSL is planning to install smart meters on each of the feeders Substation as envisaged in the measures undertaken for the loss reduction plan. The Smart meter initiative is under the advance stage of technical specification finalisation. Further, upon technical specification finalisation, the Stage I approval of the scheme shall happen.
- 9.5.3 SAIL-BSL requests Hon'ble Commission to allow them to submit the detailed plan regarding energy audit in upcoming years upon finalisation of Smart meter scheme.

### **9.6 Voltage-wise Cost of Supply**

- 9.6.1 In order to calculate losses at various voltage levels to determine the category wise cost of supply, SAIL-BSL has taken an initiative to install smart meters and CT/PT

sets at strategic points within substation network. The Smart meter initiative is under the advance stage of technical specification finalisation. Further, upon technical specification finalisation, the Stage I approval of the scheme shall happen. Accordingly, SAIL-BSL will be in a position to calculate the category wise cost of supply only after installation of such CTs /PTs and smart meters.

9.6.2 SAIL-BSL acknowledge the directive of Hon'ble Commission for submission of detailed plan for the cost of study. However, SAIL BSL humbly submits that the cost of supply study can only be done upon implementation of Smart meter initiative.

9.6.3 SAIL-BSL requests Hon'ble Commission to allow them to submit the detailed plan regarding voltage wise cost of supply in upcoming years upon finalisation of Smart meter scheme.

### **9.7 Meter separation for Commercial-cum-Residential Consumer Premises**

9.7.1 SAIL-BSL submits that plots in the City Centre and Sector markets have been allocated for commercial purposes. For the allocation of the plots, SAIL-BSL has invited a public advertisement application in the year 1987 for the transaction of business i.e. on purely commercial plots. A sample lease agreement is annexed as **Annexure P** of this Petition.

9.7.2 Further, SAIL-BSL has taken a step forward in this regard and raised a query note sheet to Town Administration Department, SAIL-BSL dated 3rd February 2024, immediately after the public hearing held at Bokaro dated 02nd February 2024, to substantiate that the plots in SAIL-BSL Township have been allotted on commercial terms only.

9.7.3 In reply to this, the Town Administration department has clarified that the Plots had been allotted by SAIL-BSL on purely commercial basis and all the lessees are using the said premises as commercial uses. The relevant extract of the reply is as below:

*Kindly refer attached Advertisement inviting application for allotment of plot in the year 1987 wherein **applications were invited for the transaction of business i.e. on purely commercial plots.** (Attachment-1).*

*Thereafter, lessee applied for a particular trade in the application form i.e. also commercial. (Attachment-2). **There was no provision for residential use.***

*After accepting terms and conditions and depositing requisite charges mentioned in Proposal letter, Allotment order was issued mentioning the trade allotted for. It is clearly mentioned in the allotted trade in Allotment letter **i.e. purely commercial** which can be seen in Attached allotment letter (Attachment-3).*

*The allotted trade which is purely commercial has also reflected in the subsequent Agreement for Lease Agreement executed by and between the Lessee and SAIL/BSL, there is no provision in residential in lease agreement. A copy of Lease Agreement is also attached herewith as (Annexure-4). Hence, it is ample clear that Plots had been allotted by SAIL/BSL on purely commercial basis and all the lessees are using the said premises as commercial uses. (emphasis added)*

- 9.7.4 In view if above, SAIL-BSL submits that it is making all efforts to ensure that consumers are put in appropriate categories with appropriate tariff is charged to them. Further, in this case plots in City Centre and Sector markets have been allotted for the commercial purposes, as per the lease agreement executed between the lessee and SAIL-BSL.
- 9.7.5 Further, there is no residential demarcation in the lease terms. Hence, such bifurcation of electricity tariff on the basis of residential and commercial use cannot be allowed in this case.
- 9.7.6 However, SAIL-BSL acknowledge the directive of Hon'ble Commission to put consumer in appropriate categories and accordingly, appropriate tariff is charged to them.
- 9.7.7 In this regard, as a next step in the benefit of the Consumers, SAIL-BSL is planning to hold a meeting with the concerned consumers only having contract lease agreement of Commercial cum Residential to discuss their grievance to the concerned officer appointed by SAIL-BSL through a public notice in the newspaper.
- 9.7.8 Further, the grievances and suggestions in the meeting would be forwarded to the concerned department of Town Administration for verification and necessary actions. Accordingly, based on the Town Administration recommendation, SAIL-BSL would ensure that consumers are put in appropriate categories with appropriate tariff is charged to them.
- 9.7.9 As the compliance of the directive of the Hon'ble Commission, SAIL-BSL would submit a detailed report within 3 months of the Order dated 22.02.2024. Further, SAIL-BSL request Hon'ble Commission to allow SAIL-BSL to charge these consumers on commercial tariff.

## **9.8 Legal Action against Theft of Electricity**

- 9.8.1 SAIL-BSL is addressing theft by taking certain initiatives as discussed in Para 3.4.7 to 3.4.11 of this Petition. Further, SAIL-BSL has also formed groups consisting of senior officials along with CISF team and visiting the local areas to check illegal connections and hooking. These officials are conducting time-bound raids in the

township for illegal connections. Details of the roster are annexed as **Annexure G** of this Petition.

9.8.2 SAIL-BSL acknowledges the directive of Hon'ble Commission and is SAIL-BSL is in process of discussing the modalities at the department level to perform legal action against the unauthorised use of electricity as per the appropriate Regulations of the JSERC.

9.8.3 SAIL BSL humbly requests Hon'ble Commission to allow SAIL-BSL to submit the details in the subsequent petition.

## **9.9 Computation of SAIDI, CAIFI and SAIFI**

9.9.1 SAIL-BSL has prepared a 'Contingency Plan for restoration of power' wherein stepwise approach has been framed to restore power supply at different instances of events. Besides other details, the plan consists of aspects such as damage report preparation, preventive actions to be taken, priority wise feeder restoration, deployment of officers and availability of vehicles etc.

9.9.2 Further, SAIL-BSL has set objectives and targets in accordance with ISO 9001:2015 Quality management System annexed as **Annexure Q** of this Petition. The following type of complaints and schedule is prepared by SAIL BSL:

1. No light in BSL Township
2. Breakdown
3. Preventive Maintenance schedule
4. Repairs and Maintenance of Street light schedule.
5. DT Failure Cases
6. Testing of meter
7. Replacement of meters

9.9.3 SAIL-BSL acknowledges the directive of Hon'ble Commission and submits that it is planning to install smart meters as discussed in Para 3.4.7 and will be in a position for computation of SAIDI, CAIDI and SAIFI only after installation of such smart meters.

9.9.4 SAIL-BSL humbly requests Hon'ble Commission to allow SAIL BSL to submit the computation of SAIDI, CAIDI and SAIFI post installation of Smart meters in the subsequent Tariff Petition.

## 9.10 Consumer Awareness Programs

9.10.1 In compliance to the directive given by the Hon'ble Commission, SAIL-BSL is in discussion with the internal team regarding the Customer Interaction Meeting (CIM) for the redressal of consumer complaints at General Manager level. A MoM of the discussion is annexed as an **Annexure R** of this Petition.

9.10.2 Further, in this regards, SAIL BSL is in process of publishing the advertisement in the newspaper through public relation office. Once the approval is in place, SAIL-BSL would submit the newspaper advertisement to Hon'ble Commission.

## 9.11 Reduction in Fixed Charges

9.11.1 SAIL-BSL acknowledge the directive of Hon'ble Commission on implementation of the reduction in Fixed Charges as per 'Clause XI: Other Terms and Conditions' of the Tariff Order. However, SAIL-BSL humbly submits that the present metering and billing infrastructure is not capable of reading and billing in the time block manner.

9.11.2 Thus, SAIL-BSL humbly prays before the Hon'ble Commission to allow SAIL-BSL to implement the billing of fixed charge based on billing hours for all categories post implementation of Smart meters which are capable of such billing.

## 9.12 Trajectory for reduction of Cross-subsidy

9.12.1 The Consumer Mix of SAIL-BSL is quite different from other utilities in the Jharkhand as ~90% consumers come under highly subsidized residential category.

9.12.2 However, SAIL-BSL acknowledge the directive of the Commission and proposes the cross-subsidy trajectory to (+/-) 20% of the Average Cost of Supply (ACoS) with the provisions of the Electricity (Amendment) Rules, 2022 as below:

CSS	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29
DS-LT	61%	66%	71%	75%	80%
DS-HT	59%	64%	70%	75%	80%
CS	131%	128%	126%	123%	120%
LTIS	134%	131%	127%	124%	120%
HTS	134%	130%	127%	123%	120%
HT/LT	113%	114%	116%	118%	120%

9.12.3 Further, in this regards, SAIL-BSL has assumed that the ACoS would increase by 4% Y-o-Y.

## Current Directives

### 9.13 Meter separation for Commercial-cum-Residential Consumer Premises

9.13.1 SAIL-BSL has submitted it reply in the Para 9.7 of this Petition.

#### **9.14 Timeliness and Data Adequacy in the Next Tariff Petition**

- 9.14.1 SAIL-BSL submits that due to delay in the finalisation of audited account and the delay in issuance of MYT order the present petition is delayed. SAIL-BSL humbly prays Hon'ble Commission to condone the delay on account of submission of this petition.
- 9.14.2 SAIL-BSL is committed to adhering to the stipulations outlined in 9.3 (Timelines and Data Adequacy) of Tariff Regulation, 2020. The focus moving forward is on maintaining rigorous compliance with deadlines.





**AMOD KUMAR & ASSOCIATES**  
**CHARTERED ACCOUNTANTS**

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### **Auditor's Report**

#### **To SAIL/ Bokaro Steel plant for its Electricity distribution business.**

1. We have audited the attached Balance Sheet of **SAIL / BOKARO STEEL PLANT (ELECTRICITY ACCOUNTS)** as at **31<sup>st</sup> March, 2023** along with the Profit and Loss Statement for the year ended on that date annexed thereto. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.
2. We have conducted our audit in accordance with auditing standards generally accepted in India. Those Standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting - principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.
3. Annual accounts pertaining to electricity distribution business have been extracted from the main audited books of accounts of SAIL/Bokaro steel plant for the financial year 2022-23. Further no separate books of accounts are being maintained for its electricity distribution business and financial statement i.e balance sheet and profit & loss account of electricity distribution business has been prepared on the basis of such accounting policies and assumptions as annexed to these financial statements.
4. Since no separate company has been formed for electricity distribution business and the entire operation of electricity distribution business is being taken care by SAIL/Bokaro steel plant, observations on Companies audit report order, 2003 has not been commented upon and we have limited our observation to the extent of true & fair view of balance sheet and profit & loss account prepared on the basis as mentioned above.





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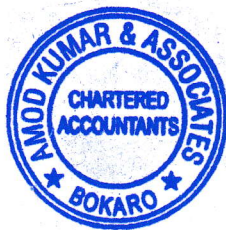
5. The directives given by the Jharkhand state electricity regulatory commission has not been complied in totality. However, in our opinion and to the best of our information and according to the explanations given to us, the said accounts give a true and fair view in conformity with the accounting principles generally accepted in India.

- a) In the case of the Balance Sheet, of the state of affairs of the Company as at 31<sup>st</sup> March, 2023; and
- b) In the case of the Profit & Loss Statement of the Profit for the year ended on that date.

**For Amod Kumar & Associates**  
**Firm Regn. No. 012502C**  
**Chartered Accountants**

*Awadhesh*

**Awadhesh Kumar**  
**Partner**  
**(Membership No. 507082)**  
**Date: 06/02/2024**  
**Place : Bokaro**



UDIN: **24507082BKBHKG2132**

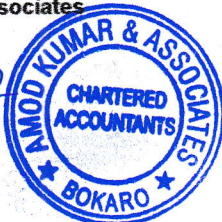


**BOKARO STEEL PLANT ( ELECTRICITY ACCOUNTS)****Balance Sheet as at 31st March, 2023**

	Note No.	As at 31st 31st March, 2023 (₹ in Crores)	As at 31st 31st March, 2022 (₹ in Crores)
<b>SOURCES OF FUNDS</b>			
<b>Shareholders' Fund</b>			
Share Capital		0.00	0.00
Reserves and Surplus		0.00	0.00
<b>Loan Funds</b>			
Funds Provided by BSL		1190.94	1112.95
Unsecured Loans		0.00	0.00
		<u>1190.94</u>	<u>1112.95</u>
<b>APPLICATION OF FUNDS</b>			
<b>Fixed Assets</b>			
Gross Block		45.04	45.53
Less: Depreciation		24.16	22.41
Net Block		20.88	23.12
Capital Work-in-Progress		0.00	0.00
		<u>20.88</u>	<u>23.12</u>
<b>Current Assets, Loans &amp; Advances</b>			
Inventories		0.00	0.00
Sundry Debtors		90.95	82.67
Cash & Bank Balances		0.00	0.00
Interest Receivable/Accrued		0.00	0.00
Loans & Advances		5.39	3.78
		<u>96.34</u>	<u>86.45</u>
<b>Less: Current Liabilities &amp; Provisions</b>			
Current Liabilities		15.17	13.56
Provisions		2.22	0.71
		<u>17.39</u>	<u>14.27</u>
<b>Net Current Assets</b>		78.95	72.18
<b>Miscellaneous Expenditure</b>		0.00	0.00
(to the extent not written off or adjusted)			
<b>Profit &amp; Loss Account Debit Balance</b>		1091.10	1017.64
<b>Inter Unit Current Account</b>		0.00	0.00
		<u>1190.94</u>	<u>1112.95</u>

Significant Accounting Policies and assumptions

Schedules 1 and 3 annexed hereto, form part of the Balance Sheet.

For Amod Kumar and Associates  
Chartered AccountantsCA Awadhesh Kumar  
Partner  
MIN : 507082  
Date: 06/02/2024  
Place : Bokaro

26/02/2024

[Rajul Harkerni]  
GM:TE-Electricals[S K Bhardwaj]  
GM:F&A

**BOKARO STEEL PLANT ( ELECTRICITY ACCOUNTS)****Profit & Loss Account for the period ended 31st March, 2023**

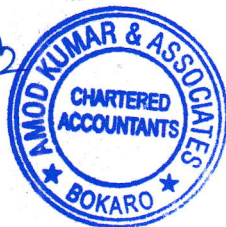
	Note No.	Year ended 31st March, 2023 (₹ in Crores)	Year ended 31st March, 2022 (₹ in Crores)
<b>INCOME</b>			
Income from distribution of electricity		85.68	66.92
Less : Excise duty			
Policy Loss			0.00
Interest earned	2.2	0.00	0.00
Other revenues	2.1	0.00	0.00
Provisions no longer required written back	2.4	0.00	
		85.68	66.92
<b>EXPENDITURE</b>			
Employees' Remuneration & Benefits	9.51	5.11	
Stores & Spares Consumed	4.01	3.21	
Power & Fuel	136.82	117.84	
Repairs & Maintenance	4.19	2.91	
Freight outward	0.00	0.00	
Other expenses	0.81	0.50	
Share of expenditure over income			
- Corporate Office	0.47	0.34	
- CMO	0.42	0.36	
- CCSO	-0.05	-0.04	
Interest & finance charges	1.19	0.84	
Depreciation	1.78	2.44	
Total	159.15	133.50	
Less : Inter Account Adjustments	0.00	159.15	0.00
		-73.46	-66.58
Adjustments pertaining to earlier years		0.00	0.00
Profit /Loss(-) for the period		-73.46	-66.58
Less : Provision for Taxation			0.00
Earlier years adjustments		0.00	0.00
Profit/Loss(-) after tax		-73.46	-66.58
Balance brought Forward		-1017.64	-951.06
		-1091.10	-1017.64
Amount available for appropriation		-1091.10	-1017.64
Balance carried over to BalanceSheet		-1091.10	-1017.64

Significant Accounting Policies and assumptions 3

Schedules 2 and 3 annexed hereto, form part of the Profit & Loss Account.

For Amod Kumar and Associates  
Chartered Accountants

CA Awadhesh Kumar  
Partner  
MIN : 507082  
Date: 06/02/2024  
Place : Bokaro



[Rajul Harkerni]  
GM:TE-Electricals

[S K Bhardwaj]  
GM:F&A

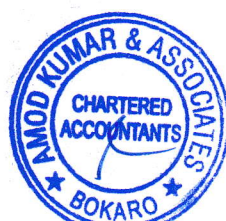


Asset	Subnumber	Asset Class	Capitalized on	Asset description	Acquis.val.	Accum.dep.	Book val.
1500481	0	1133400	01/08/2008	PROV. OF ALTERNATE POWER SUPPLY SYSTEM FOR ADM	2,768,637.00	-1,364,495.51	1,404,141.49
1500532	0	1133400	15/07/2014	TRFR,POWER,3PH,11KV,0.433KV	4,526,970.15	-1,839,557.13	2,687,413.02
1500533	0	1133400	15/07/2014	TRFR,POWER,3PH,11KV,0.433KV	2,263,485.14	-919,778.58	1,343,706.56
1700256	0	1160100	18/09/1968	NIF MARK ENGG EQUIP	1,239.71	-1,239.71	0.00
1703482	0	1162500	21/07/1968	HOHP MOTOR DULY REPAIRS	11,073.23	-10,519.57	553.66
1703513	0	1162500	02/08/1968	CHAIN PULLY BLOCK	399.96	-399.96	0.00
1703515	0	1162500	24/11/1969	CHAIN PULLY BLOCK	704.80	-704.80	0.00
1704270	0	1162500	07/08/1973	MOTOR 250 HP 300 KM K W	58,592.28	-55,662.67	2,929.61
1712082	0	1164300	31/03/1990	GEC LT INDOOR SWITCH	68,391.92	-64,972.32	3,419.60
1712210	0	1164300	10/11/1990	LT PANNEL BOARD FOR 500KVA TRANSFORMER	68,391.93	-65,183.79	3,208.14
1712211	0	1164300	20/02/1993	LT PANEL BOARD FOR 500 KVA TRANSFORMER	68,391.93	-64,972.33	3,419.60
1713075	0	1164300	24/12/2021	PROVISION OF 40 NOS HIGH MAST TOWERS WITH LED FIXT	4,716,788.00	-398,306.55	4,318,481.45
1713075	1	1164300	25/12/2021	PROVISION OF 40 NOS HIGH MAST TOWERS WITH LED FIXT	4,180,789.36	-353,044.44	3,827,744.92
1713075	2	1164300	26/12/2021	PROVISION OF 40 NOS HIGH MAST TOWERS WITH LED FIXT	1,822,395.36	-92,334.69	1,730,060.67
1708578	0	1169700	19/09/1989	CHAIN PULLY	3,022.05	-3,022.05	0.00
1708585	0	1169700	29/01/1989	CHAIN PULLY	4,161.25	-4,161.25	0.00
1708589	0	1169700	16/06/1989	MAN PULLEY	8,460.19	-8,460.19	0.00
1708590	0	1169700	05/06/1989	MAN PULLY	2,500.00	-2,500.00	0.00
1709135	0	1169700	13/06/1987	132	43,884.10	-43,884.10	0.00
1709139	0	1169700	26/08/1987	STEPPDOWN TRANSFORMER	1,490.00	-1,490.00	0.00
1709431	0	1169700	02/08/1985	CHAIN PULLY	2,519.30	-2,519.30	0.00
2300472	0	1220700	30/04/2005	UPS 0.5KVA.	34,064.85	-34,064.85	0.00
2300507	0	1220700	09/05/2005	UPS 0.5KVA.	6,813.00	-6,813.00	0.00
2301333	0	1229700	17/04/2012	COMPUTER FOR TOWNSHIP ELECTRICAL MAINT.	61,717.11	-58,631.25	3,085.86
2301334	0	1229700	17/04/2012	UPS FOR TOWNSHIP ELECTRICAL MAINT.	8,400.00	-8,400.00	0.00
2302005	0	1229700	25/01/2014	COMPUTER	30,858.56	-29,315.63	1,542.93
2302006	0	1229700	25/01/2014	UPS	4,200.00	-4,200.00	0.00
2302066	0	1229700	27/06/2014	COMPUTER	41,780.09	-39,691.09	2,089.00
2302067	0	1229700	27/06/2014	UPS	2,541.00	-2,541.00	0.00
2400038	0	1231000	17/10/1969	ELECT EQUIPT & APPL INSULATOR	1,609.50	-1,609.50	0.00
2400050	0	1231000	19/11/1969	ELECT EQUIPT & APPL 15INCH ELECT FAN	276.64	-276.64	0.00
2400085	0	1231000	07/08/1968	EMI MAKE A/C TRANSFORMER	3,563.25	-3,563.25	0.00
2400103	0	1231000	14/05/1968	AUTO TRANSFORMER MAX LOAD 8 AMPS OUTPUT 0 470VINPU	1,076.04	-1,076.04	0.00
2400104	0	1231000	14/05/1968	286 K V A TRANSFORM	458.29	-458.29	0.00
2400129	0	1231000	02/12/1967	SUNPSAN MULTIMETER	1,964.70	-1,964.70	0.00
2400130	0	1231000	02/12/1967	MULTIMETER WITH LEATHER CASE	1,309.80	-1,309.80	0.00
2400131	0	1231000	23/11/1967	MULTIMETER	654.90	-654.90	0.00
2400132	0	1231000	01/01/1968	SEIMPSON MULTIMETER WITH LEATHER CASE	654.90	-654.90	0.00
2400887	0	1231000	10/05/1972	48 SWEEP A/C CEILING COMPLETE WITH BLADES	24,181.31	-24,181.31	0.00
2402852	0	1231000	29/11/1975	CEILING FAN	2,529.98	-2,529.98	0.00
2402853	0	1231000	21/11/1975	1200 MM SINGLE PHASE A C CEILING FAN	3,035.97	-3,035.97	0.00
2402854	0	1231000	11/11/1975	A C CEILING FANS 48 INCH	50,599.53	-50,599.53	0.00
2402878	0	1231000	02/03/1976	18 INCH SWEEP EXHAUST FAN	1,060.00	-1,060.00	0.00
2405452	0	1231000	24/04/1974	TRANSFORMER 500KVA NO 939	32,042.71	-30,440.57	1,602.14
2405453	0	1231000	24/04/1974	TRANSFORMER	5,554.56	-5,276.83	277.73
2405454	0	1231000	24/04/1974	TRANSFORMER	13,691.54	-13,006.96	684.58
2405455	0	1231000	24/04/1974	TRANSFORMER	44,969.30	-42,720.84	2,248.46
2405620	0	1231000	19/04/1991	50 KVA OUTDOOR TRANSFORMER	17,789.13	-16,899.65	889.48
2405621	0	1231000	10/09/1991	250 KVA I/D PENAL	31,209.00	-29,648.57	1,560.43
2406472	0	1231000	01/08/1985	50MV TRANSFORMER	21,086.18	-20,031.87	1,054.31
2406513	0	1231000	02/11/1983	CEILING FAN	12,004.97	-12,004.97	0.00
2406520	0	1231000	02/11/1983	CEILING FAN	12,683.85	-12,683.85	0.00
2406538	0	1231000	08/08/1983	1200 MM 48 A C CEILING FAN WITH REGULATOR	17,193.28	-17,193.28	0.00
2406539	0	1231000	10/05/1983	CEILING FAN	39,984.37	-39,984.37	0.00
2406540	0	1231000	15/07/1983	48 SWEEP AC CEILING FAN COMPLETE WITH DOWN ROD	72,371.72	-72,371.72	0.00
2407040	0	1231000	03/08/1995	ceiling fans56inch	117,563.16	-117,563.16	0.00
2407041	0	1231000	26/07/1995	ceiling fans48inch	115,097.37	-115,097.37	0.00
5400071	0	1300100	21/02/1991	CHAIN PULLY	7,798.46	-7,798.46	0.00
5400138	0	1300100	02/07/1992	"MAX PULLER 1,6 TONS CAP"	3,224.00	-3,224.00	0.00
5400139	0	1300100	03/09/1992	MAX PULLER	4,920.03	-4,920.03	0.00
5400253	0	1300100	17/05/2000	OIL CIRCUIT BREAKER	26,556.80	-25,228.96	1,327.84
5400053	0	1302500	24/04/1976	SYATI MOTORS 400 HP	123,087.50	-116,933.13	6,154.37
5400001	0	1304500	01/10/1984	ELECTRICAL INSTALLATION T/SHIP(84-85)	1,350,500.00	-1,282,974.00	67,526.00
5400002	0	1304500	01/10/1985	ELECTRICAL INSTALLATION T/SHIP(85-86)	88,000.00	-83,600.00	4,400.00
5400003	0	1304500	01/10/1986	ELECTRICAL INSTALLATION T/SHIP(86-87)	4,451,000.00	-4,228,450.00	222,550.00
5400004	0	1304500	01/10/1987	ELECTRICAL INSTALLATION T/SHIP(87-88)	2,124,000.00	-2,017,800.00	106,200.00
5400005	0	1304500	01/10/1988	ELECTRICAL INSTALLATION T/SHIP(88-89)	551,000.00	-523,450.00	27,550.00
5400006	0	1304500	01/10/1989	ELECTRICAL INSTALLATION T/SHIP(89-90)	1,549,000.00	-1,471,550.00	77,450.00
5400009	0	1304500	01/10/1990	ELECTRICAL INSTALLATION T/SHIP(90-91)	1,981,000.00	-1,881,950.00	99,050.00
5400010	0	1304500	01/10/1991	ELECTRICAL INSTALLATION T/SHIP(91-92)	33,825,000.00	-32,133,750.00	1,691,250.00
5400015	0	1304500	29/02/1992	PROVN. OF ELECTRICAL WORKS FOR 2ND.PHASE OF	160,734.15	-153,504.61	7,229.54
5400016	0	1304500	30/09/1991	ADDL.11 KV CABLE OF FEEDER NO.2 FEEDING POWER TO	148,335.40	-141,548.32	6,787.08
5400018	0	1304500	31/01/1995	PROVN. OF STREET LIGHT ALONGSERVICE LANES IN	133,001.34	-126,351.27	6,650.07
5400150	0	1304500	07/05/1990	G E C LT INDOOR SWITCH	68,391.93	-64,972.35	3,419.58
5400151	0	1304500	15/05/1990	G E C LT INDOOR SWITCH	205,175.79	-194,917.00	10,258.79
5400158	0	1304500	31/03/1991	ELECT. INSTALLATION	470,549.51	-447,022.03	23,527.48
5400159	0	1304500	14/04/1988	ELECT. INSTALLATION	63,600.00	-60,420.00	3,180.00
5400163	0	1304500	16/03/1990	ELECTL INSTLN	85,200.00	-80,940.00	4,260.00
5400178	0	1304500	06/05/1995	Electrification in Block B Bokaro Hotel	76,525.25	-72,698.99	3,826.26
5400236	0	1304500	01/04/1995	ELECTRICAL INSTALLATION	20,037,275.12	-19,035,411.36	1,001,863.76
5400252	0	1304500	01/12/1999	distribution transformer	1,291,005.00	-1,226,454.75	64,550.25
5400255	0	1304500	31/08/1998	6 NOS. OF ADDL.DISTRIBUTION TRANSFORMER FOR TOWNSH	305,579.25	-290,300.29	15,278.96
5400257	0	1304500	31/05/2000	PROVISION OF 2 NOS OF ADDL.DISTRIBUTION TRANSFORME	470,476.66	-446,952.83	23,523.83
5400269	0	1304500	01/05/2006	DISTRIBUTION TRASFORMER-500 KVA	480,941.32	-258,288.61	222,652.71
5400270	0	1304500	03/05/2006	DISTRIBUTION TRASFORMER-500 KVA	480,941.32	-258,288.61	222,652.71
5400271	0	1304500	10/05/2006	DISTRIBUTION TRASFORMER-500 KVA	480,941.32	-258,288.61	222,652.71
5400272	0	1304500	02/06/2006	DISTRIBUTION TRASFORMER-500 KVA	478,583.75	-255,458.56	223,125.19





5400273	0	1304500	05/06/2006	DISTRIBUTION TRASFORMER-500 KVA	239,291.89	-127,729.28	111,562.61
5400274	0	1304500	03/07/2006	DISTRIBUTION TRASFORMER-500 KVA	239,291.88	-126,946.43	112,345.45
5400280	0	1304500	04/02/2007	PROVISION OF HIGH MAST TOWER LIGHT AT SIX PLACES	2,274,876.00	-2,161,132.20	113,743.80
5400282	0	1304500	24/08/2006	PROVISION OF EMERGENCY POWER SUPPLY FOR MD	1,003,184.00	-953,024.80	50,159.20
5400289	0	1304500	15/11/2007	PROV/ INSTALLATION OF 7 NOS. OF 20 MTR HIGH MAST	2,840,265.75	-2,698,252.46	142,013.29
5400303	0	1304500	20/07/2010	RAILWAY LINE 52KG USED AS ELECTRIC POLE IN TA DEPT	2.90	-2.90	0.00
5400315	0	1304500	30/01/2017	PROVISION OF 20 NOS HIGH MAST LIGHTING SYSTEM IN T	4,800,839.62	-1,425,249.25	3,375,590.37
5400315	1	1304500	30/01/2017	PROVISION OF 20 NOS HIGH MAST LIGHTING SYSTEM IN T	1,898,820.22	-281,856.13	1,616,964.09
5400315	2	1304500	30/01/2017	PROVISION OF 20 NOS HIGH MAST LIGHTING SYSTEM IN T	6,261,570.24	-1,487,122.94	4,774,447.30
5400317	0	1304500	16/11/2017	Augmentation of 132kV/ 11kV Township Substation -	52,246,623.47	-6,721,310.43	45,525,313.04
5400317	1	1304500	16/11/2017	Augmentation of 132kV/ 11kV Township Substation -	156,739,870.40	-40,327,862.47	116,412,007.93
5400148	0	1304900	10/04/1990	INDOOR SWITCH	68,391.93	-64,972.34	3,419.59
5400287	0	1304900	02/04/2007	PROVN. OF 04 NOS 20MTR HIGH MAST TOWER LIGHT IN	1,619,146.20	-1,538,188.89	80,957.31
5400310	0	1309700	28/02/2011	PERIMETER SECURITY SYSTEM FOR 132/11 KV TOWNSHIP	12,990,152.70	-7,507,225.73	5,482,926.97
5500254	0	1310100	01/03/1983	CALCUTTA OFFICE	1,166,597.90	-1,108,268.01	58,329.89
5800224	0	1340700	24/08/2004	UPS 0.5KVA.	18,243.05	-18,243.05	0.00
5800278	0	1340700	29/09/2006	UPS 0.5KVA.	1,939.60	-1,939.60	0.00
5800279	0	1340700	29/09/2006	UPS 0.5KVA.	1,939.60	-1,939.60	0.00
5800283	0	1340700	16/10/2006	UPS 0.5KVA.	1,939.59	-1,939.59	0.00
5800525	0	1340700	28/03/2008	UPS 0.5KVA.	2,634.47	-2,634.47	0.00
5800528	0	1340700	28/03/2008	UPS 0.5KVA.	2,634.47	-2,634.47	0.00
5800552	0	1340700	15/06/2007	UPS 0.5KVA.	1,704.39	-1,704.39	0.00
5800553	0	1340700	15/06/2007	UPS 0.5KVA.	35,792.24	-35,792.24	0.00
5801402	0	1340700	05/07/2010	BUSINESS PC MODEL	30,481.95	-28,957.84	1,524.11
5801402	1	1340700	05/07/2010	LASER PRINTER & ACCESSORIES	0.01	0.00	0.01
5901155	0	1350700	01/11/1990	PROVISION OF 7 NOS 1.0TR ROOM	183,000.00	-173,850.00	9,150.00
5900848	0	1351000	23/04/1975	CEILING FAN	50,416.71	-50,416.71	0.00
5900849	0	1351000	12/04/1975	CEILING FAN	75,625.07	-75,625.07	0.00
5900850	0	1351000	07/04/1975	CEILING FAN	8,570.84	-8,570.84	0.00
5900851	0	1351000	26/07/1975	CEILING FAN	50,416.71	-50,416.71	0.00
5900852	0	1351000	20/03/1976	CEILING FAN	27,021.56	-27,021.56	0.00
5901135	0	1351000	02/06/1990	250 K V A RATDOOR	75,525.78	-71,749.47	3,776.31
5901143	0	1351000	01/01/1991	ELECT TOWNSHIP	46,400.00	-44,080.00	2,320.00
5901145	0	1351000	31/03/1990	G ECLTINDOORSWICH BOARD	57,101.12	-54,246.06	2,855.06
5901161	0	1351000	24/04/1974	TRANSFORMER 250 KVA	19,259.62	-18,296.64	962.98
5901162	0	1351000	21/03/1975	CEILING FAN 48 INCH	2,771.67	-2,771.67	0.00
5901163	0	1351000	12/04/1974	48 SWEEP A C CEILING FAN & REGCOMPLETE	1,272.89	-1,272.89	0.00
5901164	0	1351000	12/04/1974	EXHAUST FAN 16 SWEEP COMPLTE WITH ACCESSORIES	1,297.63	-1,297.63	0.00
5901212	0	1351000	13/07/1991	PEDESTAL FAN	13,246.51	-13,246.51	0.00
5901216	0	1351000	11/02/1989	500 KVA O/D TRANSFORMER	86,284.26	-81,970.05	4,314.21
5901217	0	1351000	30/05/1988	INDOOR PANEL FOR 500 KVA TRANSFORMER	46,676.25	-44,342.44	2,333.81
5901218	0	1351000	27/04/1988	TRANSFORMER OUTDOOR 100 KVA	61,730.46	-58,643.94	3,086.52
5901219	0	1351000	30/05/1988	TRANSFORMER OUTDOOR 100 KVA	97,999.57	-93,099.59	4,899.98
5901220	0	1351000	28/11/1988	OLD 500KVA TRANSFORMER	97,999.57	-93,099.59	4,899.98
5901221	0	1351000	28/11/1988	INDOOR PANEL FOR 500 KVA O/D TRANSFORMER	50,042.07	-47,539.97	2,502.10
5901234	0	1351000	06/06/1980	PEDESTAL FAN 16 INCH RONGEN	271.67	-271.67	0.00
5901242	0	1351000	26/08/1987	400A OCB	12,375.46	-11,756.69	618.77
5901243	0	1351000	26/08/1987	OCB 600 A	12,375.45	-11,756.68	618.77
5901248	0	1351000	05/09/1987	500KVA OUT-DOOR TRANSFORMER ECF MAKE SLNO 191/85	97,999.57	-93,099.59	4,899.98
5901249	0	1351000	28/09/1987	OUT DOOR 500KVA TRANSFORMER	97,999.57	-93,099.59	4,899.98
5901250	0	1351000	15/10/1987	250KVA 11/0.433 KVA INDOOR TYPE TRANSFORMER	346,960.15	-329,612.14	17,348.01
5901251	0	1351000	30/12/1987	250KVA OUT DOOR TRANSFORMER	57,932.40	-55,035.78	2,896.62
5901252	0	1351000	03/11/1987	250KVA TRANSFORMER	57,932.40	-55,035.78	2,896.62
5901253	0	1351000	03/11/1987	250MVA SWITCH BOARD	94,000.00	-89,300.00	4,700.00
5901254	0	1351000	28/09/1987	500KVA LT PANEL BOARD	46,676.25	-44,342.44	2,333.81
5901255	0	1351000	15/10/1987	ELETRICAL EQPT CONTROL PANEL	21,500.00	-20,425.00	1,075.00
5901446	0	1351000	17/02/1990	LT PANEL BOARD FOR 500 KVA TRANSFORMER	70,636.37	-67,104.55	3,531.82
5901447	0	1351000	21/03/1990	TRANSFORMER 250 KVA	226,577.34	-215,248.47	11,328.87
5901449	0	1351000	17/02/1990	500 KVA OUT DOOR TRANSFORMER	108,264.34	-102,851.12	5,413.22
5901450	0	1351000	17/02/1990	500 KVA OUT DOOR TRANSFORMER	216,528.68	-205,702.25	10,826.43
5901451	0	1351000	31/08/1989	500 KVA OUT DOOR TRANSFORMER	86,284.27	-81,970.06	4,314.21
5901452	0	1351000	17/02/1990	500 KVA OUT DOOR TRANSFORMER	108,264.34	-102,851.12	5,413.22
5901455	0	1351000	10/08/1989	250 KVA INDOOR PENEL BOARD	31,209.00	-29,648.55	1,560.45
5901457	0	1351000	31/05/1989	INDOOR PANEL FOR 250 KVA TRANSFORMER	31,209.00	-29,648.55	1,560.45
5901458	0	1351000	21/07/1989	OUTDOOR TRANSFORMER 500 KVA	195,999.15	-186,199.19	9,799.96
5901459	0	1351000	13/04/1989	500 KVA SWITCH BOARD COMPLETE SET	56,558.12	-53,730.21	2,827.91
5901656	0	1351000	24/04/1976	CUTING FAN	50,767.45	-50,767.45	0.00
5901657	0	1351000	12/11/1976	CEILING FAN	50,767.45	-50,767.45	0.00
5901744	0	1351000	23/04/1972	MEGGER INSULATION	1,529.00	-1,529.00	0.00
5901789	0	1351000	05/12/1986	GROUNDING TRANSFORMER	61,730.45	-58,643.93	3,086.52
5901790	0	1351000	30/01/1987	OUTDOOR TRANSFORMER	59,597.00	-56,617.15	2,979.85
5901791	0	1351000	26/12/1986	OUTDOOR TRANSFORMER	37,578.90	-35,699.96	1,878.94
5901794	0	1351000	16/10/1986	132 KVCT	133,056.00	-126,403.20	6,652.80
5901796	0	1351000	31/07/1986	POWER TRANSFORMER	1,452,080.00	-1,379,476.00	72,604.00
5901797	0	1351000	16/01/1986	SWITCH BOARD UNIT	199,178.46	-189,219.54	9,958.92
5901798	0	1351000	27/03/1987	500KVA TRANSFORMER	46,676.25	-44,342.44	2,333.81
5901802	0	1351000	06/03/1987	LT SHEET OUTDOOR	10,500.00	-9,975.00	525.00
5901803	0	1351000	27/03/1987	500 KVA OUTDOOR TRANSFORMER	59,597.00	-56,617.15	2,979.85
5901804	0	1351000	06/03/1987	250 KV OUTDOOR	57,932.40	-55,035.78	2,896.62
5901809	0	1351000	13/08/1983	CEILING FAN 48 INCHS	1,999.21	-1,999.21	0.00
5901810	0	1351000	26/09/1983	CEILING FAN 56 INCHS	2,113.97	-2,113.97	0.00
5901811	0	1351000	14/07/1983	EXHUST FAN 15 SWEEP	2,527.15	-2,527.15	0.00
5901836	0	1351000	09/08/1977	56 INCH SWEEP A/C CEILING FAN	2,500.63	-2,500.63	0.00
5901837	0	1351000	09/08/1977	56 INCH SWEEP A/C CEILING FAN	4,445.56	-4,445.56	0.00
5901912	0	1351000	31/03/1993	ELECTRL APPLIANCES	642,933.82	-610,787.13	32,146.69
5901914	0	1351000	21/01/1994	100 KVA.OIL DOOR TRANF	36,202.44	-34,392.32	1,810.12
5901940	0	1351000	24/05/1994	EXHAUST FAN	10,149.79	-10,149.79	0.00
5901941	0	1351000	30/06/1994	PEDESTAL FAN	8,593.19	-8,593.19	0.00



2/10/2020

JSK



5902085	0	1351000	16/08/2001 "EXHAUST FAN 9"	1,450.00	-1,450.00	0.00
5902159	0	1351000	31/05/2005 W/O&REPL OF 2000 NO.CELLING FANS FOR TOWNSHIP	1,629,549.00	-1,629,549.00	0.00
5902210	0	1351000	04/10/2007 W/R OF 600 NO CELLING FAN -IPU	533,696.00	-533,696.00	0.00
5902211	0	1351000	04/10/2007 W/R OF 400 NO CELLING FAN -IPU	366,350.00	-366,350.00	0.00
5902342	0	1351000	08/08/2009 FOUNTAIN LIGHT	5,500.00	-5,225.00	275.00
5902334	0	1351600	11/07/2009 "BATTERY, CVT,MDF, INSTALLATION&COMM, EARTH PIT"	50,920.00	-48,374.00	2,546.00
5902338	0	1351600	15/07/2009 DIGITAL MULTIMETER	884.00	-884.00	0.00
5902084	0	1359700	31/08/2000 PROVISION OF 1500 NOS. CEILING FANS FOR TOWNSHIP	1,352,322.50	-1,352,322.50	0.00
				347,370,796.03	-149,517,841.13	197,852,954.90

F/Y	PO date	Material description	Order value	WDV-31/03/22	Dep-22-23	WDV-31/03/23
2013-14	41698	LT INDOOR PANEL BOARD,415V	3706693.20	775316.66	370669.32	404647.34
2013-14	41698	LT INDOOR PANEL BOARD,415V	1562616.52	326847.29	156261.65	170585.64
2013-14	41468	MTR,SC,415V,A355M,1475RPM	1024617.70	157534.97	102461.77	55073.20
2013-14	41607	TRFR,POWER,3PH,11KV,0.433K	4688290.01	869287.11	468829.00	400458.11
2013-14	41375	COMPLT REWINDNG OF TRANSF	1310511.72	170366.52	131051.17	39315.35
2013-14	41375	COMPLT REWINDNG OF TRANSF	3057860.70	397521.89	305786.07	91735.82
2013-14	41411	REP/MAINT OF ARTERIAL LIGHT	7075013.84	975762.33	707501.38	268260.94
2013-14	41437	COMP REWINDING OF DIFF CAP	5884681.54	858182.72	588468.15	269714.57
2013-14	41632	COMPL REWINDING OF DIFF CA	4652373.40	899458.86	465237.34	434221.52
2013-14	41647	REP/MAINT OF ARTERIAL LIGHT	5483723.89	1103599.43	548372.39	555227.04
2013-14	41696	REP.ORD.OF COMPL.REWINDING	1296381.07	271159.71	129638.11	141521.60
2013-14	41759	MTR,SC,415VAC,D100LB,700RP	24692.97	5555.92	2469.30	3086.62
2013-14	42053	MTR,SC,415VAC,D310,1486RPM	662670.57	201562.30	66267.06	135295.24
2014-15	41979	TRFR,POWER,3PH,11KV,0.433K	4688290.01	1351790.29	468829.00	882961.29
2014-15	41975	COMP.REWDG. OF TRANSFORM	230514.74	66465.08	23051.47	43413.61
2014-15	42066	REPAIR OF DISTRIBUTION TRAN	2806046.54	875720.36	280604.65	595115.70
2015-16	42294	MTR,SC,415VAC,D100LB,700RP	25813.01	10712.40	2581.30	8131.10
2014-15	42306	LT OUTDOOR PANEL BOARD,415	2391674.42	992544.88	239167.44	753377.44
2015-16	42185	REPAIR OF DISTRIBUTION TRAN	972870.02	342125.96	97287.00	244838.96
2015-16	42271	REPAIR /MAINTENANCE OF ART	8644131.25	3450449.06	864413.13	2586035.93
2015-16	42276	COMP.REWDG. OF TRANSFORM	136367.20	54433.24	13636.72	40796.52
2015-16	42335	REPAIR /MAINTENANCE OF ART	5538328.57	2386096.56	553832.86	1832263.70
2015-16	42373	COMP.REWDG. OF TRANSFORM	144788.40	66964.64	14478.84	52485.80
2016-17	42794	AB CABLE,3X95SQMM+1X70SQI	2199974.38	43999.49	43999.49	0.00
2016-17	42643	MTR,SC,415V,A355M,1475RPM	1205073.45	24101.47	24101.47	0.00
2016-17	42825	CABLE,ARM,1.1KV,AL,3.5C,300M	1099997.30	21999.95	21999.95	0.00
2016-17	42825	ACB,415V,1250A,3P,50KA	768547.67	15370.95	15370.95	0.00
2016-17	42735	CONTACTOR,220-240VAC,75A	729799.04	14595.98	14595.98	0.00
2016-17	42704	CABLE,ARM,1.1KV,AL,3.5C,185M	421832.81	8436.66	8436.66	0.00
2016-17	42674	CABLE,ARM,1.1KV,AL,4C,16MM	38632.50	772.65	772.65	0.00
2016-17	42674	CABLE,ARM,1.1KV,AL,4C,25MM	293152.50	5863.05	5863.05	0.00
2016-17	42613	SWITCH FUSE UNIT,HEAVY DUTY	230520.00	230520.00	230520.00	0.00
2016-17	42582	ACSR CONDUCTOR, 40 SQ. MM	180600.00	3612.00	3612.00	0.00
2016-17	42766	ACSR CONDUCTOR,65MM2	180600.00	3612.00	3612.00	0.00
			0.00			
2017-18	43311	TRFR,POWER,3PH,11KV,0.433K	2578555.00	255706.70	255706.70	0.00
2017-18	43220	AB CABLE,3X95SQMM+1X70SQI	2360000.00	383500.00	383500.00	0.00
2017-18	43100	MTR,SC,415V,A355M,1475RPM	1881775.50	127019.85	127019.85	0.00
2017-18	43434	ACSR CONDUCTOR, 40 SQ. MM	1525917.00	296282.22	296282.22	0.00
2017-18	43434	ACSR CONDUCTOR,65MM2	1525917.00	296282.22	296282.22	0.00
2017-18	42916	S-D STARTER PANEL FOR 315KW	1463432.71	52439.67	52439.67	0.00
2017-18	42916	S-D STARTER PANEL FOR 200KW	1463432.71	52439.67	52439.67	0.00
2017-18	43190	MTR,SC,220KW,415VAC,315LM	1005142.22	99676.60	99676.60	0.00
2017-18	43190	CABLE,ARM,1.1KV,AL,4C,16MM	909190.00	133347.87	133347.87	0.00
2017-18	43190	CABLE,ARM,1.1KV,AL,4C,25MM	909190.00	133347.87	133347.87	0.00
2017-18	43190	CABLE,ARM,1.1KV,AL,2C,2X25M	255360.00	25323.20	25323.20	0.00
2017-18	43039	END JOINTING KIT,XLPE 3X240	213285.00	21150.76	21150.76	0.00
2017-18	43281	CABLE,UNARM,1.1KV,AL,1,1X1	207762.60	33761.42	33761.42	0.00
2017-18	43281	CABLE,UNARM,1.1KV,AL,2,2X1	207762.60	33761.42	33761.42	0.00
2017-18	43281	CABLE,UNARM,1.1KV,AL,1,6MM	207762.60	33761.42	33761.42	0.00
2017-18	43281	CABLE,UNARM,1.1KV,AL,2C,6M	207762.60	33761.42	33761.42	0.00
2018-19	43404	CABLE,ARM,1.1KV,AL,3.5C,300M	2206600.00	673013.00	441320.00	231693.00
2018-19	43231	LT OUTDOOR PANEL BOARD,415	2009150.01	453733.04	401830.00	51903.04
2018-19	43231	LT INDOOR PANEL BOARD,415V	2009150.01	453733.04	401830.00	51903.04
2018-19	43488	MINIMUM 35W LED STREET LIG	1500800.00	529032.00	300160.00	228872.00
2018-19	43318	TRANSFORMER OIL W/O OXIDA	1454704.00	397619.09	290940.80	106678.29
2018-19	43386	ACB,415V,1000A,3P,50KA	1310847.86	399808.60	262169.57	137639.03
2018-19	43260	LED TUBE LIGHT WITH FIXTURE	1020768.00	246685.60	204153.60	42532.00
2018-19	43343	CONTACTOR,220-240VAC,75A	857364.40	234346.27	171472.88	62873.39
2018-19	43404	CONTACTOR,220-240V,400A	428480.18	130686.45	85696.04	44990.42

2021-22

	103077792.94	22512561.78	11544914.53	10967647.25
			11,544,914.53	
Total	450,448,588.97	gross block	-149,517,841.13	Gross 22-23
Total	17,783,499.98	Dep during 22-23	-143,279,255.68	Gross 21-22
Total	208,820,602.15	WDV as on 31.03.23	-6,238,585.45	Depr 22-23 only





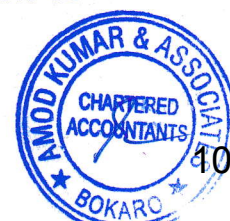
### **SCHEDULE 3: SIGNIFICANT ACCOUNTING POLICIES & ASSUMPTIONS.**

#### **Balance Sheet Items:**

1. Loan Funds: This is the balancing figure in the balance sheet.
2. Fixed Assets: The figures appearing here only pertains to TA-Electrical as DNW is not in a position to segregate the assets from the consolidated sheet. However Idle Assets, any additions during the year, directly identifiable, has been considered in the accounts.
3. Sundry debtors: Taken from Separate GL code as exists for electricity revenue recoverable in BSL.
4. Current liabilities: Taken on the basis of pro rata basis w.r.t BSL.
5. Provisions: Provision related to employees have been calculated in the ratio of Employee remuneration of electricity business versus total employee remuneration of BSL during the year.
6. Loan funds are the losses in distribution business from year to year.
7. Hon'ble Supreme Court dismissed the SLP by the Company in respect of dispute with Damodar Valley Corporation (DVC) related to provisional tariff petition of electricity charges for 2009-14 vide order dated 18th January, 2017, keeping the question of law open. The Order of Central Electricity Regulatory Commission (CERC) dt.7/8/2013 related to Tariff of 2009-14 against Petition No.275/GT/2012 has been challenged before Appellate Tribunal for Electricity (APTEL) (Appeal No.18 of 2014) in which the Company has also intervened and the order of APTEL is pending. The appeal filed by DVC pertaining to tariff of 2004-09 is yet to be decided by the Hon'ble Supreme Court of India. As per legal opinion received by the Company, the decision of Hon'ble Supreme Court of India on determination of the tariff of 2004-09 may have an effect on the subsequent periods. Pending final decision in this regard, the claim of DVC of Rs. 587.72 crores has been considered as contingent liability and also appearing in Loans & Advances. Against the said claim, the entire amount has been paid to DVC against bills raised by them and retained as advance. Further from 01<sup>st</sup> April, 2017 onwards full invoice value is being paid and charged to revenue.
8. Figures have been regrouped & rearranged wherever considered necessary.

#### **Profit & Loss Account Items:**

1. Income from distribution of electricity: This constitutes of bills raised in electricity business, unbilled units consumed by BSL itself for Township purposes.
2. Employee Remuneration & Benefits: This has been taken from the TE Electrical & 12.57% of ETL & DNW.
3. Stores & spares consumed: The expenditure has been considered on the basis of purchase orders identified by TS-Electrical.
4. Power & Fuel: This consists of expenditure of DVC plus electricity duty paid.
5. Repair & Maintenance: The expenditure has been considered on the basis of work/purchase orders identified by TS-Electrical.
6. Other Expenses: This has been calculated after considering total expenses on this account for TA-Electrical.



7. Deficit of Corporate Office/CMO/CCSO: This has been calculated based on the ratio of Income from Electricity business vis a vis Sales of Bokaro Steel Plant.
8. Interest & finance charges: Total interest & finance charges of BSL has been allocated in ratio of Income from Electricity business vis a vis Sales of Bokaro Steel Plant.
9. Depreciation: Assets earmarked by TA-Electrical for electricity distribution has only been considered. As regards DNW & ETL, it is not possible to clearly identify the assets related to electricity distribution of township.
10. Figures have been regrouped & rearranged wherever considered necessary.

General Issues:

1. Taxation Matters: Taxation matters have not been considered as the same is being dealt at corporate level. TDS liability, VAT/GST etc has also not been shown as it is difficult to identify the same.
2. Stores & spares inventory: Since separate records for electricity business has not been maintained, it is difficult to identify the inventory lying with BSL for electricity distribution business.
3. Cash & Bank balances: Since separate records for electricity business has not been maintained, it is difficult to identify the cash & bank balances lying with BSL for electricity distribution business.
4. Share capital: Bokaro Steel plant does not have a share capital of its own as it is a unit of SAIL, therefore share capital of electricity distribution business cannot be determined, however, debt-equity has been identified in line with the guidelines prescribed by JSERC.
5. Reserves & Surplus: Since separate records for electricity business has not been maintained, it is difficult to identify the reserves & surplus balances lying with BSL for electricity distribution business.





Energy consumption data for 2022-23				LTIS (units)	HTS (units)
MONTH	DS-LT (units)	DS-HT (units)	CS (units)		
Apr-22	765005.50	385043.53	1345101.40	41689.16	401481.58
May-22	763054.00	628069.09	1459056.78	40857.47	1125800.80
Jun-22	755508.00	551488.98	1427500.19	49387.81	987824.00
Jul-22	855157.00	552056.00	1280120.10	34935.67	1034086.40
Aug-22	837096.00	551935.99	1556075.70	30433.83	752033.40
Sep-22	754900.00	551869.92	1414501.10	43514.16	825390.60
Oct-22	851993.40	549405.41	1377706.30	39354.74	1060608.60
Nov-22	740025.60	549271.29	1037762.81	24883.15	766753.00
Dec-22	734681.00	555165.41	1772669.80	35159.28	627505.30
Jan-23	838071.00	549486.59	1215562.00	31994.60	752327.20
Feb-23	763437.00	549036.00	1402276.00	32954.46	820246.00
Mar-23	819818.00	549699.18	1383663.90	44646.83	630241.40
<b>Total</b>	<b>9478746.50</b>	<b>6522527.39</b>	<b>16671996.08</b>	<b>449811.16</b>	<b>9784298.28</b>

DS-HT(load)	CS(load)	LTIS(Load)	HTS(units)
4815	22207	853	7793

4815	22207			
DS-LT(No.)	DS-HT(No.)	CS(No.)	LTIS(No.)	HTS(No.)
2600	5	1914	37	24

Lease Quarter		No of consumer
17097120		4773
DS-LT		No of consumer

DS-LT	17037120	No of consumer
	License Quarter	10343
	33511320	
DS-LT		

On role Employee		No of consumer
40320000		11200
DS-LT		No of consumer

DS-LT		No of consumer
	Retention/non retention	410
	1476000	
DS-LT		

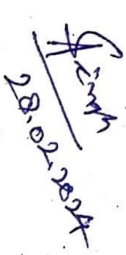
BSL& Non BSL both	All unit	No of consumer	Electrical load
DS-LT	101883186.50		4815
DS-HT	6522527.39	5	22207
CS	16671996.08	1914	853
LTIS	449811.16	37	7793
HTS	9784298.28	24	
<b>Total electricity consumption</b>	<b>135311819.4</b>		

28.02.2024  
 अमर नाथ सिंह  
 महाप्रबन्धक (न० प्र०-विद्युत)  
 प्र०, ५०० वी २ नं०

*Gimh*  
23.11.23  
अमर नाथ सिंह  
महाप्रबन्धक (न० प्र०-विद्युत)  
राज्य, कानून, स्टील, लोहा



Energy input data based on bills raised by DVC to SAIL BSL						
Month	FY 2022-23			FY 2023-24		
	Net Energy consumed as per bills(kWh)	PPC(Rs.)	Rs./KWh	Net Energy consumed as per bills(kWh)	PPC(Rs.)	Rs./KWh
Apr	12,66,90,000	53,15,08,209	4.20	11,84,82,000	70,46,19,537	5.95
May	11,84,11,000	55,61,55,966	4.70	11,79,20,000	62,06,11,469	5.26
Jun	12,73,48,000	55,69,53,857	4.37	11,89,65,000	58,95,88,898	4.96
Jul	12,38,41,000	56,07,06,166	4.53	10,37,03,000	60,11,70,039	5.80
Aug	11,48,88,000	56,46,06,253	4.91	12,27,65,810	60,90,51,449	4.96
Sep	11,90,10,000	69,60,08,740	5.85	11,95,16,000	57,02,60,565	4.77
Oct	14,98,99,975	53,87,56,353	3.59	14,98,99,975	79,18,60,837	5.28
Nov	14,00,93,289	66,36,73,095	4.74	14,00,93,289	74,00,56,087	5.28
Dec	15,23,06,763	54,05,84,935	3.55	15,23,06,763	80,45,74,924	5.28
Jan	15,77,81,231	68,58,46,268	4.35	15,77,81,231	83,34,94,318	5.28
Feb	13,76,68,287	53,26,25,367	3.87	13,76,68,287	72,72,45,785	5.28
Mar	16,25,67,487	62,92,65,718	3.87	16,25,67,487	85,87,78,171	5.28
Total (Rs. Crore)	1,630.51	705.67	4.33	1,601.67	8,451.31	5.28

  
 28.07.2024  
 अमर नाथ सिंह  
 महाप्रबन्धक (नं प्रो-विद्युत)  
 सेल. बोकरो स्टील प्लांट



Commercial Department,DVC Towers,VIP Road,Kolkata-700054

Monthly Bill for the month of 04,2022

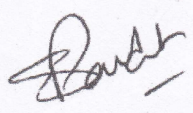
Meter No. M1-SMU01023		Consumption Month	04,2022
Consumer Id	330058	Contract Demand(KVA)	220000
Previous Meter Reading Date	01/04/2022	Supply Voltage(Volt)	220000
Present Meter Reading Date	30/04/2022	SupplyPoint	Marafari
SAIL,Bokaro Steel Plant, The Deputy General Manager,Distribution Network Department,Vidyut Bhawan,Welfare Building No.14,Bokaro Steel Plant,B.		Bill No.	MFN/202204/330058
		Bill Date	02/05/2022
		Due Date of Payment	23/05/2022

Previous Meter Reading (KVAH)	7047177000	Net Max Demand(KVA)	227563
Present Meter Reading (KVAH)	7175949000	P. F.	0.984
Gross Energy Consumption(KVAH)	128772000	L.F.(%)	78.59
Avg/Meter Replacement Adjustment(in KVAH)	0		
LT Adjustment/Other Adjustment (in KVAH)	1000	Total Supply Hours	720
Net Consumption (in KVAH)	128773000	Total Planned Interruption Hrs	0
Net Consumption (in KWH)	126690000	Total Unplanned Interruption Hrs	0

Details of Bill(Figures in rupees)			
220KV Normal Demand Chg @Rs. 350/KVA/Month	79647050	Voltage Rebate(-)	0
Penal Demand Chg 1.5 times of Normal Demand Chg over and above CD	0	L.F. Rebate(-)	65625940
Total Demand Charge	79647050	Other Charges	0
Total Energy Charge: 220KV Energy Chg@ 3.75 Rs./KVAH	482898750	Rental Charges	0
		Gross Bill Amount	496919860

ED Rate (in %)	15	Online Payment Rebate	4817392
ED Amount (in Rs.)	72434813	Due Date Payment Rebate	4817392
ED Adjustment	-28211680	Delay Payment Surcharge	0
Net ED	44223133	Adjustment	0
		Advance Paid	0
		Net Amount(Rs.)	531508209

Rs.Fifty-Three Crore Fifteen Lakh Eight Thousand Two Hundred Nine only.

Message to Customer	Authorized Signatory
The present bill has been raised in terms of the order dated 30.09.2020 passed by the Hon'ble JSERC. New Tariff is effective from 01.10.2020. Bank Details For Payment: Punjab National Bank, Branch-New Maniktala, Kolkata-700054, A/C Title-DAMODAR VALLEY CORPORATION, A/C No.-0082250010682,MICR Code-700027099, RTGS(IFSC)Code-PUNB0008220. [0' stands for zero]. For any query please mail us at biswajit.mondal@dvc.gov.in & pratik.biswas@dvc.gov.in	

Applicable TDS Amount for this bill is Rs.526509 and Net amount payable to DVC is Rs.530981700.

Copy to :ES-II ,CTPS (O&M), DVC. Please verify and inform us if there is any error in meter data

*Signature*  
04/05/22



Commercial Department, DVC Towers, VIP Road, Kolkata-700054

Monthly Bill for the month of 05,2022

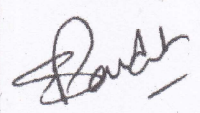
Meter No. M1-SMU01023		Consumption Month	05,2022
Consumer Id	330058	Contract Demand(KVA)	220000
Previous Meter Reading Date	01/05/2022	Supply Voltage(Volt)	220000
Present Meter Reading Date	31/05/2022	SupplyPoint	Marafari
SAIL, Bokaro Steel Plant, The Deputy General Manager, Distribution Network Department, Vidyut Bhawan, Welfare Building No. 14, Bokaro Steel Plant, B.		Bill No.	MFN/202205/330058
		Bill Date	01/06/2022
		Due Date of Payment	22/06/2022

Previous Meter Reading (KVAH)	7175949000	Net Max Demand(KVA)	224750
Present Meter Reading (KVAH)	7296076000	P. F.	0.986
Gross Energy Consumption(KVAH)	120127000	L.F.(%)	71.84
Avg/Meter Replacement Adjustment(in KVAH)	0		
LT Adjustment/Other Adjustment (in KVAH)	1000	Total Supply Hours	744
Net Consumption (in KVAH)	120128000	Total Planned Interruption Hrs	0
Net Consumption (in KWH)	118411000	Total Unplanned Interruption Hrs	0

Details of Bill(Figures in rupees)			
220KV Normal Demand Chg @Rs. 350/KVA/Month	78662500	Voltage Rebate(-)	0
Penal Demand Chg 1.5 times of Normal Demand Chg over and above CD	0	L.F. Rebate(-)	30812832
Total Demand Charge	78662500	Other Charges	0
Total Energy Charge: 220KV Energy Chg@ 3.75 Rs./KVAH	450480000	Rental Charges	0
		Gross Bill Amount	498329668

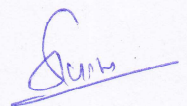
ED Rate (in %)	15	Online Payment Rebate	4872851
ED Amount (in Rs.)	67572000	Due Date Payment Rebate	4872851
ED Adjustment	0	Delay Payment Surcharge	0
Net ED	67572000	Adjustment	0
		Advance Paid	0
		Net Amount(Rs.)	556155966

Rs.Fifty-Five Crore Sixty-One Lakh Fifty-Five Thousand Nine Hundred Sixty-Six only.

Message to Customer	Authorized Signatory
The present bill has been raised in terms of the order dated 30.09.2020 passed by the Hon'ble JSERC. New Tariff is effective from 01.10.2020. Bank Details For Payment: Punjab National Bank, Branch-New Maniktala, Kolkata-700054, A/C Title-DAMODAR VALLEY CORPORATION, A/C No.-0082250010682, MICR Code-700027099, RTGS(IFSC)Code-PUNB0008220. [0' stands for zero]. For any query please mail us at biswajit.mondal@dvc.gov.in & samrat.bhowmik@dvc.gov.in.	

Applicable TDS Amount for this bill is Rs.556156 and Net amount payable to DVC is Rs.555599810.

Copy to :ES-II ,CTPS (O&amp;M), DVC. Please verify and inform us if there is any error in meter data





Commercial Department,DVC Towers,VIP Road,Kolkata-700054

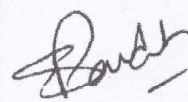
Monthly Bill for the month of 06,2022

Meter No. M1-SMU01023		Consumption Month	06,2022
Consumer Id	330058	Contract Demand(KVA)	220000
Previous Meter Reading Date	01/06/2022	Supply Voltage(Volt)	220000
Present Meter Reading Date	30/06/2022	SupplyPoint	Marafari
SAIL,Bokaro Steel Plant, The Deputy General Manager,Distribution Network Department,Vidyut Bhawan,Welfare Building No.14,Bokaro Steel Plant,B.		Bill No.	MFN/202206/330058
		Bill Date	01/07/2022
		Due Date of Payment	22/07/2022

Previous Meter Reading (KVAH)	7296076000	Net Max Demand(KVA)	228938
Present Meter Reading (KVAH)	7429385000	P. F.	0.955
Gross Energy Consumption(KVAH)	133309000	L.F.(%)	80.87
Avg/Meter Replacement Adjustment(In KVAH)	0		
LT Adjustment/Other Adjustment (in KVAH)	1000	Total Supply Hours	720
Net Consumption (in KVAH)	133310000	Total Planned Interruption Hrs	0
Net Consumption (in KWH)	127348000	Total Unplanned Interruption Hrs	0

Details of Bill(Figures in rupees)			
220KV Normal Demand Chg @Rs. 350/KVA/Month	80128300	Voltage Rebate(-)	0
Penal Demand Chg 1.5 times of Normal Demand Chg over and above CD	0	L.F. Rebate(-)	74986875
Total Demand Charge	80128300	Other Charges	0
Total Energy Charge: 220KV Energy Chg@ 3.75 Rs./KVAH	499912500	Rental Charges	0
		Gross Bill Amount	505053925

ED Rate (in %)	15	Online Payment Rebate	4885840
ED Amount (in Rs.)	74986875	Due Date Payment Rebate	4885840
ED Adjustment	-13315263	Delay Payment Surcharge	0
Net ED	61671612	Adjustment	0
		Advance Paid	0
		Net Amount(Rs.)	556953857

Rs.Fifty-Five Crore Sixty-Nine Lakh Fifty-Three Thousand Eight Hundred Fifty-Seven only.	
Message to Customer	Authorized Signatory
The present bill has been raised in terms of the order dated 30.09.2020 passed by the Hon'ble JSERC. New Tariff is effective from 01.10.2020. Bank Details For Payment: Punjab National Bank, Branch-New Maniktala, Kolkata-700054, A/C Title-DAMODAR VALLEY CORPORATION, A/C No.-0082250010682,MICR Code-700027099, RTGS(IFSC)Code-PUNB0008220. ['0' stands for zero]. For any query please mail us at biswajit.mondal@dvc.gov.in & samrat.bhowmik@dvc.gov.in.	

Applicable TDS Amount for this bill is Rs.556954 and Net amount payable to DVC is Rs.556396903.

Copy to :ES-II ,CTPS (O&M), DVC. Please verify and inform us if there is any error in meter data



Commercial Department, DVC Towers, VIP Road, Kolkata-700054

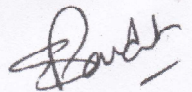
Monthly Bill for the month of 07, 2022

Meter No. M1-SMU01023	Consumption Month	07, 2022
Consumer Id 330058	Contract Demand(KVA)	220000
Previous Meter Reading Date 01/07/2022	Supply Voltage(Volt)	220000
Present Meter Reading Date 31/07/2022	Supply Point	Marafari
SAIL, Bokaro Steel Plant, The Deputy General Manager, Distribution Network Department, Vidyut Bhawan, Welfare Building No. 14, Bokaro Steel Plant, B.	Bill No.	MFN/202207/330058
	Bill Date	01/08/2022
	Due Date of Payment	22/08/2022

Previous Meter Reading (KVAH)	7429385000	Net Max Demand(KVA)	223250
Present Meter Reading (KVAH)	7555781000	P. F.	0.98
Gross Energy Consumption(KVAH)	126396000	L.F.(%)	76.1
Avg/Meter Replacement Adjustment(in KVAH)	0		
LT Adjustment/Other Adjustment (in KVAH)	1000	Total Supply Hours	744
Net Consumption (in KVAH)	126397000	Total Planned Interruption Hrs	0
Net Consumption (in KWH)	123841000	Total Unplanned Interruption Hrs	0

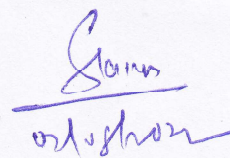
Details of Bill(Figures in rupees)			
220KV Normal Demand Chg @Rs. 350/KVA/Month	78137500	Voltage Rebate(-)	0
Penal Demand Chg 1.5 times of Normal Demand Chg over and above CD	0	L.F. Rebate(-)	52612751
Total Demand Charge	78137500	Other Charges	0
Total Energy Charge: 220KV Energy Chg@ 3.75 Rs./KVAH	473988750	Rental Charges	0
		Gross Bill Amount	499513499

ED Rate (in %)	15	Online Payment Rebate	4952823
ED Amount (in Rs.)	71098313	Due Date Payment Rebate	4952823
ED Adjustment	0	Delay Payment Surcharge	0
Net ED	71098313	Adjustment	0
		Advance Paid	0
		Net Amount(Rs.)	560706166

Rs.Fifty-Six Crore Seven Lakh Six Thousand One Hundred Sixty-Six only.	
Message to Customer	Authorized Signatory
The present bill has been raised in terms of the order dated 30.09.2020 passed by the Hon'ble JSERC. New Tariff is effective from 01.10.2020. Bank Details For Payment: Punjab National Bank, Branch-New Maniktala, Kolkata-700054, A/C Title-DAMODAR VALLEY CORPORATION, A/C No.-0082250010682, MICR Code-700027099, RTGS(IFSC)Code-PUNB0008220. ['0' stands for zero]. For any query please mail us at hiswajit.mondal@dvc.gov.in & samrat.bhowmik@dvc.gov.in.	
	

Applicable TDS Amount for this bill is Rs.560707 and Net amount payable to DVC is Rs.560145459.

Copy to :ES-II ,CTPS (O&amp;M), DVC. Please verify and inform us if there is any error in meter data





**DAMODAR VALLEY CORPORATION**

दामोदर घाटी निगम



Commercial Department, DVC Towers, VIP Road, Kolkata-700054

Monthly Bill for the month of 08,2022

Meter No. M1-SMU01023		Consumption Month	08,2022
Consumer Id	330058	Contract Demand(KVA)	220000
Previous Meter Reading Date	01/08/2022	Supply Voltage(Volt)	220000
Present Meter Reading Date	31/08/2022	SupplyPoint	Marafari
SAIL, Bokaro Steel Plant, The Deputy General Manager, Distribution Network Department, Vidyut Bhawan, Welfare Building No. 14, Bokaro Steel Plant, B.		Bill No.	MFN/202208/330058
		Bill Date	01/09/2022
		Due Date of Payment	22/09/2022

Previous Meter Reading (KVAH)	7555781000	Net Max Demand(KVA)	217875
Present Meter Reading (KVAH)	7671547000	P. F.	0.992
Gross Energy Consumption(KVAH)	115766000	L.F.(%)	70.73
Avg/Meter Replacement Adjustment(in KVAH)	0		
LT Adjustment/Other Adjustment (in KVAH)	0	Total Supply Hours	744
Net Consumption (in KVAH)	115766000	Total Planned Interruption Hrs	0
Net Consumption (in KWH)	114888000	Total Unplanned Interruption Hrs	0

Details of Bill(Figures in rupees)			
220KV Normal Demand Chg @Rs. 350/KVA/Month	76256250	Voltage Rebate(-)	0
Penal Demand Chg 1.5 times of Normal Demand Chg over and above CD	0	L.F. Rebate(-)	24875219
Total Demand Charge	76256250	Other Charges	0
Total Energy Charge: 220KV Energy Chg@ 3.75 Rs./KVAH	434122500	Rental Charges	0
		FPPPA #	23776503
		Gross Bill Amount	509280034

ED Rate (in %)	15	Online Payment Rebate	4896078
ED Amount (in Rs.)	65118375	Due Date Payment Rebate	4896078
ED Adjustment	0	Delay Payment Surcharge	0
Net ED	65118375	Adjustment	0
		Advance Paid	0
		Net Amount(Rs.)	564606253

Rs.Fifty-Six Crore Forty-Six Lakh Six Thousand Two Hundred Fifty-Three only.	
Message to Customer	Authorized Signatory
The present bill has been raised in terms of the order dated 30.09.2020 passed by the Hon'ble JSERC. New Tariff is effective from 01.10.2020. Bank Details For Payment: Punjab National Bank, Branch-New Maniktala, Kolkata-700054, A/C Title-DAMODAR VALLEY CORPORATION, A/C No.-0082250010682, MICR Code-700027099, RTGS(IFSC)Code-PUNB0008220. ['0' stands for zero]. For any query please mail us at biswajit.mondal@dvc.gov.in & samrat.bhowmik@dvc.gov.in.	

Applicable TDS Amount for this bill is Rs.564607 and Net amount payable to DVC is Rs.564041646.

# FPPPA for the month of Jan-22 to Mar-22. Total Month Energy Consumption for the said period is 344587000(Kwh) and FPPPA rate is 6.9Paisa/Kwh.

Fuel Price and Power Purchase Adjustment (FPPPA) is claimed as per clause no. 10.65 of JSERC (Terms and Condition for Determination of Distribution Tariff) Regulation, 2020. Detail calculation is available at www.dvc.gov.in under Consumer-Tariff Petitions-JSERC

Copy to :ES-II ,CTPS (O&amp;M), DVC. Please verify and inform us if there is any error in meter data



Commercial Department,DVC Towers,VIP Road,Kolkata-700054

Monthly Bill for the month of 09,2022

Meter No. M1-SMU01023		Consumption Month	09,2022
Consumer Id	330058	Contract Demand(KVA)	220000
Previous Meter Reading Date	01/09/2022	Supply Voltage(Volt)	220000
Present Meter Reading Date	30/09/2022	SupplyPoint	Marafari
SAIL,Bokaro Steel Plant, The Deputy General Manager,Distribution Network Department,Vidyut Bhawan,Welfare Building No.14,Bokaro Steel Plant,B.		Bill No.	MFN/202209/330058
		Bill Date	01/10/2022
		Due Date of Payment	22/10/2022

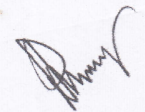
Previous Meter Reading (KVAH)	7671547000	Net Max Demand(KVA)	225563
Present Meter Reading (KVAH)	7792043000	P. F.	0.988
Gross Energy Consumption(KVAH)	120496000	L.F.(%)	74.2
Avg/Meter Replacement Adjustment(in KVAH)	0		
LT Adjustment/Other Adjustment (in KVAH)	1000	Total Supply Hours	720
Net Consumption (in KVAH)	120497000	Total Planned Interruption Hrs	0
Net Consumption (in KWH)	119010000	Total Unplanned Interruption Hrs	0

**Details of Bill(Figures in rupees)**

220KV Normal Demand Chg @Rs. 350/KVA/Month	78947050	Voltage Rebate(-)	0
Penal Demand Chg 1.5 times of Normal Demand Chg over and above CD	0	L.F. Rebate(-)	41571465
Total Demand Charge	78947050	Other Charges	0
Total Energy Charge: 220KV Energy Chg@ 3.75 Rs./KVAH	451863750	Rental Charges	0
		FPPPA #	148979600
		Gross Bill Amount	638218935

ED Rate (in %)	15	Online Payment Rebate	4994879
ED Amount (in Rs.)	67779563	Due Date Payment Rebate	4994879
ED Adjustment	0	Delay Payment Surcharge	0
Net ED	67779563	Adjustment	0
		Advance Paid	0
		Net Amount(Rs.)	696008740

Rs.Sixty-Nine Crore Sixty Lakh Eight Thousand Seven Hundred Forty only.

Message to Customer	Authorized Signatory
The present bill has been raised in terms of the order dated 30.09.2020 passed by the Hon'ble JSERC. New Tariff is effective from 01.10.2020. Bank Details For Payment: Punjab National Bank, Branch-New Maniktala, Kolkata-700054, A/C Title-DAMODAR VALLEY CORPORATION, A/C No.-0082250010682,MICR Code-700027099, RTGS(IFSC)Code-PUNB0008220. ['0' stands for zero]. For any query please mail us at biswajit.mondal@dvc.gov.in & samrat.bhowmik@dvc.gov.in.	

Applicable TDS Amount for this bill is Rs.696009 and Net amount payable to DVC is Rs.695312731.

# FPPPA for the month of Apr-22 to Jun-22. Total Month Energy Consumption for the said period is 372449000(Kwh) and FPPPA rate is 40Paisa/Kwh.

Fuel Price and Power Purchase Adjustment (FPPPA) is claimed as per clause no. 10.65 of JSERC (Terms and Condition for Determination of Distribution Tariff) Regulation, 2020. Detail calculation is available at [www.dvc.gov.in](http://www.dvc.gov.in) under Consumer-Tariff Petitions-JSERC

Copy to :ES-II ,CTPS (O&M), DVC. Please verify and inform us if there is any error in meter data



**DAMODAR VALLEY CORPORATION**

दामोदर घाटी निगम



Commercial Department,DVC Towers,VIP Road,Kolkata-700054

Monthly Bill for the consumption month of 04'2023

Consumer ID	330058	Bill No.	MFN/202304/330058
Previous Meter Reading Date	01/04/2023	Bill Date	01/05/2023
Present Meter Reading Date	30/04/2023	Due Date of Payment	22/05/2023
Meter No	M1-SMU01023	Contract Demand	220000
SAIL,Bokaro Steel Plant, The Deputy General Manager,Distribution Network Department,Vidyut Bhawan,Welfare Building No.14,Bokaro Steel Plant,B.S.City. Pin-827001.	Supply Voltage(Volt)		220000
	SupplyPoint		Marafari
	E-Mail Id		niraj.bhatia@sail.in
	Mobile No		8986871605

Previous Meter Reading (KVAH)	8488739000	Net Max Demand(KVA)	227250
Present Meter Reading (KVAH)	8608665000	P. F.	0.988
Gross Energy Consumption(KVAH)	119926000	L.F.(%)	73.3
Avg/Meter Replacement Adjustment(in KVAH)	0		
LT Adjustment/Other Adjustment (in KVAH)	1000	Total Supply Hours	720
Net Consumption (in KVAH)	119927000	Total Planned Interruption Hrs	0
Net Consumption (in KWH)	118482000	Total Unplanned Interruption Hrs	0

Details of Bill(Figures in rupees)			
220KV Normal Demand Chg @Rs. 400/KVA/Month	90900000	Voltage Rebate(-)	0
Penal Demand Chg 1.5 times of Normal Demand Chg over and above CD	0	L.F. Rebate(-)	39318067
Total Demand Charge	90900000	Other Charges	0
Total Energy Charge: 220KV Energy Chg@ 3.95 Rs./KVAH	473711650	Rental Charges	0
		FPPPA #	116179470
		Gross Bill Amount	641473053

ED Rate (in %)	15	Online Payment Rebate	250
ED Amount (in Rs.)	71056748	Due Date Payment Rebate	10703382
ED Adjustment	2793368	Delay Payment Surcharge	0
Net ED	73850116	Adjustment	0
		Advance Paid	0
		Net Amount(Rs.)	704619537



Commercial Department,DVC Towers,VIP Road,Kolkata-700054  
Monthly Bill for the consumption month of 05'2023

Consumer ID	330058	Bill No.	MFN/202305/330058
Previous Meter Reading Date	01/05/2023	Bill Date	01/06/2023
Present Meter Reading Date	31/05/2023	Due Date of Payment	22/06/2023
Meter No	M1-SMU01023	Contract Demand	220000
SAIL,Bokaro Steel Plant, The Deputy General Manager,Distribution Network Department,Vidyut Bhawan,Welfare Building No.14,Bokaro Steel Plant,B.S.City. Pin-827001.	Supply Voltage(Volt)		220000
	SupplyPoint		Marafari
	E-Mail Id		niraj.bhatia@sail.in
	Mobile No		8986871605

Previous Meter Reading (KVAH)	8608665000	Net Max Demand(KVA)	217625
Present Meter Reading (KVAH)	8727830000	P. F.	0.99
Gross Energy Consumption(KVAH)	119165000	L.F.(%)	72.86
Avg/Meter Replacement Adjustment(In KVAH)	0		
LT Adjustment/Other Adjustment (in KVAH)	1000	Total Supply Hours	744
Net Consumption (in KVAH)	119166000	Total Planned Interruption Hrs	0
Net Consumption (in KWH)	117920000	Total Unplanned Interruption Hrs	0.58

Details of Bill(Figures in rupees)			
220KV Normal Demand Chg @Rs. 400/KVA/Month	87050000	Voltage Rebate(-)	0
Penal Demand Chg 1.5 times of Normal Demand Chg over and above CD	0	L.F. Rebate(-)	36997468
Total Demand Charge	87050000	Other Charges	0
Total Energy Charge: 220KV Energy Chg@ 3.95 Rs./KVAH	470705700	Rental Charges	0
		Gross Bill Amount	520758232

ED Rate (in %)	15	Online Payment Rebate	250
ED Amount (in Rs.)	70605855	Prompt Payment Rebate	12615388
ED Adjustment	41863020	Delay Payment Surcharge	0
Net ED	112468875	Adjustment	0
		Advance Paid	0
		Net Amount(Rs.)	620611469



Commercial Department,DVC Towers,VIP Road,Kolkata-700054

Monthly Bill for the consumption month of 06'2023

Consumer ID	330058	Bill No.	MFN/202306/330058
Previous Meter Reading Date	01/06/2023	Bill Date	03/07/2023
Present Meter Reading Date	30/06/2023	Due Date of Payment	24/07/2023
Meter No	M1-SMU01023	Contract Demand	220000
SAIL,Bokaro Steel Plant, The Deputy General Manager,Distribution Network Department,Vidyut Bhawan,Welfare Building No.14,Bokaro Steel Plant,B.S.City. Pin-827001.	Supply Voltage(Volt)		220000
	SupplyPoint		Marafari
	E-Mail Id		niraj.bhatia@sail.in
	Mobile No		8986871605

Previous Meter Reading (KVAH)	8727830000	Net Max Demand(KVA)	219813
Present Meter Reading (KVAH)	8848087000	P. F.	0.989
Gross Energy Consumption(KVAH)	120257000	L.F.(%)	75.92
Avg/Meter Replacement Adjustment(in KVAH)	0		
LT Adjustment/Other Adjustment (in KVAH)	1000	Total Supply Hours	720
Net Consumption (in KVAH)	120258000	Total Planned Interruption Hrs	0
Net Consumption (in KWH)	118965000	Total Unplanned Interruption Hrs	0

Details of Bill(Figures in rupees)			
220KV Normal Demand Chg @Rs. 400/KVA/Month	87925200	Voltage Rebate(-)	0
Penal Demand Chg 1.5 times of Normal Demand Chg over and above CD	0	L.F. Rebate(-)	51872086
Total Demand Charge	87925200	Other Charges	0
Total Energy Charge: 220KV Energy Chg@ 3.95 Rs./KVAH	475019100	Rental Charges	0
		Gross Bill Amount	511072214

ED Rate (in %)	15	Online Payment Rebate	250
ED Amount (in Rs.)	71252865	Prompt Payment Rebate	10162852
ED Adjustment	17426921	Delay Payment Surcharge	0
Net ED	88679786	Adjustment	0
		Advance Paid	0
		Net Amount(Rs.)	589588898





# DAMODAR VALLEY CORPORATION

दामोदर घाटी निगम



Commercial Department,DVC Towers,VIP Road,Kolkata-700054

Monthly Bill for the consumption month of 07'2023

Consumer ID	330058	Bill No.	MFN/202307/330058
Previous Meter Reading Date	01/07/2023	Bill Date	01/08/2023
Present Meter Reading Date	31/07/2023	Due Date of Payment	22/08/2023
Meter No	M1-SMU01023	Contract Demand	220000
SAIL,Bokaro Steel Plant, The Deputy General Manager,Distribution Network Department,Vidyut Bhawan,Welfare Building No.14,Bokaro Steel Plant,B.S.City. Pin-827001.	Supply Voltage(Volt)		220000
	SupplyPoint		Marafari
	E-Mail Id		niraj.bhatia@sail.in
	Mobile No		8986871605

Previous Meter Reading (KVAH)	8848087000	Net Max Demand(KVA)	216938
Present Meter Reading (KVAH)	8952737000	P. F.	0.991
Gross Energy Consumption(KVAH)	104650000	L.F.(%)	63.94
Avg/Meter Replacement Adjustment(in KVAH)	0		
LT Adjustment/Other Adjustment (in KVAH)	0	Total Supply Hours	744
Net Consumption (in KVAH)	104650000	Total Planned Interruption Hrs	0
Net Consumption (in KWH)	103703000	Total Unplanned Interruption Hrs	0

Details of Bill(Figures in rupees)			
220KV Normal Demand Chg @Rs. 400/KVA/Month	86775200	Voltage Rebate(-)	0
Penal Demand Chg 1.5 times of Normal Demand Chg over and above CD	0	L.F. Rebate(-)	0
Total Demand Charge	86775200	Other Charges	0
Total Energy Charge: 220KV Energy Chg@ 3.95 Rs./KVAH	413367500	Rental Charges	0
		FPPPA #	42644040
		Gross Bill Amount	542786740

ED Rate (in %)	15	Online Payment Rebate	250
ED Amount (in Rs.)	62005125	Prompt Payment Rebate	10018182
ED Adjustment	6396606	Delay Payment Surcharge	0
Net ED	68401731	Adjustment	0
		Advance Paid	0
		Net Amount(Rs.)	601170039



# DAMODAR VALLEY CORPORATION

दामोदर घाटी निगम



Commercial Department,DVC Towers,VIP Road,Kolkata-700054

Monthly Bill for the consumption month of 08'2023

Consumer ID	330058	Bill No.	MFN/202308/330058
Previous Meter Reading Date	01/08/2023	Bill Date	01/09/2023
Present Meter Reading Date	31/08/2023	Due Date of Payment	22/09/2023
Meter No	M1-SMU01023	Contract Demand	220000
SAIL,Bokaro Steel Plant, The Deputy General Manager,Distribution Network Department,Vidyut Bhawan,Welfare Building No.14,Bokaro Steel Plant,B.S.City. Pin-827001.	Supply Voltage(Volt)		220000
	SupplyPoint		Marafari
	E-Mail Id		niraj.bhatia@sail.in
	Mobile No		8986871605

Previous Meter Reading (KVAH)	8952737000	Net Max Demand(KVA)	230010
Present Meter Reading (KVAH)	9076551000	P. F.	0.984
Gross Energy Consumption(KVAH)	123814000	L.F.(%)	72.88
Avg/Meter Replacement Adjustment(in KVAH)	900938		
LT Adjustment/Other Adjustment (in KVAH)	1000	Total Supply Hours	744
Net Consumption (in KVAH)	124715938	Total Planned Interruption Hrs	0
Net Consumption (in KWH)	122765810	Total Unplanned Interruption Hrs	0

Details of Bill(Figures in rupees)			
220KV Normal Demand Chg @Rs. 400/KVA/Month	92004000	Voltage Rebate(-)	0
Penal Demand Chg 1.5 times of Normal Demand Chg over and above CD	0	L.F. Rebate(-)	38819083
Total Demand Charge	92004000	Other Charges	0
Total Energy Charge: 220KV Energy Chg@ 3.95 Rs./KVAH	492627955	Rental Charges	0
		Gross Bill Amount	545812872

ED Rate (in %)	15	Online Payment Rebate	250
ED Amount (in Rs.)	73894193	Prompt Payment Rebate	10655366
ED Adjustment	0	Delay Payment Surcharge	0
Net ED	73894193	Adjustment	0
		Advance Paid	0
		Net Amount(Rs.)	609051449



**DAMODAR VALLEY CORPORATION**

दामोदर घाटी निगम



Commercial Department, DVC Towers, VIP Road, Kolkata-700054

Monthly Bill for the month of 10, 2022

Meter No. M1-SMU01023		Consumption Month	10, 2022
Consumer Id	330058	Contract Demand(KVA)	220000
Previous Meter Reading Date	01/10/2022	Supply Voltage(Volt)	220000
Present Meter Reading Date	31/10/2022	Supply Point	Marafari
SAIL, Bokaro Steel Plant, The Deputy General Manager, Distribution Network Department, Vidyut Bhawan, Welfare Building No.14, Bokaro Steel Plant, B.	Bill No.		MFN/202210/330058
	Bill Date		01/11/2022
	Due Date of Payment		22/11/2022

Previous Meter Reading (KVAH)	7792043000	Net Max Demand(KVA)	218313
Present Meter Reading (KVAH)	7908175000	P. F.	0.992
Gross Energy Consumption(KVAH)	116132000	L.F.(%)	70.95
Avg/Meter Replacement Adjustment(in KVAH)	0		
LT Adjustment/Other Adjustment (in KVAH)	1000	Total Supply Hours	744
Net Consumption (in KVAH)	116133000	Total Planned Interruption Hrs	0
Net Consumption (in KWH)	115222000	Total Unplanned Interruption Hrs	0

Details of Bill(Figures in rupees)			
220KV Normal Demand Chg @Rs. 350/KVA/Month	76409550	Voltage Rebate(-)	0
Penal Demand Chg 1.5 times of Normal Demand Chg over and above CD	0	L.F. Rebate(-)	25912176
Total Demand Charge	76409550	Other Charges	0
Total Energy Charge: 220KV Energy Chg@ 3.75 Rs./KVAH	435498750	Rental Charges	0
		Gross Bill Amount	485996124

ED Rate (in %)	15	Online Payment Rebate	6282292
ED Amount (in Rs.)	65324813	Due Date Payment Rebate	6282292
ED Adjustment	0	Delay Payment Surcharge	0
Net ED	65324813	Adjustment	0
		Advance Paid	0
		Net Amount(Rs.)	538756353

Rs.Fifty-Three Crore Eighty-Seven Lakh Fifty-Six Thousand Three Hundred Fifty-Three only.

Message to Customer	Authorized Signatory
The present bill has been raised in terms of the order dated 30.09.2020 passed by the Hon'ble JSERC. New Tariff is effective from 01.10.2020. Bank Details For Payment: Punjab National Bank, Branch-New Maniktala, Kolkata-700054, A/C Title-DAMODAR VALLEY CORPORATION, A/C No.-0082250010682, MICR Code-700027099, RTGS(IFSC)Code-PUNB0008220. [0' stands for zero]. For any query please mail us at biswajit.mondal@dvc.gov.in & samrat.bhowmik@dvc.gov.in.	

Applicable TDS Amount for this bill is Rs.538757 and Net amount payable to DVC is Rs.538217596.

Copy to :ES-II ,CTPS (O&amp;M), DVC. Please verify and inform us if there is any error in meter data





# DAMODAR VALLEY CORPORATION

दामोदर घाटी निगम



Commercial Department, DVC Towers, VIP Road, Kolkata-700054

Monthly Bill for the month of 11, 2022

Meter No. M1-SMU01023		Consumption Month	11, 2022
Consumer Id	330058	Contract Demand(KVA)	220000
Previous Meter Reading Date	01/11/2022	Supply Voltage(Volt)	220000
Present Meter Reading Date	30/11/2022	Supply Point	Marafari
SAIL, Bokaro Steel Plant, The Deputy General Manager, Distribution Network Department, Vidyut Bhawan, Welfare Building No. 14, Bokaro Steel Plant, B.		Bill No.	MFN/202211/330058
		Bill Date	01/12/2022
		Due Date of Payment	22/12/2022

Previous Meter Reading (KVAH)	7908175000	Net Max Demand(KVA)	218750
Present Meter Reading (KVAH)	8016544000	P. F.	0.994
Gross Energy Consumption(KVAH)	108369000	L.F.(%)	68.41
Avg/Meter Replacement Adjustment(in KVAH)	0		
LT Adjustment/Other Adjustment (in KVAH)	0	Total Supply Hours	720
Net Consumption (in KVAH)	108369000	Total Planned Interruption Hrs	0
Net Consumption (in KWH)	107684000	Total Unplanned Interruption Hrs	0

## Details of Bill(Figures in rupees)

220KV Normal Demand Chg @Rs. 350/KVA/Month	76562500	Voltage Rebate(-)	0
Penal Demand Chg 1.5 times of Normal Demand Chg over and above CD	0	L.F. Rebate(-)	13857686
Total Demand Charge	76562500	Other Charges	0
Total Energy Charge: 220KV Energy Chg@ 3.75 Rs./KVAH	406383750	Rental Charges	0
		FPPPA #	143095600
		Gross Bill Amount	612184164

ED Rate (in %)	15	Online Payment Rebate	4734316
ED Amount (in Rs.)	60957563	Due Date Payment Rebate	4734316
ED Adjustment	0	Delay Payment Surcharge	0
Net ED	60957563	Adjustment	0
		Advance Paid	0
		Net Amount(Rs.)	663673095

Rs. Sixty-Six Crore Thirty-Six Lakh Seventy-Three Thousand Ninety-Five only.

Message to Customer	Authorized Signatory
The present bill has been raised in terms of the order dated 30.09.2020 passed by the Hon'ble JSERC. New Tariff is effective from 01.10.2020. Bank Details For Payment: Punjab National Bank, Branch-New Maniktala, Kolkata-700054, A/C Title-DAMODAR VALLEY CORPORATION, A/C No.-0082250010682, MICR Code-700027099, RTGS(IFSC) Code-PUNB0008220. ['0' stands for zero]. For any query please mail us at biswajit.mondal@dvc.gov.in & samrat.bhowmik@dvc.gov.in.	

Applicable TDS Amount for this bill is Rs.663674 and Net amount payable to DVC is Rs.663009421.

# FPPPA for the month of Jul-22 to Sep-22. Total Month Energy Consumption for the said period is 357739000(Kwh) and FPPPA rate is 40Paisa/Kwh.

Fuel Price and Power Purchase Adjustment (FPPPA) is claimed as per clause no. 10.65 of JSERC (Terms and Condition for Determination of Distribution Tariff) Regulation, 2020. Detail calculation is available at [www.dvc.gov.in](http://www.dvc.gov.in) under Consumer-Tariff Petitions-JSERC

Copy to : ES-II, CTPS (O&M), DVC. Please verify and inform us if there is any error in meter data



**DAMODAR VALLEY CORPORATION**

दामोदर घाटी निगम

Azadi Ka  
Amrit Mahotsav

Commercial Department, DVC Towers, VIP Road, Kolkata-700054

Monthly Bill for the month of 12, 2022

Meter No. M1-SMU01023		Consumption Month	12, 2022
Consumer Id	330058	Contract Demand(KVA)	220000
Previous Meter Reading Date	01/12/2022	Supply Voltage(Volt)	220000
Present Meter Reading Date	31/12/2022	Supply Point	Marafari
SAIL, Bokaro Steel Plant, The Deputy General Manager, Distribution Network Department, Vidyut Bhawan, Welfare Building No.14, Bokaro Steel Plant, B.	Bill No.		MFN/202212/330058
	Bill Date		01/01/2023
	Due Date of Payment		22/01/2023

Previous Meter Reading (KVAH)	8016544000	Net Max Demand(KVA)	215125
Present Meter Reading (KVAH)	8134416000	P. F.	0.993
Gross Energy Consumption(KVAH)	117872000	L.F.(%)	72.01
Avg/Meter Replacement Adjustment(in KVAH)	0		
LT Adjustment/Other Adjustment (in KVAH)	2000	Total Supply Hours	744
Net Consumption (in KVAH)	117874000	Total Planned Interruption Hrs	0
Net Consumption (in KWH)	117072000	Total Unplanned Interruption Hrs	0

Details of Bill(Figures in rupees)			
220KV Normal Demand Chg @Rs. 350/KVA/Month	75293750	Voltage Rebate(-)	0
Penal Demand Chg 1.5 times of Normal Demand Chg over and above CD	0	L.F. Rebate(-)	30986128
Total Demand Charge	75293750	Other Charges	0
Total Energy Charge: 220KV Energy Chg@ 3.75 Rs./KVAH	442027500	Rental Charges	0
		Gross Bill Amount	486335122

ED Rate (in %)	15	Online Payment Rebate	6027156
ED Amount (in Rs.)	66304125	Due Date Payment Rebate	6027156
ED Adjustment	0	Delay Payment Surcharge	0
Net ED	66304125	Adjustment	0
		Advance Paid	0
		Net Amount(Rs.)	540584935

Rs.Fifty-Four Crore Five Lakh Eighty-Four Thousand Nine Hundred Thirty-Five only.

Message to Customer	Authorized Signatory
The present bill has been raised in terms of the order dated 30.09.2020 passed by the Hon'ble JSERC. New Tariff is effective from 01.10.2020. Bank Details For Payment: Punjab National Bank, Branch-New Maniktala, Kolkata-700054, A/C Title-DAMODAR VALLEY CORPORATION, A/C No.-0082250010682, MICR Code-700027099, RTGS(IFSC)Code-PUNB0008220. ['0' stands for zero]. For any query please mail us at biswajit.mondal@dvc.gov.in & samrat.bhowmik@dvc.gov.in.	

Applicable TDS Amount for this bill is Rs.540585 and Net amount payable to DVC is Rs.540044350.

Copy to :ES-II ,CTPS (O&amp;M), DVC. Please verify and inform us if there is any error in meter data



**DAMODAR VALLEY CORPORATION**

दामोदर घाटी निगम



Commercial Department, DVC Towers, VIP Road, Kolkata-700054

Monthly Bill for the consumption month of 01'2023

Consumer ID	330058	Bill No.	MFN/202301/330058
Previous Meter Reading Date	01/01/2023	Bill Date	01/02/2023
Present Meter Reading Date	31/01/2023	Due Date of Payment	22/02/2023
SAIL, Bokaro Steel Plant, The Deputy General Manager, Distribution Network Department, Vidyut Bhawan, Welfare Building No. 14, Bokaro Steel Plant, B.S. City. Pin-827001.	Contract Demand		220000
	Supply Voltage(Volt)		220000
	Supply Point		Marafari
	Meter No		M1-SMU01023

Previous Meter Reading (KVAH)	8134416000	Net Max Demand(KVA)	219313
Present Meter Reading (KVAH)	8256487000	P. F.	0.994
Gross Energy Consumption(KVAH)	122071000	L.F.(%)	74.58
Avg/Meter Replacement Adjustment(in KVAH)	0		
LT Adjustment/Other Adjustment (in KVAH)	1000	Total Supply Hours	744
Net Consumption (in KVAH)	122072000	Total Planned Interruption Hrs	0
Net Consumption (in KWH)	121280000	Total Unplanned Interruption Hrs	0

Details of Bill(Figures in rupees)			
220KV Normal Demand Chg @Rs. 350/KVA/Month	76759550	Voltage Rebate(-)	0
Penal Demand Chg 1.5 times of Normal Demand Chg over and above CD	0	L.F. Rebate(-)	43854366
Total Demand Charge	76759550	Other Charges	0
Total Energy Charge: 220KV Energy Chg@ 3.75 Rs./KVAH	457770000	Rental Charges	0
		FPPPA #	135991200
		Gross Bill Amount	626666384

ED Rate (in %)	15	Online Payment Rebate	4742808
ED Amount (in Rs.)	68665500	Due Date Payment Rebate	4742808
ED Adjustment	0	Delay Payment Surcharge	0
Net ED	68665500	Adjustment	0
		Advance Paid	0
		Net Amount(Rs.)	685846268



**DAMODAR VALLEY CORPORATION**

दामोदर घाटी निगम



Commercial Department, DVC Towers, VIP Road, Kolkata-700054

Monthly Bill for the consumption month of 02'2023

Consumer ID	330058	Bill No.	MFN/202302/330058
Previous Meter Reading Date	01/02/2023	Bill Date	01/03/2023
Present Meter Reading Date	28/02/2023	Due Date of Payment	22/03/2023
Meter No	M1-SMU01023	Contract Demand	220000
SAIL, Bokaro Steel Plant, The Deputy General Manager, Distribution Network Department, Vidyut Bhawan, Welfare Building No.14, Bokaro Steel Plant, B.S. City. Pin-827001.	Supply Voltage(Volt)		220000
	Supply Point		Marafari
	E-Mail Id		niraj.bhatia@sail.in
	Mobile No		8986871605

Previous Meter Reading (KVAH)	8256487000	Net Max Demand(KVA)	218313
Present Meter Reading (KVAH)	8362928000	P. F.	0.994
Gross Energy Consumption(KVAH)	106441000	L.F.(%)	72
Avg/Meter Replacement Adjustment(in KVAH)	0		
LT Adjustment/Other Adjustment (in KVAH)	0	Total Supply Hours	672
Net Consumption (in KVAH)	106441000	Total Planned Interruption Hrs	0
Net Consumption (in KWH)	105820000	Total Unplanned Interruption Hrs	0

Details of Bill(Figures in rupees)			
220KV Normal Demand Chg @Rs. 400/KVA/Month	87325200	Voltage Rebate(-)	0
Penal Demand Chg 1.5 times of Normal Demand Chg over and above CD	0	L.F. Rebate(-)	29430937
Total Demand Charge	87325200	Other Charges	0
Total Energy Charge: 220KV Energy Chg@ 3.95 Rs./KVAH	420441950	Rental Charges	0
		Gross Bill Amount	478336213

ED Rate (in %)	15	Online Payment Rebate	6171807
ED Amount (in Rs.)	63066293	Due Date Payment Rebate	6171807
ED Adjustment	3566476	Delay Payment Surcharge	0
Net ED	66632769	Adjustment	0
		Advance Paid	1
		Net Amount(Rs.)	532625367



**DAMODAR VALLEY CORPORATION**

दामोदर घाटी निगम



Commercial Department, DVC Towers, VIP Road, Kolkata-700054  
Monthly Bill for the consumption month of 03'2023

Consumer ID	330058	Bill No.	MFN/202303/330058
Previous Meter Reading Date	01/03/2023	Bill Date	01/04/2023
Present Meter Reading Date	31/03/2023	Due Date of Payment	22/04/2023
Meter No	M1-SMU01023	Contract Demand	220000
SAIL, Bokaro Steel Plant, The Deputy General Manager, Distribution Network Department, Vidyut Bhawan, Welfare Building No.14, Bokaro Steel Plant, B.S. City. Pin-827001.	Supply Voltage(Volt)		220000
	Supply Point		Marafari
	E-Mail Id		niraj.bhatia@sail.in
	Mobile No		8986871605

Previous Meter Reading (KVAH)	8362928000	Net Max Demand(KVA)	224375
Present Meter Reading (KVAH)	8488739000	P. F.	0.993
Gross Energy Consumption(KVAH)	125811000	L.F.(%)	75.37
Avg/Meter Replacement Adjustment(in KVAH)	0		
LT Adjustment/Other Adjustment (in KVAH)	0	Total Supply Hours	744
Net Consumption (in KVAH)	125811000	Total Planned Interruption Hrs	0
Net Consumption (in KWH)	124959000	Total Unplanned Interruption Hrs	0

Details of Bill(Figures in rupees)			
220KV Normal Demand Chg @Rs. 400/KVA/Month	89750000	Voltage Rebate(-)	0
Penal Demand Chg 1.5 times of Normal Demand Chg over and above CD	0	L.F. Rebate(-)	51534073
Total Demand Charge	89750000	Other Charges	0
Total Energy Charge: 220KV Energy Chg@ 3.95 Rs./KVAH	496953450	Rental Charges	0
		Gross Bill Amount	535169377

ED Rate (in %)	15	Online Payment Rebate	250
ED Amount (in Rs.)	74543018	Due Date Payment Rebate	0
ED Adjustment	19553573	Delay Payment Surcharge	0
Net ED	94096591	Adjustment	0
		Advance Paid	0
		Net Amount(Rs.)	629265718



Commercial Department, DVC Towers, VIP Road, Kolkata-700054

Monthly Bill for the consumption month of 09/2023

Consumer ID	330058	Bill No.	MFN/202309/330058
Previous Meter Reading Date	01/09/2023	Bill Date	03/10/2023
Present Meter Reading Date	30/09/2023	Due Date of Payment	24/10/2023
Meter No	M1-Q0781494	Contract Demand	220000
SAIL, Bokaro Steel Plant, The Deputy General Manager, Distribution Network Department, Vidyut Bhawan, Welfare Building No. 14, Bokaro Steel Plant, B.S. City. Pin-827001.	Supply Voltage(Volt)		220000
	Supply Point		Marafari
	E-Mail Id		niraj.bhatia@sail.in
	Mobile No		8986871605

Previous Meter Reading (KVAH)	117809000	Net Max Demand(KVA)	214502
Present Meter Reading (KVAH)	238763000	P. F.	0.988
Gross Energy Consumption(KVAH)	120954000	L.F.(%)	76.36
Avg/Meter Replacement Adjustment(in KVAH)	0		
LT Adjustment/Other Adjustment (in KVAH)	1000	Total Supply Hours	720
Net Consumption (in KVAH)	120955000	Total Planned Interruption Hrs	0
Net Consumption (in KWH)	119516000	Total Unplanned Interruption Hrs	0

Details of Bill(Figures in rupees)			
220KV Normal Demand Chg @Rs. 400/KVA/Month	85800800	Voltage Rebate(-)	0
Penal Demand Chg 1.5 times of Normal Demand Chg over and above CD	0	L.F. Rebate(-)	54274928
Total Demand Charge	85800800	Other Charges	0
Total Energy Charge: 220KV Energy Chg@ 3.95 Rs./KVAH	477772250	Rental Charges	0
		Gross Bill Amount	509298122

ED Rate (in %)	15	Online Payment Rebate	250
ED Amount (in Rs.)	71665838	Prompt Payment Rebate	10703145
ED Adjustment	0	Delay Payment Surcharge	0
Net ED	71665838	Adjustment	0
		Advance Paid	0
		Net Amount(Rs.)	570260565

**DAMODAR VALLEY CORPORATION**

CONSUMER NO. 330058

**AGREEMENT**

**FOR SUPPLY OF ELECTRICAL ENERGY  
AT 220 KILO VOLTAGE**

EXECUTED ON 25.05.2022

BETWEEN

**DAMODAR VALLEY CORPORATION**

AND

**M/S BOKARO STEEL LIMITED  
[STEEL AUTHORITY OF INDIA LIMITED]**

FOR

**SUPPLY OF ELECTRICAL ENERGY****FOR INDUSTRIAL PURPOSE**

AT

**BOKARO STEEL CITY, BOKARO, JHARKHAND**

FOR STEEL LOAD

WITH

**EXISTING CONTRACT DEMAND - 220MVA AT 220KV**

*Handwritten:* 28.02.2024

*Handwritten:* अमर नाथ सिंह  
महाप्रबन्धक (नं० प्रो-विद्युत)  
सेल, बोकारो स्टील प्लांट



*Handwritten:* 21/5/22

*Handwritten:* राजुल हार्करनी  
RAJUL HARKERNI  
महाप्रबन्धक (नगर सेवा-विद्युत)  
General Manager (TA - Electrical)  
सेल, बोकारो इस्पात संयंत्र  
SAIL, Bokaro Steel Plant



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Adhesive stamp of pre



# AGREEMENT

For Supply of Electrical Energy  
At  
220 Kilo Voltage

An agreement, made this 25<sup>th</sup> day of May, Two  
thousand and twenty two

## BETWEEN

**DAMODAR VALLEY CORPORATION**, a Corporation constituted under the Damodar Valley Corporation Act, being Act No. XIV of 1948 and having its headquarters at D.V.C Towers, VIP Road, Kolkata- 700054 in the State of West Bengal (hereinunder called the '**Corporation**' which expression shall unless excluded by or repugnant to the context includes its successors or assigns) of the one part

## AND

**M/s. STEEL AUTHORITY OF INDIA LIMITED**, a company under the Companies Act, 1956 and having its registered office at ISPAT BHAWAN, LODI ROAD, NEW DELHI-110003, INDIA, and having one of its Steel Plant as **BOKARO STEEL PLANT** located at Bokaro Steel City, hereinafter referred to as '**Consumer**' which term or expression shall unless excluded by our repugnant to the context or the meaning thereof shall be deemed to include its successors and permitted assigns, of the other part;

WHEREAS the Consumer has requested the Corporation to supply electrical energy for use in the consumer's / customer's premises at **Bokaro Steel City, Dist. Bokaro, Jharkhand** to be fed from **CTPS Sub Station** of the Corporation as an extension of the power supply from the Corporation at the aforesaid point of supply.

**AND WHEREAS** the Corporation has agreed subject to availability of power to supply such energy and continue to supply such energy to the Consumer for a period of **3 (three) years** as the first block from the date of commencement of power supply.

**AND WHEREAS** the Corporation is deemed licensee under the Electricity Act, 2003 but shall not be required to obtain a license under this act and the provisions of Damodar Valley Corporation Act, 1948, in so far as they are **not** inconsistent with the provisions of this Act, shall apply to the Corporation.

**AND WHEREAS** the Consumer agreed to accept the liabilities which might accrue due to the execution of this **Agreement** for supply of power unless otherwise specified in the terms and conditions of this Agreement.

*Nanapriya*  
मुख्य महाप्रबन्धक (वितरण क्षेत्र)  
सेल, बोकारो स्टील शहर



The terms and conditions of disconnection under this clause will be guided by relevant Clauses of JSERC [Electricity Supply Code] Regulation, 2015 vide its Notification no.-45 dt. 7<sup>th</sup> September, 2015 and its amendment from time to time

6. In case of reconnection after disconnection for non-payment of dues, reconnection charge will be payable by the consumer as per JSERC Regulation.

7. In case of reconnection whose supply has been disconnected for theft/tampering etc., reconnection will be done on payment of reconnection charge and on fulfillment of the penal action as prescribed in Electricity Supply Code of JSERC and as amended from time to time.

#### **Clause 21**

1. In the event of a Consumer desiring to increase the 'contract demand' mentioned in Schedule-I from a specified month during the continuance of the Agreement, the Consumer will approach the Corporation in writing for the same.

Provided that the application for enhancement of Contract Demand will be outright rejected by the Corporation if the Consumer is in arrears of Corporation's dues and the same has not been stayed by a court of law or the commission.

Enhancement of security deposit will commensurate with the increased Contract Demand.

However, Enhancement of Contract Demand will be subject to availability of power and system constraints.

2. In the event of the Licensee/Consumer desiring reduction of 'contract demand' mentioned in Schedule-I, the Consumer shall give the Corporation notice in advance in writing stating the quantity of power required along with time frame.

The terms and conditions of reduction of 'contract demand' will be guided by relevant Clauses of JSERC [Electricity Supply Code] Regulation, 2015 vide its Notification no.- 45 dt. 7<sup>th</sup> September, 2015 and its amendment from time to time.

#### **Clause 22**

This agreement shall subject as hereinbefore provided remain in force from the date of commencement of power supply for a period of **3 (three) years** and may continue thereafter if so mutually agreed upon between the Consumer and the Corporation on such terms and conditions as may be specified by the Corporation provided however continuance of the agreement after the initial **3 (three) years** will be only for a block of **1(one) year** at a time. Provided however either party shall be at liberty to terminate this agreement at the end of this stipulated period of initial block of **3 (three) years** or the subsequent block of **1(one) year** as applicable by giving 30 days' notice in advance in writing of such intention and on the expiration of such notice period this Agreement shall absolutely cease and determine but without prejudice to the rights and remedies, if any, of either party which may have accrued or arisen hereunder in the meantime.

However, if the agreement is to be terminated before expiry of initial period of agreement, the consumer shall be liable to pay Demand charge [for the balance period of initial period of agreement] as to be declared by JSERC in its tariff order or any amendment thereof by JSERC.

In case supply is continued after expiry of agreement without formal extension, this agreement shall continue to be effective on same terms & conditions as provided in Agreement, Act, Rules/regulation.

If any consumer is willing to sell its property to another person who intends to retain the power supply from the Corporation, the existing consumer/ new owner has to clear all its dues against power supply bills, if any and the new owner will be deemed as new consumer and shall complete all the formalities including signing of PPA. It is to be noted that point of power supply to a consumer is for use in a specific property area as declared by the consumer and claim for outstanding dues on that

नीरज भाटिया  
प्रमुख प्रबंधक (वितरण तंत्र)  
संल. बांकाशी स्टोल प्लान्ट





property will debar new owner's electricity connection by DVC till all outstanding dues on old consumer for supply in that property is cleared either by old consumer or new owner.

**Clause 23**

If the power supply to any Consumer remains disconnected continuously for a period of 180 (one hundred and eighty ) days where the disconnection has been effected in compliance with any of the provisions of Electricity Act,2003 and clauses of this Agreement , The Agreement with the Consumer for the supply of electricity shall be deemed to have been terminated with consequential effect on expiry of the said period of 180 (one hundred and eighty ) days or after expiry of the initial period of power purchase agreement, whichever is later. This will be without prejudice to such other action or the claim that may arise from the disconnection of supply or related issues therefor. On termination of the Agreement, the Corporation shall have the right to remove the service line and other installations through which electricity is supplied to the Consumer.

**Clause 24**

The above agreement is subject to provisions of Electricity Act, 2003 and the Regulations and Consumer agrees to pay for all charges payable in accordance with the Regulations and schedule of charges of the Corporation.

This agreement supersedes all the agreement executed between DVC and Bokaro Steel Limited in regard to power supply at Marafari , Bokaro Steel City.

**IN WITNESS WHEREOF** the parties hereto have executed or caused to be executed these presents the day and year first written.

**CONSUMER:**

(Full Name & Address)

WITNESS

संजय कुमार सिंह  
महाप्रबंधक (वितरण तंत्र)  
सेल, बोकारो स्टील प्लान्ट

(Full Name & Address with Seal)

SIGNED FOR AND ON BEHALF OF  
M/s STEEL AUTHORITY OF INDIA LIMITED  
BOKARO STEEL LIMITED

Registered Office:

**CORPORATION:**

(WITNESS)

उप मुख्य अभियंता (बाणि.)  
Dy. Chief Engineer (Comm.)  
दा.घा.नि., कोलकाता - 54  
DVC, Kolkata - 54

SIGNED FOR AND ON BEHALF OF

मुख्य अभियंता (वाणिज्यिक)  
Chief Engineer (Commercial)  
दामोदर घाटी निगम/D.V.O.  
कोलकाता-54/Kolkata-54

## Energy consumption data for 2023-24 (till sep 2023)

MONTH	DS-LT(units)	DSHT(units)	CS(units)	LTIS(units)	HTS(units)
Apr-23	894013.80	550451.03	1608247.40	23147.20	844989.30
May-23	848538.00	589732.59	1961187.80	33934.00	812792.60
Jun-23	831302.00	567619.24	2134953.70	25541.00	996218.70
Jul-23	851572.00	549385.00	1816404.70	52075.00	900097.70
Aug-23	791774.00	551013.00	1577836.00	42258.00	1011681.10
Sep-23	861400.00	550273.00	1456311.90	41052.00	839143.70
	5078599.80	3358473.86	10554941.50	218007.20	5404923.10

## Connected Load

DS-HT (load)	CS (load)	LTIS (load)	HTS (load)
4565	20873.5	820.17	9977.75

## Number of consumer

DS-LT	DS-HT	CS	LTIS	HTS
2595	5	1764	31	25

Type (DS-LT)	Consumption	Number of Consumers
Lease quarter	8548560	4773
License Quarter	16755660	10343
On roll employees	20160000	11200
Retention/non retention	738000	410

Frank  
28/10/23

19/11/23  
CMR (TA-Revenue)

अमर नाथ सिंह  
(नं. प्रो-विद्युत)  
महामन्थक  
सेवा, बोकारो स्टील प्लांट



## Power Purchased from DVC

	DVC Import (KWH)	Export to Township(kWh)	Export to steel Plant
Apr-22	12,66,90,000	2,87,93,405	9,78,96,595
May-22	11,84,11,000	2,96,13,185	8,87,97,815
Jun-22	12,73,48,000	2,87,86,768	9,85,61,232
Jul-22	12,38,41,000	2,87,14,044	9,51,26,956
Aug-22	11,48,88,000	2,74,60,859	8,74,27,141
Sep-22	11,90,10,000	2,64,09,299	9,26,00,701
Oct-22	11,52,22,000	2,44,78,359	9,07,43,641
Nov-22	10,76,84,000	2,16,14,122	8,60,69,878
Dec-22	11,70,72,000	2,51,76,155	9,18,95,845
Jan-23	12,12,80,000	2,63,17,569	9,49,62,431
Feb-23	10,58,20,000	2,11,54,789	8,46,65,211
Mar-23	12,49,59,000	2,24,35,471	10,25,23,529

*Ammh*  
28.02.2024

अमर नाथ सिंह  
महाप्रबन्धक (नं० प्र०-विद्युत)  
सेल, बोकारो स्टील प्लांट

Month	2023-24	
	Import from DVC (kWh)	Township Consumption (kWh)
Apr-23	118482000	25912512
May-23	117920000	28482398
Jun-23	118965000	32189371
Jul-23	103703000	30224746
Aug-23	122765810	26627182
Sep-23	119516000	26687472
	701.35181	170.123681

*Handwritten signature*  
20.10.2024

अमर नाथ सिंह  
महाप्रबन्धक (न० प्र०-विद्युत)  
र.न. बाजार स्थित प्लान्ट



**SAIL AUTHORITY OF INDIA LIMITED**  
**BOKARO STEEL PLANT**  
**TOWNSHIP ELECTRICAL**

Date: 30.11.2023

**Sub: Unauthorized hooking removal team**

The officers and supervisors named below along with security person shall go for inspection of the Township to take action for the removal/ hooking of unauthorized power connection. The scheduled time for this activity will be from 3:00 PM onwards. The plan for the visit will be under:

Date	DAYS	Area	Name of Officer and Supervisors
01.12.2023	FRIDAY	A	Shri. T.K. Das, Mgr.(TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
04.12.2023	MONDAY	B	Shri. T.K. Das, Mgr.(TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
06.12.2023	WEDNESDAY	C	Shri. T.K. Das, Mgr.(TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
08.12.2023	FRIDAY	D	Shri. T.K. Das, Mgr.(TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
11.12.2023	MONDAY	E	Shri. T.K. Das, Mgr.(TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
13.12.2023	WEDNESDAY	F	Shri. T.K. Das, Mgr.(TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
15.12.2023	FRIDAY	G	Shri. T.K. Das, Mgr.(TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
18.12.2023	MONDAY	H	Shri. T.K. Das, Mgr.(TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
20.12.2023	WEDNESDAY	I	Shri. T.K. Das, Mgr.(TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
22.12.2023	FRIDAY	J	Shri. T.K. Das, Mgr.(TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
27.12.2023	WEDNESDAY	K	Shri. T.K. Das, Mgr.(TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
29.12.2023	FRIDAY	L	Shri. T.K. Das, Mgr.(TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector

*Rajul Harkarni*  
 23/11/23

Rajul harkarni  
 GM-I/C (TA-Elect.)

राजुल हरकरनी  
 महाप्रबन्धक (न. प्र.-विद्युत)  
 सेल, बोकारो स्टील प्लांट

Copy To:  
 CGM-I/C, (TA) for kind information  
 CGM/Security  
 Sr. Mgr. Security  
 All Concerned





**SAIL AUTHORITY OF INDIA LIMITED**  
**BOKARO STEEL PLANT**  
**TOWNSHIP ELECTRICAL**

Date: 31.10.2023

**Sub: Unauthorized hooking removal team**

The officers and supervisors named below along with security person shall go for inspection of the Township to take action for the removal/ hooking of unauthorized power connection. The scheduled time for this activity will be from 3:00 PM onwards. The plan for the visit will be under:

Date	DAYS	Area	Name of Officer and Supervisors
01.11.2023	WEDNESDAY	A	Shri. T.K. Das, Mgr.(TE-E), Shri. T. Soren, Asst Mgr (TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
03.11.2023	FRIDAY	B	Shri. T.K. Das, Mgr.(TE-E), Shri. T. Soren, Asst Mgr (TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
06.11.2023	MONDAY	C	Shri. T.K. Das, Mgr.(TE-E), Shri. T. Soren, Asst Mgr (TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
08.11.2023	WEDNESDAY	D	Shri. T.K. Das, Mgr.(TE-E), Shri. T. Soren, Asst Mgr (TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
10.11.2023	FRIDAY	E	Shri. T.K. Das, Mgr.(TE-E), Shri. T. Soren, Asst Mgr (TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
13.11.2023	MONDAY	F	Shri. T.K. Das, Mgr.(TE-E), Shri. T. Soren, Asst Mgr (TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
17.11.2023	FRIDAY	G	Shri. T.K. Das, Mgr.(TE-E), Shri. T. Soren, Asst Mgr (TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
20.11.2023	MONDAY	H	Shri. T.K. Das, Mgr.(TE-E), Shri. T. Soren, Asst Mgr (TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
22.11.2023	WEDNESDAY	I	Shri. T.K. Das, Mgr.(TE-E), Shri. T. Soren, Asst Mgr (TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
24.11.2023	FRIDAY	J	Shri. T.K. Das, Mgr.(TE-E), Shri. T. Soren, Asst Mgr (TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector
29.11.2023	WEDNESDAY	K	Shri. T.K. Das, Mgr.(TE-E), Shri. T. Soren, Asst Mgr (TE-E), Shri. P K Paswan, Asst Mgr (TE-E), and supervisors of respective sector

Copy To:  
 CGM-I/C, (TA) for kind information  
 CGM/Security  
 Sr. Mgr. Security  
 All Concerned

Rajul harkerni  
 GM-I/C (TA-Elect.)

राजुल हार्करनी  
 महाप्रबन्धक (न. प्र.-विद्युत)  
 सेल, बोकारो स्टील प्लांट





# Bokaro Steel Plant

## eNote Sheet

**eNote Sheet No.** 1000033238

**Status:** In Approval

**Initiator:** ASHUTOSH KUMAR , Manager ,  
TOWN ADMN

**Date:** Jul 28, 2022

**Subject:** Implementation of Smart Meter/  
Advanced Metering Infrastructure in  
BSL Township

*Handwritten signature*  
28.10.2024

अमर नाथ सिंह  
महाप्रबन्धक (न० प्र०-विद्युत)  
सेल, बोकारो स्टील प्लांट

*Handwritten signature*



1000033238

Print Date: Nov 6, 2022

Printed By: C003682

21/11/22 *Handwritten signature*

राजुल हरकरनी  
RAJUL HARKERNI  
महाप्रबन्धक (नगर सेवा-विद्युत)  
General Manager (TA - Electrical)  
सेल, बोकारो इस्पात संयंत्र  
SAIL, Bokaro Steel Plant

## **Sub: Implementation of Smart Meter/ Advanced Metering Infrastructure in BSL Township**

### **Existing System:**

At present conventional Meters are installed in Plots, shops, quarters of the electrical consumers in BSL Township. These conventional set up has been technologically out graded and brings lot of challenges in our day to day activities. Few of them have been listed below:

1. Due to insufficient nos. of meter readers the meter reading is not possible, so average billing is done.
2. Maximum demand control is not available in present meter.
3. Chances of energy theft by bypassing the meter.
4. Lack in real time billing leads to outstanding dues.
5. Unsatisfied consumers

### **Proposed:**

Advanced Metering Infrastructure(AMI),is also referred as Smart Metering is the combination of the electronic meters with two-way communications technology for information, monitor, and control. Smart Meters are advanced electronic energy measurement devices having the capacity to collect information about energy usage at various intervals and transmitting the data through a communication network to utility and receiving instructions from utility as well. In addition to conventional electronic metering functionality smart meters through its built-in communication module can undertake load switch activities for disconnecting/ connecting the load remotely. Smart metering system aims to deliver multiple benefits by:-

- Providing a platform for improved customer service, e.g. timely and accurate readings support billing without need for estimation.
- Detailed and in time information of energy usage for identifying opportunities for energy savings.
- Building a platform for future smart grids.
- Allow remote connection/disconnection of supply.
- Measurement of electricity exported.
- Increase energy efficiency by keeping track of peak usage timings.
- Manage personal energy consumption.

- Reduce utility problems associated with regular breakdown, no lights in quarters, plots etc.
- Rise in revenue collection

This proposal includes-

- Replacement of Service Cable including erection of junction boxes, PVC conduit and flexible conduit.
- Replacement of Load side cable up to main switch including erection of junction boxes, PVC conduit and flexible conduit.
- Implementation of Smart Meter/ Advanced Metering Infrastructure including Design, Engineering and Operation & Maintenance for 10 years (1.5 years for Roll out and 8.5 years for comprehensive O&M)

It is proposed to cover Entire Township under this proposal. We have approximately 36231 consumer's points of different category. These categories are: LTIS (3 phase – CT meter), LTIS (3 phase Direct), HTS, CS (1 phase), CS (3 phase – CT meter), DS – LT, DS – HT, Lease Quarter, License Quarter, BSL Employee Quarter, Pool quarters.

The details of the 36231 consumers are mentioned in the table shown below-

Sl. No	Type of meter	Numbers
1	Single Phase Prepaid Smart Energy Meter	35787
2	Three Phase Prepaid Smart Energy meter	169
3	HT Prepaid Meters	20
4	11 KV Substation LTCT Meters for transformers incomer points	255
<b>Total consumer</b>		<b>36231</b>
<b>Deviation expected in total consumer list</b>		<b>36231±10%</b>

In view of above TC-DB is requested to prepare Technical Specification and cost estimate for above IPU proposal.



Noting:

Note # 1 ASHUTOSH KUMAR , (B036475), Manager, TOWN ADMN

Date:- 28.07.2022 16:34:29

May please process further.

---

Note # 2 RAJUL HARKERNI , (C003382),GM,TOWN ADMN

Date:- 28.07.2022 16:47:04

We may please request TC-DB  
to prepare TS and cost estimate.

---

Note # 3 BHUPINDER SINGH POPLI , (C001413),CGM,TOWN ADMN

Date:- 29.07.2022 10:43:01

For further processing on priority please

---

Note # 4 AJAY KUMAR , (C001387),CGM,TECHNICAL CELL

Date:- 30.07.2022 17:44:43

May kindly be taken up.

---

Note # 5 JYOTI , (C003555),AGM,TECHNICAL CELL

Date:- 06.08.2022 12:43:01

Meeting held with officers of TA (Electrical) on 04-08-22. As discussed a Technological Selection committee meeting may be organized by department as per AMR procedure to deliberate mode of tendering, mode of implementation etc.

---

Note # 6 AJAY KUMAR , (C001387),CGM,TECHNICAL CELL

Date:- 06.08.2022 16:21:13

Shri R.L.Meena, Sr. Mgr., shall be member from TC-DB TSC meeting.

---

Note # 7 BHUPINDER SINGH POPLI , (C001413),CGM,TOWN ADMN

Date:- 06.08.2022 18:04:22

Please process further

---

Note # 8 RAJUL HARKERNI , (C003382),GM,TOWN ADMN

Date:- 23.08.2022 17:01:51

TSC meeting was organized in the Office of CGM (I/C) TA on 10/8/2022 Minutes of the meeting has been recorded.

---

Note # 9 JYOTI , (C003555),AGM,TECHNICAL CELL

Date:- 24.08.2022 15:33:20

Please examine and prepare.

---

Note # 10 SNEHLATA , (C029097),Sr. Manager,TECHNICAL CELL

Date:- 07.09.2022 17:17:17

As discussed.

---



### Installation of Smart meter

a) **Detailed Project Report:** E note sheet on approval of Implementation of Smart meter/ Advance Metering Infrastructure in BSL Township dated 28th July 2022, is enclosed as Annexure H.

b) **Cost benefit analysis:** SAIL-BSL is committed for reduction of the distribution losses in the township. At present, the consumers of SAIL-BSL are connected with the analog meters and SAIL-BSL has appointed meter readers for meter readings. Few of the challenges in the existing meters are listed below:

A) Insufficient manpower for meter reading, causing average billing for some of the consumers.

B) Electricity theft by bypassing the energy meter.

C) Delay in billing leading to outstanding dues.

Hence, SAIL-BSL has proposed for smart meters which would help in overcoming the above-mentioned challenges. Further, it is submitted that SAIL-BSL is planning to install smart meters for all the consumers.

SAIL-BSL humbly pray before Hon'ble Commission to allow SAIL-BSL to approach separately to the Hon'ble Commission in next tariff petition for the CAPEX approval of Installation of Smart Meters, **after the Stage I approval.**

c) **Cost of financing:** To be estimated

21/7/22  
SAIL

## Annexure I



सेल / SAIL  
बी एस एल / BSL  
टिप्पणी पत्र

## Proposal for Underground of LT Network

SAIL-BSL is committed for reduction of the distribution losses in the township. Every year SAIL-BSL is having a financial impact of ~30 Crores in regard to distribution loss in township because of non-technical reasons such as illegal tapping and hooking.

Thus, considering the seriousness of the matter, General Manager, SAIL-BSL has discussed this issue with the concerned officials of TA Electrical department level with the concerned officials to know their opinion on the matter.

It was discussed during the meeting that the Sectors 01, 04 and 09 are the high loss pockets of the Township majorly due to its location at the border area of the township.

Thus, as a concrete measure to reduce the non-technical distribution loss because of illegal connection/theft of power /pilferage, SAIL-BSL may propose to install underground cables which is one of the prevailing practices followed in India. It was highlighted in the meeting that the Forum of Regulators Report on "Best practices and strategies for distribution loss reduction" has also suggested underground of LT network as one of the measures for the non-technical distribution loss reduction. Further, Central Electricity Authority has also acknowledged the fact that in the underground cabling system, it is generally impossible to have illegal connection by tapping the conductor for theft of power.

In view of above discussion, General Manager, TA Electrical Department has directed the concerned officials to prepare a detailed plan for implementation of Underground of LT Network along with the tentative timelines and cost estimate for Stage I approval from the SAIL-BSL Management.

*Spindh*  
28.02.2024

अमर नाथ सिंह  
महाप्रबन्धक (नगर राया-विद्युत)

*21/3/24* *Spindh*

*21/3/24* *Spindh*

राजुल हर्करनी  
RAJUL HARKERNI  
महाप्रबन्धक (नगर राया-विद्युत)  
General Manager (TA - Electrical)  
सेल, बोकारो इस्पात संयंत्र  
SAIL, Bokaro Steel Plant

## Annexure K

**STEEL AUTHORITY OF INDIA LIMITED BOKARO**  
BOKARO STEEL CITY

**PAYMENT ADVICE**

To  
SURYA ROSHNI LTD

Dear Sir/Madam/Messers,

The following payment(s) have been initiated through SBI CMP, in favour of you:

UTR NO	AMOUNT(INR)	DATE	LINKAGE FIELD	E-CHEQUE NO.	CMP REFERENCE NO.
SBIN323075386863	10,77,203.00	16-03-2023		AOIF06377000001	CMP00000000620781437

Other Additional Information regarding the transaction is

BANK STATEMENT	DEBIT ACCOUNT	PRODUCT	INSTRUMENT
200006832223	10887277388	NEFT	E000001723093

Your Bank Account No: **1120008700000771**

Your Bank IFSC Code: **PUNB0112000**

You are requested to kindly check your Bank Account, as above and please acknowledge the receipt of the payment.

For STEEL AUTHORITY OF INDIA LIMITED BOKARO

Authorised Signatory

This is Computer generated advice and does not require any Signature

*A Singh*  
28.02.2024  
अमर नाथ सिंह  
महाप्रबन्धक (न० प्र०-विद्युत)  
सेल, बोकारो स्टील प्लांट

*राजुल*  
राजुल हरकरनी  
RAJUL HARKERNI  
महाप्रबन्धक (नगर सेवा-विद्युत)  
General Manager (TA - Electrical)  
सेल, बोकारो इस्पात संयंत्र  
SAIL, Bokaro Steel Plant

**STEEL AUTHORITY OF INDIA LIMITED BOKARO**

BOKARO STEEL CITY

**PAYMENT ADVICE**

To  
SURYA ROSHNI LTD

Dear Sir/Madam/Messers,

.

The following payment(s) have been initiated through SBI CMP, in favour of you:

UTR_NO	AMOUNT(INR)	DATE	LINKAGE_FIELD	E-CHEQUE NO.	CMP REFERENCE NO.
SBIN423082854519	66,45,994.43	23-03-2023		AOIG06950200001	CMP00000000621770244

Other Additional Information regarding the transaction is

BANK STATEMENT	DEBIT ACCOUNT	PRODUCT	INSTRUMENT
200006894723	10887277388	NEFT	E000001723704

Your Bank Account No: **1120008700000771**

Your Bank IFSC Code: **PUNB0112000**

You are requested to kindly check your Bank Account, as above and please acknowledge the receipt of the payment.

For STEEL AUTHORITY OF INDIA LIMITED BOKARO

Authorised Signatory

This is Computer generated advice and does not require any Signature





To,

**SURYA ROSHNI LTD PLOT NO 1823**  
**NEAR DALADALI CHOWK SIMALIYA RATU RANCHI**  
**RANCHI RANCHI Pin: 834001**

Payment against your Bills/Dues is under process through NEFT(e-payment) mode. The details of your bill (vide docno:2000068947) is furnished below:-

**BILL LEVEL RECOVERIES/REFUNDS**

Bill Ctl No.	Bill Ctl Dt	PO No.	Vendor Inv No	Vendor Inv Dt	Bill Reg Amount	Payable Amount	Recoveries(-)/Refunds(+)						Amount
1208286	16.03.2023	4572000565	RAN3471000305	13.02.2023	6922911.34	8169035.38	138459.00-194C-Contractors-Corporate PAN	69229.12-TDS on CGST	69229.12-TDS on SGST				<b>7892118.14</b>

**VENDOR LEVEL RECOVERIES/REFUNDS**

Doc No.	Doc Dt	Remarks	PO No.	Reference	Amount
8800016403	17.03.2023	SD Deduction-RA 01	4572000565	RAN3471000305	<b>1038436.71-</b>
Doc No.	Doc Dt	RECV Adv no.	Recvy Reason	Remarks	Amount

**Total Payable: 6853681.43**

This is system generated report/information and hence does not require signature.

NOTE: KYC UPDATE -Your PAN No is AAACS3558C and Your TIN No is ..Please verify your PAN NO & TIN NO.

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3.C FORM DATA IN THE SPECIFIED FORMAT AS ANNEXED IN PO TO BE SUBMITTED TO BSL ON EMAILID- bslcform@gmail.com WITHIN 7 DAYS FROM THE END OF THE RESPECTIVE QUARTER POSITIVELY.

4. To enable BSL to avail ITC, please ensure that GST involved in the instant Case is paid to Govt. exchequer and proper GST return is filed by you as per GST Act/Rules failing which the GST so reimbursed to you along with penalty and interest leviabale under the GST Act/Rules shall be recovered from you.

**5.Vendor claiming TCS as per Section- 206 C (1H) (If Applicable) may update their TAN number in Vendor master in ERP/MM Deptt. and timely submit the TCS Certificate to Bill Passing Section.**

Party Code:1000029629

PO/BI No.:

diff : 207687



To,

SURYA ROSHNI LTD PLOT NO 1823  
NEAR DALADALI CHOWK SIMALIYA RATU RANCHI  
RANCHI RANCHI Pin: 834001

Payment against your Bills/Dues is under process through NEFT(e-payment) mode. The details of your bill (vide docno:2000071026) is furnished below:-

**BILL LEVEL RECOVERIES/REFUNDS**

Bill Ctl No.	Bill Ctl Dt	PO No.	Vendor Inv No	Vendor Inv Dt	Bill Reg Amount	Payable Amount	Recoveries(-)/Refunds(+)						Amount
1208372	29.03.2023	4572000565	RAN3471000361	22.03.2023	6313681.00	7450143.58	126274.00-194C-Contractors-Corporate PAN	63136.81-TDS on CGST	63136.81-TDS on SGST				7197595.96

**VENDOR LEVEL RECOVERIES/REFUNDS**

Doc No.	Doc Dt	Remarks	PO No.	Reference	Amount
8800017057	29.03.2023	SD Deduction-RA 3 AGT-595	4572000565	RAN3471000361	947052.15-
Doc No.	Doc Dt	RECV Adv no.	Recvy Reason	Remarks	Amount

**Total Payable: 6250543.81**

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Party Code:1000029629

PO/BI No.:

diff : 189410

**Installation of Arterial Lights in BSL township**

a) **Detailed Project Report:** Payment Advice is submitted as Annexure K

b) **Cost Benefit Analysis:** It is submitted that, the Arterial lights (Main Road Lights) of SAIL-BSL had been installed more than 30 years back. These lights require frequent repair/maintenance for their upkeep. Further, the old electrical infrastructure such as electric poles and cables are prone to frequent breakdown. Hence, SAIL-BSL has planned to replace the older Arterial lights by octagonal poles with LED Fixtures in the township. SAIL-BSL humbly submits to perform the mentioned project in FY 2022-23 and FY 2023-24 under vide Scheme no. AMR/TA/6328.

SAIL BSL humbly pray before Hon'ble Commission to approve estimated capitalization of Rs. 2.08 crs and Rs. 2.16 crs. during FY 2022-23 and FY 2023-24 respectively. and allow any deviation in the true up petitions.

c) **Cost of financing:** Rs. 4,23,70,000 provided by SAIL-BSL

21/3/23  
[Signature]

**STEEL AUTHORITY OF INDIA LIMITED BOKARO**

BOKARO STEEL CITY

**PAYMENT ADVICE**

To  
SURYA ROSHNI LTD

Dear Sir/Madam/Messers,

.

The following payment(s) have been initiated through SBI CMP, in favour of you:

UTR_NO	AMOUNT(INR)	DATE	LINKAGE_FIELD	E-CHEQUE NO.	CMP REFERENCE NO.
SBIN223114905677	72,05,625.61	24-04-2023		AOIU18743400001	CMP00000000639949116

Other Additional Information regarding the transaction is

BANK STATEMENT	DEBIT ACCOUNT	PRODUCT	INSTRUMENT
200000386323	10887277388	NEFT	E000001730106

Your Bank Account No: **1120008700000771**

Your Bank IFSC Code: **PUNB0112000**

You are requested to kindly check your Bank Account, as above and please acknowledge the receipt of the payment.

For STEEL AUTHORITY OF INDIA LIMITED BOKARO

Authorised Signatory

This is Computer generated advice and does not require any Signature



**STEEL AUTHORITY OF INDIA LIMITED BOKARO**

BOKARO STEEL CITY

**PAYMENT ADVICE**

To  
SURYA ROSHNI LTD

Dear Sir/Madam/Messers,

.

The following payment(s) have been initiated through SBI CMP, in favour of you:

UTR_NO	AMOUNT(INR)	DATE	LINKAGE_FIELD	E-CHEQUE NO.	CMP REFERENCE NO.
SBIN423087542068	39,62,868.84	28-03-2023		AOIJ41640600001	CMP00000000625256845

Other Additional Information regarding the transaction is

BANK STATEMENT	DEBIT ACCOUNT	PRODUCT	INSTRUMENT
200007030823	10887277388	NEFT	E000001725037

Your Bank Account No: **1120008700000771**

Your Bank IFSC Code: **PUNB0112000**

You are requested to kindly check your Bank Account, as above and please acknowledge the receipt of the payment.

For STEEL AUTHORITY OF INDIA LIMITED BOKARO

Authorised Signatory

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To,

**SURYA ROSHNI LTD PLOT NO 1823**  
**NEAR DALADALI CHOWK SIMALIYA RATU RANCHI**  
**RANCHI RANCHI Pin: 834001**

Payment against your Bills/Dues is under process through NEFT(e-payment) mode. The details of your bill (vide docno:2000007818) is furnished below:-

**BILL LEVEL RECOVERIES/REFUNDS**

Bill Ctl No.	Bill Ctl Dt	PO No.	Vendor Inv No	Vendor Inv Dt	Bill Reg Amount	Payable Amount	Recoveries(-)/Refunds(+)						Amount
1208484	12.05.2023	4572000565	RAN3471000003	04.04.2023	3264618.72	3852250.08	65293.00-194C-Contractors-Corporate PAN	32646.19-TDS on CGST	32646.19-TDS on SGST				<b>3721664.70</b>

**VENDOR LEVEL RECOVERIES/REFUNDS**

Doc No.	Doc Dt	Remarks	PO No.	Reference	Amount
8800001525	12.05.2023	SD Deduction-RA 8 th	4572000565	RAN3471000003	<b>489692.81-</b>
Doc No.	Doc Dt	RECV Adv no.	Recvy Reason	Remarks	Amount

**Total Payable: 3231971.89**

This is system generated report/information and hence does not require signature.

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**5.Vendor claiming TCS as per Section- 206 C (1H) (If Applicable) may update their TAN number in Vendor master in ERP/MM Deptt. and timely submit the TCS Certificate to Bill Passing Section.**

Party Code:1000029629

PO/BI No.:

diff : 97939



To,

SURYA ROSHNI LTD PLOT NO 1823  
NEAR DALADALI CHOWK SIMALIYA RATU RANCHI  
RANCHI RANCHI Pin: 834001

Payment against your Bills/Dues is under process through NEFT(e-payment) mode. The details of your bill (vide docno:2000017319) is furnished below:-

**BILL LEVEL RECOVERIES/REFUNDS**

Bill Ctl No.	Bill Ctl Dt	PO No.	Vendor Inv No	Vendor Inv Dt	Bill Reg Amount	Payable Amount	Recoveries(-)/Refunds(+)						Amount
1208634	26.06.2023	4572000565	RAN0808000002	12.06.2023	101897.60	120239.16	2038.00-194C-Contractors-Corporate PAN	1018.98-TDS on CGST	1018.98-TDS on SGST				116163.20
1208635	26.06.2023	4572000565	RAN0808000003	12.06.2023	577710.90	681698.86	11555.00-194C-Contractors-Corporate PAN	5777.11-TDS on CGST	5777.11-TDS on SGST				658589.64

**VENDOR LEVEL RECOVERIES/REFUNDS**

Doc No.	Doc Dt	Remarks	PO No.	Reference	Amount
8800003952	27.06.2023	SD Deduction-RA 12	4572000565	RAN0808000002	15284.64-
8800003953	27.06.2023	SD Deduction-RA 13	4572000565	RAN0808000003	86656.48-
Doc No.	Doc Dt	RECV Adv no.	Recvy Reason	Remarks	Amount

**Total Payable: 672811.72**

This is system generated report/information and hence does not require signature.

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Party Code:1000029629

PO/BI No.:

diff : 20389



To,

SURYA ROSHNI LTD PLOT NO 1823  
NEAR DALADALI CHOWK SIMALIYA RATU RANCHI  
RANCHI RANCHI Pin: 834001

Payment against your Bills/Dues is under process through NEFT(e-payment) mode. The details of your bill (vide docno:2000020457) is furnished below:-

**BILL LEVEL RECOVERIES/REFUNDS**

Bill Ctl No.	Bill Ctl Dt	PO No.	Vendor Inv No	Vendor Inv Dt	Bill Reg Amount	Payable Amount	Recoveries(-)/Refunds(+)						Amount
1208665	13.07.2023	4572000565	RAN0808000005	05.07.2023	359067.80	423700	7182.00-194C-Contractors-Corporate PAN	3590.68-TDS on CGST	3590.68-TDS on SGST				409336.64
1208664	13.07.2023	4572000565	RAN0808000004	28.06.2023	504841.84	595713.36	10097.00-194C-Contractors-Corporate PAN	5048.42-TDS on CGST	5048.42-TDS on SGST				575519.52

**VENDOR LEVEL RECOVERIES/REFUNDS**

Doc No.	Doc Dt	Remarks	PO No.	Reference	Amount
8800004902	14.07.2023	SD Deduction-	4572000565	RAN0808000005	53860.17-
8800004903	14.07.2023	SD Deduction-RA 14	4572000565	RAN0808000004	75726.40-
Doc No.	Doc Dt	RECV Adv no.	Recvy Reason	Remarks	Amount

**Total Payable: 855269.59**

This is system generated report/information and hence does not require signature.

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Party Code:1000029629

PO/BI No.:

diff : 0





To,

**SURYA ROSHNI LTD PLOT NO 1823**  
**NEAR DALADALI CHOWK SIMALIYA RATU RANCHI**  
**RANCHI RANCHI Pin: 834001**

Payment against your Bills/Dues is under process through NEFT(e-payment) mode. The details of your bill (vide docno:2000024186) is furnished below:-

**BILL LEVEL RECOVERIES/REFUNDS**

Bill Ctl No.	Bill Ctl Dt	PO No.	Vendor Inv No	Vendor Inv Dt	Bill Reg Amount	Payable Amount	Recoveries(-)/Refunds(+)						Amount
1208700	28.07.2023	4572000565	RAN0808000006	05.07.2023	2177636.48	2569611.04	43553.00-194C-Contractors-Corporate PAN	21776.37-TDS on CGST	21776.37-TDS on SGST				<b>2482505.30</b>

**VENDOR LEVEL RECOVERIES/REFUNDS**

Doc No.	Doc Dt	Remarks	PO No.	Reference	Amount
8800005984	31.07.2023	SD Deduction-	4572000565	RAN0808000006	<b>326645.47-</b>
Doc No.	Doc Dt	RECV Adv no.	Recvy Reason	Remarks	Amount

**Total Payable: 2155859.83**

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Party Code:1000029629

PO/BI No.:

diff : 0



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SURYA ROSHNI LTD PLOT NO 1823  
 NEAR DALADALI CHOWK SIMALIYA RATU RANCHI  
 RANCHI RANCHI Pin: 834001

Payment against your Bills/Dues is under process through NEFT(e-payment) mode. The details of your bill (vide docno:2000068322) is furnished below:-

**VENDOR LEVEL RECOVERIES/REFUNDS**

Doc No.	Doc Dt	Remarks	PO No.	Reference	Amount
Doc No.	Doc Dt	RECV Adv no.	Recvy Reason	Remarks	Amount

**Total Payable: 0**

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Party Code:1000029629

PO/BI No.:4572000565

diff : 1077203-



To,

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**NEAR DALADALI CHOWK SIMALIYA RATU RANCHI**  
**RANCHI RANCHI Pin: 834001**

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**BILL LEVEL RECOVERIES/REFUNDS**

Bill Ctl No.	Bill Ctl Dt	PO No.	Vendor Inv No	Vendor Inv Dt	Bill Reg Amount	Payable Amount	Recoveries(-)/Refunds(+)						Amount
1208286	16.03.2023	4572000565	RAN3471000305	13.02.2023	6922911.34	8169035.38	138459.00-194C-Contractors-Corporate PAN	69229.12-TDS on CGST	69229.12-TDS on SGST				<b>7892118.14</b>

**VENDOR LEVEL RECOVERIES/REFUNDS**

Doc No.	Doc Dt	Remarks	PO No.	Reference	Amount
8800016403	17.03.2023	SD Deduction-RA 01	4572000565	RAN3471000305	<b>1038436.71-</b>
Doc No.	Doc Dt	RECV Adv no.	Recvy Reason	Remarks	Amount

**Total Payable: 6853681.43**

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PO/BI No.:

diff : 207687



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**BILL LEVEL RECOVERIES/REFUNDS**

Bill Ctl No.	Bill Ctl Dt	PO No.	Vendor Inv No	Vendor Inv Dt	Bill Reg Amount	Payable Amount	Recoveries(-)/Refunds(+)						Amount
1208372	29.03.2023	4572000565	RAN3471000361	22.03.2023	6313681.00	7450143.58	126274.00-194C-Contractors-Corporate PAN	63136.81-TDS on CGST	63136.81-TDS on SGST				<b>7197595.96</b>

**VENDOR LEVEL RECOVERIES/REFUNDS**

Doc No.	Doc Dt	Remarks	PO No.	Reference	Amount
8800017057	29.03.2023	SD Deduction-RA 3 AGT-595	4572000565	RAN3471000361	<b>947052.15-</b>
Doc No.	Doc Dt	RECV Adv no.	Recvy Reason	Remarks	Amount

**Total Payable: 6250543.81**

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Party Code:1000029629

PO/BI No.:

diff : 189410





To,

SURYA ROSHNI LTD PLOT NO 1823  
NEAR DALADALI CHOWK SIMALIYA RATU RANCHI  
RANCHI RANCHI Pin: 834001

Payment against your Bills/Dues is under process through NEFT(e-payment) mode. The details of your bill (vide docno:2000071571) is furnished below:-

**BILL LEVEL RECOVERIES/REFUNDS**

Bill Ctl No.	Bill Ctl Dt	PO No.	Vendor Inv No	Vendor Inv Dt	Bill Reg Amount	Payable Amount	Recoveries(-)/Refunds(+)						Amount
1208389	30.03.2023	4572000565	RAN3471000337	14.03.2023	536500.00	633070	10730.00-194C-Contractors-Corporate PAN	5365.00-TDS on CGST	5365.00-TDS on SGST				611610.00
1208390	30.03.2023	4572000565	RAN0808000001	23.03.2023	2911360.00	3435404.8	58228.00-194C-Contractors-Corporate PAN	29113.60-TDS on CGST	29113.60-TDS on SGST				3318949.60

**VENDOR LEVEL RECOVERIES/REFUNDS**

Doc No.	Doc Dt	Remarks	PO No.	Reference	Amount
8800017232	30.03.2023	SD Deduction-RA 5 AGT-595	4572000565	RAN3471000337	80475.00-
8800017233	30.03.2023	SD Deduction-RA 4 AGT-595	4572000565	RAN0808000001	436704.00-
Doc No.	Doc Dt	RECV Adv no.	Recvy Reason	Remarks	Amount

**Total Payable: 3413380.6**

This is system generated report/information and hence does not require signature.

NOTE: KYC UPDATE -Your PAN No is AAACS3558C and Your TIN No is ..Please verify your PAN NO & TIN NO.

1.In case of incorrect PAN/TIN TDS deducted by BSL (and tds Certificate generation) shall be incorrect and may not be claimable from IT /Comm tax Deptt by you. BSL shall not be responsible for any incorrect PAN /TIN submitted and consequential financial losses incurred by you on account. In case of INCORRECT PAN/TIN Nos your future bills shall be witheld.

2. For accurate and faster delivery of Intimation Memo it is requested that your email id be submitted with concerned vendor master team in BSL AS INTIMATION MEMO shall be E-MAILED IN FUTURE and hardcopy shall be withdrwan.

3.C FORM DATA IN THE SPECIFIED FORMAT AS ANNEXED IN PO TO BE SUBMITTED TO BSL ON EMAILID- bslcform@gmail.com WITHIN 7 DAYS FROM THE END OF THE RESPECTIVE QUARTER POSSITIVELY.

4. To enable BSL to avail ITC, please ensure that GST involved in the instant Case is paid to Govt. exchequer and proper GST return is filed by you as per GST Act/Rules failing which the GST so reimbursed to you along with penalty and interest leviabale under the GST Act/Rules shall be recovered from you.

**5.Vendor claiming TCS as per Section- 206 C (1H) (If Applicable) may update their TAN number in Vendor master in ERP/MM Deptt. and timely submit the TCS Certificate to Bill Passing Section.**

Party Code:1000029629

PO/BI No.:

diff : 103436

STEEL AUTHORITY OF INDIA LIMITED BOKARO  
BOKARO STEEL CITYPAYMENT ADVICETo  
ESSEL PROJECTS PVT LTD

Dear Sir/Madam/Messers,

The following payment(s) have been initiated through SBI CMP, in favour of you:

UTR NO	AMOUNT(INR)	DATE	LINKAGE FIELD	E-CHEQUE NO.	CMP REFERENCE NO.
SBIN323040735523	39,68,390.00	09-02-2023		AOI335835200001	CMP00000000603517418

Other Additional Information regarding the transaction is

BANK STATEMENT	DEBIT ACCOUNT	PRODUCT	INSTRUMENT
200005882623	10887277388	NEFT	E000001713882

Your Bank Account No: 016151000036

Your Bank IFSC Code: ICIC0000161

You are requested to kindly check your Bank Account, as above and please acknowledge the receipt of the payment.

For STEEL AUTHORITY OF INDIA LIMITED BOKARO

Authorised Signatory

This is Computer generated advice and does not require any Signature

28-02-2024  
अमर नाथ सिंह  
महाप्रबन्धक (न० प्र०-विद्युत)  
सेल, बोकारो स्टील प्लांट

राजुल हरकरनी  
RAJUL HARKERNI  
महाप्रबन्धक (नगर संवा-विद्युत)  
General Manager (TA - Electrical)  
सेल, बोकारो इस्पात संयंत्र  
SAIL, Bokaro Steel Plant

**STEEL AUTHORITY OF INDIA LIMITED BOKARO**

BOKARO STEEL CITY

**PAYMENT ADVICE**

To  
ESSEL PROJECTS PVT LTD

Dear Sir/Madam/Messers,

.

The following payment(s) have been initiated through SBI CMP, in favour of you:

UTR_NO	AMOUNT(INR)	DATE	LINKAGE_FIELD	E-CHEQUE NO.	CMP REFERENCE NO.
SBIN523054944256	4,52,41,969.00	23-02-2023		AOI744586600001	CMP00000000609240539

Other Additional Information regarding the transaction is

BANK STATEMENT	DEBIT ACCOUNT	PRODUCT	INSTRUMENT
200006353823	10887277388	NEFT	E000001718433

Your Bank Account No: **016151000036**

Your Bank IFSC Code: **ICIC0000161**

You are requested to kindly check your Bank Account, as above and please acknowledge the receipt of the payment.

For STEEL AUTHORITY OF INDIA LIMITED BOKARO

Authorised Signatory

This is Computer generated advice and does not require any Signature

**STEEL AUTHORITY OF INDIA LIMITED BOKARO**

BOKARO STEEL CITY

**PAYMENT ADVICE**

To  
ESSEL PROJECTS PVT LTD

Dear Sir/Madam/Messers,

.

The following payment(s) have been initiated through SBI CMP, in favour of you:

UTR_NO	AMOUNT(INR)	DATE	LINKAGE_FIELD	E-CHEQUE NO.	CMP REFERENCE NO.
SBIN423082918262	5,66,32,530.00	23-03-2023		AOIF63363100001	CMP00000000621349559

Other Additional Information regarding the transaction is

BANK STATEMENT	DEBIT ACCOUNT	PRODUCT	INSTRUMENT
200006885923	10887277388	NEFT	E000001723619

Your Bank Account No: **016151000036**

Your Bank IFSC Code: **ICIC0000161**

You are requested to kindly check your Bank Account, as above and please acknowledge the receipt of the payment.

For STEEL AUTHORITY OF INDIA LIMITED BOKARO

Authorised Signatory

This is Computer generated advice and does not require any Signature



**11KV Feeder Augmentation in BSL Township**

a) **Detailed Project Report:** Payment Notice is submitted as Annexure L

b) **Cost Benefit Analysis:** It is submitted that, SAIL-BSL is observing growth in the energy consumption. Hence, capacity enhancement of township substation and augmentation of 11kV distribution system is planned. The augmentation of SAIL-BSL 11kV distribution system shall be done by redistributing the electrical loads of large sectors and shifting the part of the load from existing feeder to new feeder being created under the present scheme.

SAIL-BSL humbly submits that, it is technical necessity, in view of the increasing trend of power requirement of SAIL-BSL Township and to minimize shutdown/breakdowns in distribution network during the power supply to different sectors of township. Further, SAIL-BSL has awarded the contract for Augmentation of 11 kV Power distribution System of the Township vide Scheme no. AMR/TA/6518.

SAIL BSL humbly pray before Hon'ble Commission to approve estimated capitalization of Rs. 10.58 crs and Rs. 5.02 crs. during FY 2022-23 and FY 2023-24 respectively and allow any deviation in the true up petitions.

c) **Cost of financing:** Rs. 1,56,090,000 provided by SAIL-BSL

21/5/23  
SAIL

**ESSEL PROJECTS PVT LTD**
**CC-171 & 172-SAIL-BOKARO-SUPPLY & ERECTION - PAYMENT RECEIPT DETAILS FROM APR-23 TO SEP-23**

			EPPL CLAIMED INVOICE DETAILS						DEDUCTIONS				RECEIVABLES	Payment Receipt Detail		
SL. No.	Invoice No.	BILL DATE	Site Bill Ref. No.	PO. NO.	Basic Bill	CGST	SGST	GROSS Bill Amt.	LESS TDS IT @2%	LESS TDS GST @2%	LESS RETENTION 20%	MOB ADV 3%	NET RECEIVABLE	Receipt Date	Net Receipt Amt.	
1	EP/JH/23-24/002	6.Apr.23	CC-172/RA-08	4572000567	24,99,999.92	224,999.99	224,999.99	2950000	50000	50000	500000	75000	2275000	18-Apr-23	2275000.00	
2	EP/JH/23-24/003	6.Apr.23	CC-171/RA-09	4572000567	17,41,695.00	156,752.55	156,752.55	2055200	34834	34834	348339	52251	1584942	18-Apr-23	1584940.12	
3	EP/JH/23-24/011	13.May.23	CC-172/RA-10	4572000567	96,41,310.00	867,717.90	867,717.90	11376746	192826	192826	1928262	289239	8773592	23-May-23	8773783.43	
4	EP/JH/23-24/012	13.May.23	CC-171/RA-11	4572000567	4,50,000.00	40,500.00	40,500.00	531000	9000	9000	90000	13500	409500	23-May-23	409500.00	
5	EP/JH/23-24/016	7.Jun.23	CC-171/RA-12	4572000567	3,30,000.00	29,700.00	29,700.00	389400	6600	6600	66000	9900	300300	21.Jun.23	300300.00	
6	EP/JH/23-24/018	20.Jun.23	CC-172/RA-13	4572000567	21,50,379.14	193,534.12	193,534.12	2537447	43008	43008	430076	64511	1956845	30.Jun.23	1956885.27	
7	EP/JH/23-24/023	17.Jul.23	CC-172/RA-14	4572000567	14,36,276.96	129,264.93	129,264.93	1694807	28726	28726	287255	43088	1307012	02.Aug.23	1307037.80	
8	EP/JH/23-24/026	11.Sep.23	CC-171/RA-16	4572000567	1,50,000.00	13,500.00	13,500.00	177000	3000	3000	30000	4500	136500	22.Sep.23	136501.00	
9	EP/JH/23-24/027	12.Sep.23	CC-172/RA-17	4572000567	30,000.00	2,700.00	2,700.00	35400	600	600	6000	900	27300	22.Sep.23	27300.00	
10	EP/JH/23-24/028	12.Sep.23	CC-172/RA-18	4572000567	2,00,000.00	18,000.00	18,000.00	236000	4000	4000	40000	6000	182000	22.Sep.23	182000.00	
11	EP/JH/23-24/030	14.Sep.23	CC-172/RA-19	4572000567	2,00,000.00	18,000.00	18,000.00	236000	4000	4000	40000	6000	182000	22.Sep.23	182000.00	
12	RETENTION 2.5% AGAINST PAC RELEASED			4572000567							-3306992	0	3306992	02.Sep.23	3306991.53	
13	RETENTION 5% AGAINST COMMISSIONING RELEASED			4572000567							-6613983	0	6613983	21.Sep.23	6613983.00	
			Total Payment Receipt from Apr-20 to Sep-23 from SAIL-BOKARO													27056222



# Government of Jharkhand

## Receipt of Online Payment of Stamp Duty

NON JUDICIAL

Receipt Number : 3c5def70c66ed4e4e8bf

Receipt Date : 24-Feb-2023 05:12:08 pm

Receipt Amount : 100/-

Amount In Words : One Hundred Rupees Only

Document Type : Agreement or Memorandum of an Agreement

District Name : Bokaro

Stamp Duty Paid By : SURYA ROSHNI LTD

Purpose of stamp duty paid : AGREEMENT

First Party Name : SAIL BOKARO STEEL PLANT

Second Party Name : SURYA ROSHNI LTD

GRN Number : 2315950518

*Handwritten:* 28.02.2024  
अमर नाथ सिंह  
महाप्रबन्धक (नगर रावा-विद्युत)  
सेल, बोकारो इस्पात संयंत्र

This stamp paper can be verified in the jharnibandhan site through receipt number :-

### CONTRACT AGREEMENT

THIS CONTRACT NO. T&C(E)/A6313/SA/597 made this Twenty\_Seven Day of February, Two Thousand Twenty-Three (27.02.2023) at Bokaro Steel Plant, Bokaro Steel City, Jharkhand (India).

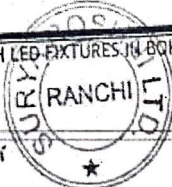


This Receipt is to be used as proof of payment of stamp duty only for one document. The use of the same receipt as proof of payment of stamp duty in another document through reprint, photo copy or other means is penal offence under section-62 of Indian Stamp Act, 1899

इस रसीद का उपयोग केवल एक ही दस्तावेज पर मुद्रांक शुल्क का भुगतान के प्रमाण हेतु ही किया जा सकता है। पुनः प्रिन्ट कर अथवा फोटो कॉपी आदि द्वारा इसी रसीद का दूसरे दस्तावेज पर मुद्रांक शुल्क का भुगतान के प्रमाण हेतु उपयोग भारतीय मुद्रांक अधिनियम, 1899 की धारा 62 अन्तर्गत दण्डनीय अपराध है।

PROVISION OF 30 NOS OF HIGH MAST TOWER WITH LED FIXTURES IN BOKARO STEEL CITY TOWNSHIP  
Contract No: T&C(E)/A6313/SA/597

**P. H. BHARMA**  
Chief General Manager (Prol. Comm.)  
सेल, बोकारो इस्पात संयंत्र  
SAIL, BOKARO STEEL PLANT



*Handwritten:* Anand Singh  
21/02/2023

**राजुल हरकरनी**  
RAJUL HARKERNI  
महाप्रबन्धक (नगर रावा-विद्युत)  
General Manager (TA - Electrical)  
सेल, बोकारो इस्पात संयंत्र  
SAIL, Bokaro Steel Plant

**BETWEEN**

**STEEL AUTHORITY OF INDIA LIMITED**, a Company incorporated under the Companies Act, 1956, and having its registered office at Ispat Bhavan, Lodi Road, New Delhi 110 003, India, having one of its plants **Bokaro Steel Plant** at Bokaro Steel City, Jharkhand (India) (hereinafter referred to as the "Employer") which term or expression unless excluded by or repugnant to the context or the meaning thereof, shall be deemed to include its successors and permitted assigns, **OF THE ONE PART,**

**AND**

**M/s SURYA ROSHNI LIMITED**, a Company organised and existing under the laws of India and having its Registered Office at **Padma Tower 1, Rajendra Place, New Delhi-110008** (hereinafter referred to as "Contractor"), which term or expression unless excluded by or repugnant to the context or meaning thereof, shall be deemed to include its successors and permitted assigns, **OF THE OTHER PART**

**AND WHEREAS**

- The Employer has decided for 'PROVISION OF 30 NOS OF HIGH MAST TOWER WITH LED FIXTURES IN BOKARO STEEL CITY OF BOKARO STEEL CITY TOWNSHIP' (hereinafter referred to as the "Facilities") on Turnkey Basis, and
- The Contractor has declared that the Contractor has valuable and specialized knowledge and expertise for providing and executing the above Facilities and
- The Contractor has declared that the Contractor is in a position to disclose, impart, deliver and transfer the requisite engineering data, drawings and documents of those items which are in the scope of the Contractor in this Contract, to the Employer for the engineering of the Facilities and for erection, start-up and commissioning of the Facilities with the aim to manufacture product as specified in the Contract, and
- The Contractor has obtained clarifications on technical and commercial aspects, inspected the site and surroundings of Facilities and has examined and considered all other matters, conditions and things, probable contingencies and generally all matters incidental thereto and ancillary thereof, affecting the execution and completion of the Facilities, and
- The Contractor has agreed to undertake design & engineering, civil engineering work, dismantling of buildings, structures & equipment, fabrication & supply of steel structures, manufacture & supply of plant and equipment, manufacture & supply of refractories, intermediate storage, insurance & handling, erection work, testing, pre-commissioning, start-up & commissioning, and demonstration & establishment of performance guarantee parameters of the Facilities.

**NOW IT IS HEREBY AGREED as follows:**

**Article 1 Contract Documents**

- 1.1. Definitions** (Reference GCC Clause 1)
- 1.2. Contract Documents** (Reference GCC Clause 2)

The following documents shall constitute the Contract between the Employer and the Contractor, and each shall be read and construed as an integral part of the Contract:

- 1) This Contract Agreement and Appendices hereto
- 2) Special Conditions of Contract and Annexure hereto
- 3) General Conditions of Contract and Annexure hereto
- 4) Contract Technical Specifications
- 5) General Technical Specifications
- 6) Safety code for Contractors
- 7) Guidelines on Banning of Business Dealings

PROVISION OF 30 NOS OF HIGH MAST TOWER WITH LED FIXTURES IN BOKARO STEEL CITY OF BOKARO STEEL CITY TOWNSHIP  
Contract No: T&C(E)/A6313/SA/597

1.2 of 1.6

प्री० एच० शर्मा  
P. H. SHARMA  
मुख्य महाप्रबन्धक (परि-वाणिज्यिक)  
Chief General Manager (Proj.-Comm.)  
बोकारो इस्पात संयंत्र  
BOKARO STEEL PLANT



Amal Sagar



1.3. **Order of Precedence** (Reference GCC Clause 2)

In the event of any ambiguity or conflict between the Contract Documents listed above, the order of precedence shall be the order in which the Contract Documents are listed in Article 1.2 (Contract Documents) above.

**Article 2** **Contract Price and Terms of Payment**

2.1. **Contract Price** (Reference GCC Clause 11 & Appendix-1)

The Employer hereby agrees to pay to the Contractor the Contract Price in consideration of the performance by the Contractor of its obligations hereunder.

The Contract price shall be ₹1,22,40,000/- [Rupees One Crore Twenty Two Lakh Forty Thousand only] inclusive of GST as applicable as on date of signing of agreement, or such other sums as may be determined in accordance with the terms and conditions of the Contract.

The GST amount for the contract is ₹18,67,118.64/- [Rupees Eighteen Lakh Sixty-Seven Thousand One Hundred Eighteen and Paise Sixty-Four only]. The amount of ITC on GST to be passed on to the Employer is NIL.

2.2. **Terms of Payment** (Reference Appendix-3)

The terms of payment are given in Appendix-3.

2.3. **Price Adjustment due to Variation in Price Indices**

Base date for price adjustment is 01.09.2022. Price adjustment shall be governed by Appendix 4.

**Article 3** **Effective Date**

3.1. The Effective Date of Contract shall be 27.02.2023.

**Article 4** **Scope of Facilities** (Reference GCC Clause 7 & Technical Specifications)

4.1. The Contract is for the execution of Scope of Facilities as specified in the GCC Clause 7 and Technical Specifications, on divisible turnkey basis. The quantities/ weights of any item are indicative only for the purpose of making progress payments on pro-rata basis as per Sub-Clause 2.3 of Appendix-3.

4.2. Should the actual quantities/ weights differ from the indicated ones, neither the Contractor shall be entitled to get any additional price from the Employer nor is the Employer entitled to deduct any amount from the Contract Price due to variation in physical quantities/ weight.

**Article 5** **Time for Completion** (Reference GCC Clause 8 & Appendix-2)

5.1. The Facilities will be commissioned in 06 (Six) Months from the Effective Date of Contract.

The Performance Bank Guarantee (PBG) in amount equivalent to 03 (Three) % of the Contract Price (including taxes and duties) shall be submitted by the Contractor within 30 days of signing of Contract.

**Article 6 Consultant**

- 6.1. **DESIGN BUREAU (TC-DB)**, shall be the Consultant for this project. The consultant, in relation to the Contract, shall have such functions as are delegated to them or as may be delegated to them by the Employer from time to time. Employer shall keep the Contractor informed of such delegation.

**Article 7 Subcontracting (Reference GCC Clause 19)**

- 7.1. This shall be as per GCC Clause 19.

**Article 8 Liquidated Damages (Reference GCC Clause 27 & 29)**

- 8.1. **Liquidated Damages due to Delay in Completion of Facilities** (Reference GCC Sub- Clause 29.2)

If the Contractor fails to attain "Completion of the Facilities" within the Time for Completion or any extension thereof under Clause 42 (Extension of Time for Completion) of GCC due to reasons attributable to the Contractor, the Employer shall recover the amount of Liquidated Damages along with applicable GST, but not by way of penalty, by making deductions from the Contractor's account or by encashment of Contractor's Bank Guarantees (as per Sub-Clause 13.1.2 of GCC), at the rate of 0.5% of the Contract Price (excluding price of O&M spares) plus escalation, if any, paid or payable to the Contractor, excluding taxes and duties per complete week of delay up to a maximum of 5% of the Contract Price (excluding price of O&M spares) plus escalation if any, paid or payable to the Contractor excluding taxes and duties, as specified in the Clause 29.2 of GCC.

- 8.2. **Liquidated Damages for Non-fulfilment of Performance Guarantee Parameters of Facilities** (Reference GCC Clause 27)

If, for reasons attributable to the Contractor, the performance guarantee parameters specified in Appendix-5 are not met either in whole or in part, the Contractor shall at its cost and expense make such changes, modifications and/ or additions to the Facilities or any part thereof as may be necessary to meet performance guarantees parameters. The Contractor shall notify the Employer upon completion of the necessary changes, modifications and/ or additions and the Contractor shall be allowed by the Employer to repeat the performance guarantee tests twice after first campaign of guarantee test and the Contractor must establish the performance guarantee parameters during second or third test.

In case the Contractor expresses its inability to achieve the performance guarantee parameters but attains above the minimum acceptance level of performance guarantee parameters, as specified in Appendix-5, either in whole or in part, the Employer shall recover the amount of Liquidated Damages along with applicable GST, but not by way of penalty, by making deductions from the Contractor's account or as a last resort by encashment of Contractor's Bank Guarantees, at the rates specified in the Appendix-5 for respective items, subject to a maximum of 7.5% of the Contract Price (excluding price of O&M spares) plus escalations, if any, paid or payable to the Contractor excluding taxes and duties, in respect of the failure to demonstrate the Performance Guarantees in accordance with the provisions in Appendix-5.

In case, even after all possible repairs and replacements the Contractor fails to attain the minimum level of performance guarantee parameters in third test conducted, the Employer may at its option reject the Facilities and recover the entire cost paid to the Contractor or alternatively the Employer may proceed for commercial settlement with the Contractor for acceptance of the Facilities at the negotiated Price.

The Employer shall not reject the plant & equipment after commissioning and achievement of minimum acceptance level of PG parameters. After successful commissioning and achievement of the minimum acceptance level of PG parameters, the total liability of the Contractor on account of delay and demonstration of PG parameters will not be more than LD along with applicable GST.

- 8.3. The Overall limit of Liquidated Damages with respect to Articles 8.1 & 8.2 shall be 10% of the Contract Price plus escalation, if any, excluding taxes and duties. However, individual ceiling for delay in completion and non-fulfilment of the PG parameters shall be 5% and 7.5% respectively.
- 8.4. Any Recovery of Liquidated Damages shall be effected from the amount payable to the Contractor against Performance Guarantee Test, balance Price escalation bills beyond schedule completion, Final Acceptance Certificate, Performance Bank Guarantee, or any other dues. LD will not be recovered from the running bills prior to above payments.
- 8.5. GST at applicable rates shall be charged on the Liquidated Damages as stated above and recovered from the Contractor, for which a tax invoice shall be issued by the Employer to the Contractor.

**Article 9 Arbitration (Reference GCC Clause 6)**

- 9.1. Arbitration shall be as per GCC Clause 6.

**Article 10 Liability of Govt. of India**

- 10.1. It is expressly understood and agreed between the Contractor and the Employer that the Employer is entering into this Contract solely on its own behalf and not on behalf of any other person or entity. In particular, it is expressly understood and agreed that the Govt. of India is not a party to this Contract and has no liabilities, obligations or rights hereunder. It is expressly understood and agreed that the Employer is an independent legal entity with power and authority to enter into Contracts solely on its own behalf under the applicable laws of India and general principles of Contract Law. The Contractor expressly agrees, acknowledges and understands that the Employer is not an agent, representative or delegate of the Govt. of India. It is further understood and agreed that the Govt. of India is not and shall not be liable for any acts, omissions, commissions, breaches or other wrongs arising out of the Contract. Accordingly, the Contractor hereby, expressly waives, releases and foregoes any and all actions or claims, including cross claims, impleader claims or counter claims against the Govt. of India arising out of this Contract and covenants not to sue the Govt. of India as to any manner, claim, cause of action or thing whatsoever arising of or under this Contract.

**Article 11 Appendix**

- 11.1. The following Appendices shall be deemed to form an integral part of this Contract Agreement. Reference in the Contract to any Appendix shall mean the Appendices attached hereto, and the Contract shall be read and construed accordingly.

- 1) Price Schedule
- 2) Time Schedule
- 3) Terms of Payment
- 4) Price Adjustment due to Variation in Price Indices
- 5) Performance Guarantees
- 6) List of Approved Vendors for Indian Component

## Article 12

No modifications of this Contract including Appendices hereto, shall be valid unless the same is agreed to in writing by the parties and specifically mentioned as an amendment to the Contract.

IN WITNESS WHEREOF the Employer and the Contractor have caused this Agreement to be duly executed by their duly authorised representatives the day and year first above written.

Signed by for and on behalf of the Contractor

(M/s Surya Roshni Limited)



*Anil Sagar*  
[Signature]

*Project Engrs*  
[Designation]

In the presence of

*R.K. Banerjee*  
[Signature] Proprietor

[Designation]

2) [Signature]

[Designation]

Signed by for and on behalf of the Employer

(SAIL, Bokaro Steel Plant)

*eh*  
[Signature]  
*P. H. SHARMA*  
[Designation] Chief General Manager (Proj.-Comm.)  
सेल, बोकारो इस्पात संयंत्र  
SAIL, BOKARO STEEL PLANT

In the presence of

*Km*  
[Signature]

[Designation]

2) [Signature]

[Designation]





**30 No's of High Mast Towers with LED Fixture in BSL township**

a) **Detailed Project Report:** Contract agreement is submitted as Annexure M

b) **Cost Benefit Analysis:** It is submitted that, the township of SAIL-BSL comprises of 10 sectors and is spread over 17000 acres. There are various road intersections, market, fields, parks etc. in the Township of SAIL-BSL which requires proper illumination in night, as these are prone to incident of theft, accident, nuisance caused by people etc. In order to provide better facilities and security to the residents of Township. SAIL-BSL submits to perform the mentioned project in FY 2023-24 under vide Scheme no. AMR/TA/6313. The estimated cost for the project will be 1.13 Crores, which is estimated to be completed within 12 months from the date of contract.

SAIL BSL humbly pray before Hon'ble Commission to approve estimated capitalization of Rs. 1.22 Crs in FY 2023-24 and allow any deviation in the true up petitions.

c) **Cost of financing:** Rs. 1.22 Crore provided by SAIL-BSL

2/1/24  
[Signature]



To,

**SURYA ROSHNI LTD**  
**PADMA TOWER 1, RAJENDRA PLACE**  
**NEW DELHI NEW DELHI Pin: 110008**

Payment against your Bills/Dues is under process through e-payment mode. The details of your bill (vide docno:2000025923) is furnished below:-

**VENDOR LEVEL RECOVERIES/REFUNDS**

Doc No.	Doc Dt	Remarks	PO No.	Reference	Amount
Doc No.	Doc Dt	RECV Adv no.	Recvy Reason	Remarks	Amount

**Total Payable: 0**

This is system generated report/information and hence does not require signature.

NOTE: KYC UPDATE -Your PAN No is AAACS3558C and Your TIN No is 20970301297.Please verify your PAN NO & TIN NO.

1.In case of incorrect PAN/TIN TDS deducted by BSL (and tds Certificate generation) shall be incorrect and may not be claimable from IT /Comm tax Deptt by you. BSL shall not be responsible for any incorrect PAN /TIN submitted and consequential financial losses incurred by you on account. In case of INCORRECT PAN/TIN Nos your future bills shall be withheld.

2. For accurate and faster delivery of Intimation Memo it is requested that your email id be submitted with concerned vendor master team in BSL AS INTIMATION MEMO shall be E-MAILED IN FUTURE and hardcopy shall be withdrwan.

3.C FORM DATA IN THE SPECIFIED FORMAT AS ANNEXED IN PO TO BE SUBMITTED TO BSL ON EMAILID- bslcform@gmail.com WITHIN 7 DAYS FROM THE END OF THE RESPECTIVE QUARTER POSSITIVELY.

4. To enable BSL to avail ITC, please ensure that GST involved in the instant Case is paid to Govt. exchequer and proper GST return is filed by you as per GST Act/Rules failing which the GST so reimbursed to you along with penalty and interest leviabale under the GST Act/Rules shall be recovered from you.

**5.Vendor claiming TCS as per Section- 206 C (1H) (If Applicable) may update their TAN number in Vendor master in ERP/MM Deptt. and timely submit the TCS Certificate to Bill Passing Section.**

Party Code:1000006413

PO/BI No.:4572000581

diff : 311186-



To,

SURYA ROSHNI LTD PLOT NO 1823  
NEAR DALADALI CHOWK SIMALIYA RATU RANCHI  
RANCHI RANCHI Pin: 834001

Payment against your Bills/Dues is under process through NEFT(e-payment) mode. The details of your bill (vide docno:2000028698) is furnished below:-

**BILL LEVEL RECOVERIES/REFUNDS**

Bill Ctl No.	Bill Ctl Dt	PO No.	Vendor Inv No	Vendor Inv Dt	Bill Reg Amount	Payable Amount	Recoveries(-)/Refunds(+)						Amount
1208738	22.08.2023	4572000581	RAN3471000042	22.06.2023	6921105.39	8166904.37	138423.00-194C-Contractors-Corporate PAN	69211.06-TDS on CGST	69211.06-TDS on SGST				7890059.25
1208739	22.08.2023	4572000581	RAN3471000049	26.07.2023	357792.00	422194.56	7156.00-194C-Contractors-Corporate PAN	3577.92-TDS on CGST	3577.92-TDS on SGST				407882.72

**VENDOR LEVEL RECOVERIES/REFUNDS**

Doc No.	Doc Dt	Remarks	PO No.	Reference	Amount
8800007132	24.08.2023	SD Deduction-	4572000581	RAN3471000042	1038165.81-
8800007133	24.08.2023	SD Deduction-RA 3	4572000581	RAN3471000049	53668.80-
Doc No.	Doc Dt	RECV Adv no.	Recvy Reason	Remarks	Amount

**Total Payable: 7206107.36**

This is system generated report/information and hence does not require signature.

NOTE: KYC UPDATE -Your PAN No is AAACS3558C and Your TIN No is ..Please verify your PAN NO & TIN NO.

1.In case of incorrect PAN/TIN TDS deducted by BSL (and tds Certificate generation) shall be incorrect and may not be claimable from IT /Comm tax Deptt by you. BSL shall not be responsible for any incorrect PAN /TIN submitted and consequential financial losses incurred by you on account. In case of INCORRECT PAN/TIN Nos your future bills shall be withheld.

2. For accurate and faster delivery of Intimation Memo it is requested that your email id be submitted with concerned vendor master team in BSL AS INTIMATION MEMO shall be E-MAILED IN FUTURE and hardcopy shall be withdrawn.

3.C FORM DATA IN THE SPECIFIED FORMAT AS ANNEXED IN PO TO BE SUBMITTED TO BSL ON EMAILID- bslcform@gmail.com WITHIN 7 DAYS FROM THE END OF THE RESPECTIVE QUARTER POSITIVELY.

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**5.Vendor claiming TCS as per Section- 206 C (1H) (If Applicable) may update their TAN number in Vendor master in ERP/MM Deptt. and timely submit the TCS Certificate to Bill Passing Section.**

Party Code:1000029629

PO/BI No.:

diff : 0



To,

**SURYA ROSHNI LTD PLOT NO 1823**  
**NEAR DALADALI CHOWK SIMALIYA RATU RANCHI**  
**RANCHI RANCHI Pin: 834001**

Payment against your Bills/Dues is under process through NEFT(e-payment) mode. The details of your bill (vide docno:2000029506) is furnished below:-

**BILL LEVEL RECOVERIES/REFUNDS**

Bill Ctl No.	Bill Ctl Dt	PO No.	Vendor Inv No	Vendor Inv Dt	Bill Reg Amount	Payable Amount	Recoveries(-)/Refunds(+)						Amount
1208753	26.08.2023	4572000581	RAN0808000007	28.07.2023	1037975.10	1224810.72	20760.00-194C-Contractors-Corporate PAN	10379.76-TDS on CGST	10379.76-TDS on SGST				<b>1183291.20</b>

**VENDOR LEVEL RECOVERIES/REFUNDS**

Doc No.	Doc Dt	Remarks	PO No.	Reference	Amount
8800007568	30.08.2023	SD Deduction-RA 3	4572000581	RAN0808000007	<b>155696.28-</b>
Doc No.	Doc Dt	RECV Adv no.	Recvy Reason	Remarks	Amount

**Total Payable: 1027594.92**

This is system generated report/information and hence does not require signature.

NOTE: KYC UPDATE -Your PAN No is AAACS3558C and Your TIN No is ..Please verify your PAN NO & TIN NO.

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3.C FORM DATA IN THE SPECIFIED FORMAT AS ANNEXED IN PO TO BE SUBMITTED TO BSL ON EMAILID- bslcform@gmail.com WITHIN 7 DAYS FROM THE END OF THE RESPECTIVE QUARTER POSITIVELY.

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**5.Vendor claiming TCS as per Section- 206 C (1H) (If Applicable) may update their TAN number in Vendor master in ERP/MM Deptt. and timely submit the TCS Certificate to Bill Passing Section.**

Party Code:1000029629

PO/BI No.:

diff : 0





To,

**SURYA ROSHNI LTD PLOT NO 1823**  
**NEAR DALADALI CHOWK SIMALIYA RATU RANCHI**  
**RANCHI RANCHI Pin: 834001**

Payment against your Bills/Dues is under process through NEFT(e-payment) mode. The details of your bill (vide docno:2000031558) is furnished below:-

**BILL LEVEL RECOVERIES/REFUNDS**

Bill Ctl No.	Bill Ctl Dt	PO No.	Vendor Inv No	Vendor Inv Dt	Bill Reg Amount	Payable Amount	Recoveries(-)/Refunds(+)					Amount
1208782	08.09.2023	4572000581	RAN0808000008	26.08.2023	1556962.78	1837216.07	31140.00-194C-Contractors-Corporate PAN	15569.63-TDS on CGST	15569.63-TDS on SGST			<b>1774936.81</b>

**VENDOR LEVEL RECOVERIES/REFUNDS**

Doc No.	Doc Dt	Remarks	PO No.	Reference	Amount
8800008065	09.09.2023	SD Deduction-	4572000581	RAN0808000008	<b>233544.42-</b>
Doc No.	Doc Dt	RECV Adv no.	Recvy Reason	Remarks	Amount

**Total Payable: 1541392.39**

This is system generated report/information and hence does not require signature.

NOTE: KYC UPDATE -Your PAN No is AAACS3558C and Your TIN No is ..Please verify your PAN NO & TIN NO.

1.In case of incorrect PAN/TIN TDS deducted by BSL (and tds Certificate generation) shall be incorrect and may not be claimable from IT /Comm tax Deptt by you. BSL shall not be responsible for any incorrect PAN /TIN submitted and consequential financial losses incurred by you on account. In case of INCORRECT PAN/TIN Nos your future bills shall be withheld.

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3.C FORM DATA IN THE SPECIFIED FORMAT AS ANNEXED IN PO TO BE SUBMITTED TO BSL ON EMAILID- bslcform@gmail.com WITHIN 7 DAYS FROM THE END OF THE RESPECTIVE QUARTER POSITIVELY.

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**5.Vendor claiming TCS as per Section- 206 C (1H) (If Applicable) may update their TAN number in Vendor master in ERP/MM Deptt. and timely submit the TCS Certificate to Bill Passing Section.**

Party Code:1000029629

PO/BI No.:

diff : 0

## JOB WORK-ORDER

Contract Cell-Works  
Bokaro Steel Plant  
Bokaro Steel City-827001  
Jharkhand, INDIA



W.O. No. : 4565044800	W.O. Date : 16.05.2022	Amendment No. :	Amendment Date :
Estimate value 4,999,926.00 INR	W.O. Value(LCMS): 4,999,426.02 INR	W.O. Value in Text: INR FOUR MILLION NINE HUNDRED NINETY- EIGHT THOUSAND FOUR HUNDRED TWENTY-SIX Point TWO ONLY	Upward Variation 0%
Rate Contract No. :	Rate Contract Date :	Rate Contract Target Value : 0.00	Downward Variation 0.03%
Name & Address of Order Vendor : TATA COMMUNICATIONS LIMITED BANDRA-KURLA COMPLEX, PLOT NO. C-21 & C-36 VIDYA NAGARI MUMBAI-400098 Maharashtra, India Your Vendor Code with us : - 1000092790		Validity: From: 01.06.2022 To: 28.02.2023 BI No.:3000003062 Dt.:14.03.2022 Offer Dt.: DT.30.04.22	Job Location(s) : BOKARO Executing Agency : FW/1615 Engineer-in-Charge : C003362-RHARKERNI
		Rate Contract Valid upto:	PO Type: Regular
		Vendor's Mobile No. : +919831049243	No. of Service Items in W.O. : 2
		CLC Requirement No	No. of Supply Items in W.O. : 0
		Reference Book: 02-YELLOW	PO Priority : Normal
Name of Work : SMART STREET LIGHT SOLUTION			
Purchase Group : W01	Created By : Sachida Nand		
PR No. 4010027738	NIT No. : STE42117		
<p>Dear Sir,</p> <p>We are pleased to convey our acceptance to your offer(s) against our above referred NIT and advise you to start execution of work subject to terms and conditions of contract and instructions given herewith and in our General Conditions of Contracts given in above indicated Reference Book which is available on our web site <a href="http://www.sailenders.co.in">www.sailenders.co.in</a>. Priced Schedule of Quantities is placed here under. Salient features of requirement are available in scope of the Work along with Guarantee Clause, Safety Requirements, Inspection &amp; Testing Requirements and Special Conditions etc. Standard Terms and Conditions are part of this Work Order.</p> <p>Special Remarks : REFERENCE E NOTE SHEET NO.-21493 NIT NO.-CC/STE/ENON-PROP/CSA/42117 DT. 14.03.2022</p>			
<p>Important: 1. GST if applicable, will be reimbursed on submission of proper documents as per statutory provisions. 2. Income Tax shall be deducted at source at the time of payment as per IT Rules. 3. Entries, Terms and Conditions specified in this W.O. shall over ride similar but interfering clauses, if any of relevant book guiding General Conditions of Contracts</p>			
<b>TERMS AND CONDITIONS</b>			
Price Term Description :		Currency : INR	Security Deposit Amount 0.00
Payment Term : Service Entry 97%, PCert 3%		Security Deposit Date	
Paying Authority : OPAS-OPERATION PAYMENT ACS			
BSL GST No : - 20AAACST062FAZJ			
PG Bond Amount 0.00	PGB Expiry Date:	PG Bond Detail:	
LD Applicability Y	LD Period Steps	LD Period Percentage	LD Ceiling
Expected Required Mandates:	Semi-Skilled: 000000000	Un-Skilled: 000000000	Supervisor:
Cat A : 000000000			
For SAIL/Bokaro Steel Plant Name and Signature :			
<p>आयुष कुमार RAJUL HARKERNI General Manager (TA - Electrical) SAIL, Bokaro Steel Plant</p>			



# JOB WORK-ORDER

Contract Cell-Works  
Bokaro Steel Plant  
Bokaro Steel City-827001  
Jharkhand, INDIA

W.O. No. : 4565044600

W.O. Date : 16.05.2022

Amendment No. :

Amendment Date :

## PRICED SCHEDULE OF QUANTITIES :

### SERVICE PART

NAME OF WORK: SMART STREET LIGHT SOLUTION

SAC ; 995461

Financial Yr - 2022-23 Completion Date - 28.02.2023 Service Net Value:- 4,998,426.02

Short Desc:- SMART STREET LIGHT SOLUTION

SL NO.	Service code	Quantity	Order Unit	Estimate Rate (Gross)	CURR	Estimate Value	Net Rate	Net Value	Service Tax & Ed. Cess
1	4002011695	719.000	NOS	6,342.00	INR	4,559,898.00	6,340.10	4,558,530.03	IGST 18% ITC
Description : "Design, Engineering, Supply, Installation and Commissioning of StreetLight Controllers for Real time controlling <(>&<)> Monitoring viaonline dashboard of street lights across various areas of BokaroTownship with features of network connectivity, scheduling, metering,dimming and maintenance. Tabular and Graphical Reports with for any datetime, charts and filters for Energy Savings, On/Off Report, Alert LogReport, Device Metering Report and can be scheduled to be delivered viaemailsAndroid/web application should be able to trigger Alarms <(>&<)>Notification - User setttable SMS <(>&<)> email notification <(>&<)>alarms in the case of critical events for all equipment . All thehardware,software and technical expertise is included in the scope ofparty/all TA/DA <(>&<)> lodging is in the scope of vendor."									
2	4002011696	36.000	MON	12,223.00	INR	440,028.00	12,219.33	439,895.99	IGST 18% ITC
Description : Subscription for Street Light Monitoring and Management with cloudhosting for 03(three) years, All the hardware,software and technicalexpertise is included in the scope of party/all TA/DA <(>&<)> lodging isin the scope of vendor.									

### SUB TOTAL

Service Estimate Value	Upward Variation	Downward Variation	Service Net Value	Cenvatable Tax	Non-Cenvatable Tax
4,999,926.00	0%	0.03%	4,998,426.02	899,716.69	0.00

### GRAND TOTAL

Total Estimate Value	Upward Variation	Downward Variation	Freight Value	Insurance Value	Total Net Value	Total Cenvatable Tax	Total Non-Cenvatable Tax
4,999,926.00	0%	0.03%	0.00	0.00	4,998,426.02	899,716.69	0.00



# JOB WORK-ORDER

Contract Cell-Works  
Bokaro Steel Plant  
Bokaro Steel City-827001  
Jharkhand, INDIA

W.O. No. : 4565044600

W.O. Date : 16.05.2022

Amendment No. :

Amendment Date :

## SCOPE OF WORK:

Name of Work-SMART STREET LIGHT SOLUTION

Scope of Work, Special Terms & Condition and Schedule of Quantities / Bill Of Material (BOM):

Introduction-

Bokaro Steel Limited (SAIL Bokaro unit) has a Township spread to more than 200 acres, divided in many sectors. Proper Illumination of Sector Roads and City Centre are crucial for civic environment. Not only does lighting influence people's sense of safety and productivity, it also provides an inviting environment for business and commerce after dusk.

Driving energy efficiency (EE) has been one of the key objectives of the government since it formalised the energy conservation act in 2001. Using efficient lighting infrastructure could help reduce energy consumption between 25 and 60 percent. Operation of such vast Street Lights system in Bokaro Steel Township requires manpower, vehicles and maintenance to avoid over consumption and wastage of energy.

We require end to end solution where in Street Light Controllers, Network, IoT platform & software application will be provided to remotely manage infrastructure, minimise energy consumption, identify faults, light metering and respond faster to outages.

The detailed lists of equipments/components are listed in ANNEXURE-1 as Schedule of Quantities / Bill of Material (BOM) to be covered under this contract.

Name of Work: Smart Street Light Solution

Scope of Work and General Guidelines for Smart Street Light Solution

1. Design, Engineering, Supply, Installation and Commissioning of Street Light Controllers for Real time controlling & Monitoring via online dashboard of street lights across various areas of Bokaro Township with features of network connectivity, scheduling, metering, dimming and maintenance. (Hardware and Software).

2. Vendor shall carry out field study, site assessment of equipment installation, working environment, field interference and propose / consider suitable solution based on wireless technology & latest trends for Real time controlling & Monitoring of street lights for required equipment's (equipment list enclosed)

Including field sensors, data collectors / concentrators, transmitter, receivers, controllers, cables and Cabling system, hardware & software systems, required auxiliary systems, accessories and hardware etc.

3. Real Time online Controlling, Monitoring, Maintenance of Smart Street Light Solution shall have minimum capabilities and functionalities as listed below #

a. Software Application to Monitor and Control individual/Group of Lights on a connected network with end to end encryption for data security.

b. User credential with Admin, Engineer and Operator role for remote Monitoring, Configuration and operation.

c. The GUI on the Smart phone as well as the web dashboard includes multiple level displays to provide a quick overview, as well as the detailed info of all the lamps that are being monitored using the proposed system.

d. Application should provide Map view coordinates of each lamp (Individual/Group) with status colour codes and List view with key parameters of each lamp's controller.

e. Application should include Configurable threshold and restoration from application for following parameters: Mains & Load Failure, Metering Alerts: (V, I, PF, Active Power).

f. Alerts for Consumption, dead lamp and faults.

g. Tabular and Graphical Reports with for any date time, charts and filters for Energy Savings, On/Off Report, Alert Log Report, Device Metering Report and can be scheduled to be delivered via emails

h. Android/web application should be able to trigger Alarms & Notification - User settable SMS & email notification & alarms in the case of critical events for all equipment.

i. There must be an administrator login to display billing details & duration of warranty remaining for the project and to launch a complain regarding faulty/dead controller/lamp.

j. Vendor will ensure monitoring, surveillance and replacement in case of faulty/dead controller.

k. Vendor shall must keep min. 10% of the supplied items at BSL site to meet any emergency requirement.

l. Vendor shall must assist in installation of controller in case of relocation/damage of electrical pole.

m. Individual Lamp Controller should include features for : On/Off/Dimming/Metering/Theft/Fault/Lifespan

n. Mode of Operation: Lux Mode, Manual Mode, Schedule Mode.

o. Grouping of lights to have multicast communication.

p. Provision to preload GPS coordinates for each lamp (lat./long).

q. Data from controller at configurable interval: on demand or 15 min to 1 hour.

r. Data Communication between Controller and Application should be in wireless mode.

Normal mode: The controller will send info periodically (User defined) on mains supply, additionally on request basis when asked by user.

Alert/Event Mode: The controller will send alert packets upon occurrence of any defined event.

Admin Mode: Admin will send info to individual/Group of controllers for configuration or schedule updates.

4. Complete supervision of installation & commissioning of proposed system will be in scope of vendor. The list of plant equipment for monitoring attached herewith (Annexure # I), however it is prime responsibility of the agency to provide adequate sensors for effective implementation of the proposed solution.

SAIL Bokaro reserves the right to take a final decision on the finalization of number of sensors and vendor shall submit the proposal accordingly.

5. Sensor, Hardware, JB, enclosure etc. used in field should meet the Ingress Protection (IP67) and hazard category requirement specific to the equipment areas.

6. Measuring and mounting location/ position of sensor and field devices to be discussed and finalized before installation.





## JOB WORK-ORDER

Contract Cell-Works  
Bokaro Steel Plant  
Bokaro Steel City-827001  
Jharkhand, INDIA

W.O. No. : 4565044600

W.O. Date : 16.05.2022

Amendment No. :

Amendment Date :

7. Vendor shall must provide onsite support in 8x7 General shift, in case of device malfunction, Regular Bonafide competent employee (01) of vendor will be stationed at Bokaro for operation of 3 years from the start date of work order.
8. Vendor to arrange minimum Four days training on the concept & method of field data collection, Software Application configuration and operation method in this solution. Vendor has to submit manual, operating instructions , complete drawing, documents and software code (which is not proprietary) of offered solution.
8. All supplied Software License will be perpetual in nature and software & all Hardware will be having min. 3 years warranty.
9. Storing all measured data to a cloud, Data mining of historical data in cloud.

### Special Conditions:

- # All other safety & other electrical precautions must be taken during the project.
- # Work permit clearance must be taken for the job from Executing and User department.
- # In case the job involves working in Gas Hazardous Area, gas safety precautions has to be taken as per the approved protocol. All safety & electrical precautions must be taken during the project.
- # Work permit clearance must be taken for the job from the Executing and User department.
- # SD (Security Deposit) will be released as per the standard rules of contract, after the completion of warranty and support period.
- # Bill of material (BOM) to be delivered at site
- # The detailed tech Specification,make,model of the equipment to be supplied
- # All the engg. Drawings to be approve by EIC before start of job

### Contractor's Supply:

- # All hardware /software for monitoring of smart controllers as mentioned in Annexure 1
- # SMPS, Power supply to the modules as required
- # Anything not specifically mentioned here but required for the execution of job need to be supplied by the vendor.
- # All safety PPEs required for the Execution of Job.

### BSL's Supply:

- # Source of Power supply of 220V/24V for Electricals/Instruments.
- # Sufficient lighting arrangement for the work to be carried out safely.

### Penalty Clauses:

Penalty clause against starting & non-completion of job within stipulated time duration will be considered as:

#### Starting:

- # Job is to be started on site within 45 days of allotment of work order
- # If job is not started within 60 days after allotment of work order date then- 5% of contract value
- # If job is not started within 90 days after allotment of work order date then- 7% of contract value
- # If job is not started within 120 days after allotment of work order date then- 10% of contract value
- # If job is not started within 150 days after allotment of work order date then it will be considered as Non-Performance of job contract & suitable penalty action as deemed fit by Engineer In Charge of contract will be final & abiding.

#### Completion:

- # If job is completed upto 15 days after scheduled completion date then- 5% of contract value
- # If job is completed upto 1 month after scheduled completion date then- 10% of contract value
- # If job is completed upto 2 months after scheduled completion date then- 20% of contract value
- # If job is completed after 2 months of scheduled completion date then it will be considered as Non-Performance of job contract & suitable penalty action as deemed fit by Engineer In Charge of contract will be final & abiding.

Penalty for violation of Safety Rules: As per SAIL/ Bokaro Steel Plant

Inspection: General inspection by the department (Town Administration).

Location : Bokaro Steel Plant Township

Period of Completion

Entire job shall be completed within 09(Nine) Months from the date of Work Order. Nine Months is the work order validity period.

The Main stages of the work are as follows:

For SAIL/Bokaro Steel Plant: Name and Signature:



## JOB WORK-ORDER

Contract Cell-Works  
Bokaro Steel Plant  
Bokaro Steel City-827001  
Jharkhand, INDIA

W.O. No. : 4565044600

W.O. Date : 16.05.2022

Amendment No. :

Amendment Date :

# Digitize the activities, Equipment Installation, Data Collection /HMI development Period: Maximum 6 (Six) Weeks

# Commissioning Period: Maximum 04 (Four) Weeks.

# Performance Guarantee (PG). Maximum 04 (Four) Weeks)

### Acceptance Test Procedure

- Digitize the activities, Data Collection /HMI development Period 6 (Six) Weeks means the integrated trouble free running for a period of 06(Six) Weeks, without any degradation and or disconnection of the system, sensor and application software
- Commissioning Period: Maximum 04 (Four) Weeks
- Performance Guarantee (PG) test which starts immediately after successful commissioning, the uninterrupted running of the supplied solution for a period of 04 (four) weeks, without any degradation and/ or disconnection of the proposed system and application software. In case of failure of the proposed system/downgraded performance disconnection from the network, application crash, problem in user interfaces, etc. the PG test will start afresh for a period of 04(four) weeks, after elimination of the causes of failure. Successful PG test will have to be completed within the work order validity period.
- Overall uptime efficiency of 99.9% to be achieved during the Commissioning and PG test period.
- Up-time efficiency is defined as productive and error free, optimum use of equipment. Any unutilized time during the test shall also qualify as uptime provided there are no hardware and software malfunctions. Computation of Uptime Efficiency:  $(\text{Uptime} \times 100) / (\text{Total available time})$
- If the PG test is not completed successfully within the work order validity period then the contractor will have to withdraw the offered solution without any financial implication on the employer.

### Payment Clause

The Contractor shall raise monthly bills indicating the basic rate and applicable taxes and submit the same to the engineer In-charge during the first fortnight of the subsequent month.

### Compliance with Laws and Regulations

Rules & laws: Contractor shall comply with all laws, rules, regulation and statutory requirements of government of India, State Govt. and other statutory bodies as far as such bodies have jurisdiction over the contracted work. The Contractor shall strictly follow all MV Acts. & Rules, Safety and security rules, labour laws & Rules issued by BSL / State Or Central Govt./Any Other Statutory Authority from time to time.

Vendor shall provide technical support, including configuration and replacement of defective Equipment as mentioned in Schedule of work for three years (03) years.

### Specification of supply Items:-

#### ANNEXURE-1

#### Schedule of Quantities / Bill of Material (BOM) Covered

- Individual Luminaire Monitoring Controller "SLC" or Intelligent Luminaire Controller ("SLC"- Non-NEMA # Wired connection type) with cable at 719 Poles covering 1144 Lamps, with 3 years extended warranty.
- The proposed solution must be compatible with the existing non-dimmable 150watt LED Lamps.
- Onetime Application configuration, Device Onboarding and onetime Project management.
- Network and Platform Subscription Chargers for connecting streetlight controllers with central system for 03(three) years.
- Application Subscription for Street Light Monitoring and Management with cloud hosting for 03(three) years

\* No contractual manpower of the Contractor will be involved within BSL premises with respect to the contract, hence no CLC clearance is required.

\*\* It is a computer (Software/IT and Hardware) related contract and does not require any Electrical job to be carried out by the contractor, hence no Electrical License required.



## JOB WORK-ORDER

Contract Cell-Works  
Bokaro Steel Plant  
Bokaro Steel City-827001  
Jharkhand, INDIA

W.O. No. : 4565044600

W.O. Date : 16.05.2022

Amendment No. :

Amendment Date :

### STANDARD TERMS AND CONDITIONS:

#### TERMS AND CONDITIONS OF WORK ORDER

1. You will comply with all the provision of labour laws/acts/rules made therein including Factories Act 1948, Contract labour (R&A) Act 1970, EPF & MP Act 1952, Bonus Act 1965, ID Act 1947, ESI Act 1948, Environment Protection Act 1986, Safety Rules issued by central / State Govt. or any other statutory authority from time to time. You shall maintain statutory registers, document and produce the same whenever required for checking by statutory authority/ Principle employer's representatives and CLC Representatives.
2. In addition to other relevant document, Adult Register and notice of period of work to be shown to SED for safety clearance.
3. You are advised to contact Manager/Pers (CLC) immediately and comply with all formalities as required under relevant law and submit CLC clearance for carrying out the work before starting the work or signing of the contract whichever is earlier. You are further advised to obtain Safety Clearance before start of the work from SED.
4. Along with contract document and job instruction from contracting deptt. the contractor along with supervisor will go to Safety Engg. Deptt. where he will further be briefed and contractor's Safety Rules Book will be handed over to him & explained. The contractor is not permitted to start the job without clearance from Safety Engg. Deptt.
5. You will have to provide a list of workers to be engaged well before the start of the work. All the labour and supervisor must be physically made available to undergo Safety Training programme in the Safety Engg. Deptt. and obtain certificate before engaging them on the job. Contractor's labours without certificate of training from Safety Engg. Deptt. shall not be allowed to work.
6. Safety of workers employed by you is entirely your responsibility and in the event of any worker accident major or minor, the workman can be admitted to BGH if your supervisor is not available to give adequate medical care and the cost of treatment can be recovered from your monthly bills. Safety guidelines must be followed strictly.
7. As the area of work is highly sensitive with respect to safety hazards the contractors must take proper work permit, shutdown clearance and other instruction from Engineer-in-charge, daily before starting the work. You will follow all the safety precautions and rules in this regard.
8. Without prejudice to the rights conferred by the clause above for stoppage of work for violation of Safety requirements, contractors shall be liable for penalties mention below:-
  - a) Upto Rs 5000/- by DGM(Safety)/Head of Safety Engg Department/Head of the Department where work is being done for 1st violation of safety norms, non-use of PPEs (Personal Protective Equipments) like safety shoes, hand gloves, safety helmets, goggles etc as per work requirements by the contractor or his workers. This condition is applicable in case of violations of Road Safety norms also.
  - b) Fine upto Rs 20,000/- on 2nd violation as mentioned in Clause 8(a) above.
  - c) The contractor shall be debarred for one year/deregistered from taking up further contractual work in BSL from the date of issue of debarring/de-registering order on 3rd violation as mentioned in Clause 8 (a) above.
  - d) Fine upto Rs 10,000/- for violation in use of Full Body Harness by the contractor or his workers for working at height (above 1.8 meter from immediate floor).
  - e) Fine Rs 25,000/- (minimum) to Rs 50,000/- (maximum) for serious injuries and disabilities caused by violations as mentioned in Clause 8(a) and 8(d).
  - f) Independent of the above, the contractor shall be fined Rs 1,00,000/- (Rs 1.0 lakh) or more and debarred/de-registered from taking up further contractual work in BSL from the date of issue of debarring/de-registering order in case any Fatal accident occurs due to violations as mentioned in Clause 8(a) and 8(d).
9. No Claim on account of idle labour, interruption of work or any other expenses incurred by the contractor for any reason whatsoever will be entertained.
10. You will return all the gate passes of your workers after completion of the contract duly forwarded by the executing deptt. and deposit it to CISF through Contract Labour Cell and obtain an endorsement in final CLC clearance to this effect. Final bill of the contractor will not be released to him unless the same is accompanied with the above certificate.
11. You are to make provision of third party insurance at least of the value of Rs.50,000/- during the contract period.
12. You are further requested to send your authorized representative along with non judicial stamp paper of Rs.100/- from the state of Jharkhand for signing of agreement (applicable for w/o value above Rs 10 lakhs [ Rupees ten lakhs] only).
13. You will provide all safety appliances and personal protection equipment to all your workmen at site, proper use of safety appliances/personal protection to be ensured by the contractor / his supervisor (personal protection shall include: safety shoes, hand gloves, safety goggles safety belts for working at height etc.)
14. Contractor shall produce Medical fitness certificates for his workers prior to CLC, Clearance for works at height "Height Passes" to be obtained from Safety Engg Deptt.
15. You must ensure that payment is made to the workers as per provisions of payment of wages Act and CLC norms failing which BSL shall make payments to concerned workers directly. The amount so paid along with 15% of Administrative cum Service charge shall be deducted from any of the concerned Contractors' bill. If the provision of payment of wages act is not adhered to second time, the Contractor shall be liable for banning of business dealing with Bokaro Steel Plant as per procedure in vogue. Such Contractor shall not be permitted to work in Bokaro Steel Plant through sub-let or sub-contracting also for the banning period. Timely and regular payment of wages will also be a criterion for evaluation work execution of work performance.
16. Payment of wages to the workers shall be made to worker's Bank Account through bank transfer mode only i.e. by RTGS/NEFT/e-payment within 7th day of succeeding month and evidence of such payments should be produced at the time of witnessing of muster roll cum wage sheet. As evidence of online payment, the contractor should present a self-certified copy of transaction details issued by concerned bank or downloaded from the official website of the Bank or copy of the updated passbook of the concerned workers.
17. The contractor shall have to pay an amount of Rs. 96.15 per day of actual attendance Per month (not exceeding Rs 2500/-per month) to the workers deployed by him in the job as Additional Welfare Amenity (AWA). This amount shall be inclusive in Work Order Value. During execution of contract, if any increase/decrease in AWA will take place, the difference amount will be reimbursed/recovered from the party.
18. Completion Period: Is as mentioned on the first page of NIT. However, BSL reserves the right to modify the completion period with or without imposition of LD. Extension of completion period, if any, may be granted to the contractor without any escalation (even if the contract provides price variation/escalation clause). However, de-escalation if any shall be availed of by BSL.
19. The party shall have to submit an undertaking to Pers/CLC before start of the work stating that they are fully committed towards SA:8000 and shall comply with the requirements of the system. BSL would prefer tenderers who implement the requirements of SA:8000 (Social Accountability System) and would like to have access to their premises to assess the extent of their implementation.



## JOB WORK-ORDER

Contract Cell-Works  
Bokaro Steel Plant  
Bokaro Steel City-827001  
Jharkhand, INDIA

W.O. No. : 4565044600

W.O. Date : 16.05.2022

Amendment No. :

Amendment Date :

20. During Operation of the Contract, if there is an upward revision of minimum wages, VDA by the appropriate Government, the Contractor shall be entitled to reimbursement of such additional amount on actual basis subject to production of documentary evidence. The base date shall be the date of (a) Bid submission or (b) revised Bid submission in case of Price Negotiation. Further, if the base date falls in between the effective date and the notification date of such an upward revision, then the rate to be considered for reimbursement from the base date, shall be the effective rate under the said notification.

21. For the purpose of this contract/agreement, if Goods and Services Tax introduced during the tenure of this contract/agreement become payable then the same shall be borne and payable by SAIL-BSL to the Contractor in addition to the Contract price without taxes) at actuals. You would pass on the tax benefit/savings, if any, on account of output taxes to SAIL-BSL.

22. You will do all things not limited to providing GST invoices or other documentation as per GST Law relating to the above Services, payment of taxes, timely filing of valid statutory returns for the tax period on the Goods and Service Tax Portal etc. that may be necessary to match the invoice on GSTN common portal and enable SAIL-BSL to claim input tax credit in relation to any GST payable under this agreement or in respect of any part under this agreement.

23. In case the Input Tax Credit of GST is denied or demand is recovered from SAIL-BSL on account of any non-compliance by you, including non-payment of GST charged and recovered, You will indemnify SAIL-BSL in respect of all claims of tax, penalty and/or interest, loss, damage, costs, expenses and liability that may arise due to such non-compliance.

24. You will maintain high GST compliance rating track record at any given point of time.

25. Similarly, if there are any new taxes, duties & levies including but not limited to proposed Goods & Services Tax introduced during the tenure of this contract/agreement by the Central/State Government & Local Authorities and such new taxes, duties & levies become payable, then the same shall be payable/reimbursed by the SAIL-BSL to the contractor subject to production of relevant documents.



## SMART LIGHTING

With thanks & regards,

**Shubhendra Singh Chahal, (PMP)®**

Sr. Manager | Program Management | India IoT

Tata Communications Collaboration Services Pvt Ltd | Kolkata

Mob.: +91-7557711777 | e-mail: [shubhendra.chahal@tatacommunications.com](mailto:shubhendra.chahal@tatacommunications.com)

Customer Service support mail ID: [iot11.customersupport@iot.tatacommunications.com](mailto:iot11.customersupport@iot.tatacommunications.com)

**TATA COMMUNICATIONS**

**From:** Shubhendra Chahal

**Sent:** Wednesday, August 9, 2023 4:50 PM

**To:** RAJUL HARKERNI <[rajul.harkerni@sail.in](mailto:rajul.harkerni@sail.in)>; [rajulbokaro@gmail.com](mailto:rajulbokaro@gmail.com); ANKUR SINGH <contractor> <[ankur.singh@contractor.in](mailto:ankur.singh@contractor.in)>

**Cc:** Shailesh Singh (IoT) <[shailesh.s@tatacommunications.com](mailto:shailesh.s@tatacommunications.com)>; Anirban Patnaik <[Anirban.Patnaik@tatacommunications.com](mailto:Anirban.Patnaik@tatacommunications.com)>;

<[Rajiv.Desai@tatacommunications.com](mailto:Rajiv.Desai@tatacommunications.com)>; Jayant Singh <[Jayant.Singh1@tatacommunications.com](mailto:Jayant.Singh1@tatacommunications.com)>; VIJAY KUMAR <[kumarvijay@tatacommunications.com](mailto:kumarvijay@tatacommunications.com)>

**Subject:** RE: Urgent: BSL Township Smart Street Light Project Initiation

Dear Rajul Sir,

With reference to the trailing mail and my brief discussion with Amarnath Singh sir, we have already initiated the process to supply

I am sharing a brief plan of action for your ready reference:-

Sr. no.	Activity	Start date	End date
1	Additional cable supply to BSL	01-08-2023	07-09-2023
2	Refresher training to BSL team	08-09-2023	08-09-2023
3	ILM installation by BSL team	11-09-2023	14-10-2023
4	ILM onboarding and commissioning in app and system go-live by Tata Communications	11-09-2023	16-10-2023

Furthermore, I understand that my collection lead Ankur Singh is in touch with you in separate email chain for the long pending sm 272303GC0005039 as attached.

With our written commitment and delivery plan for additional cable already shared with you, we trust that it should help you approve

With thanks & regards,

**Shubhendra Singh Chahal, (PMP)®**

Sr. Manager | Program Management | India IoT

Tata Communications Collaboration Services Pvt Ltd | Kolkata

Mob.: +91-7557711777 | e-mail: [shubhendra.chahal@tatacommunications.com](mailto:shubhendra.chahal@tatacommunications.com)

Customer Service support mail ID: [iot11.customersupport@iot.tatacommunications.com](mailto:iot11.customersupport@iot.tatacommunications.com)

**TATA COMMUNICATIONS**

**From:** Shubhendra Chahal

**Installation of Energy saving dimmable LED streetlights (Smart Street lighting system)**

**a) Detailed Project Report:** Work Order and timeline is submitted as Annexure N.

**b) Cost benefit analysis:** SAIL-BSL humbly submits that, the digital transformation is one of the critical steps towards harnessing the potential of latest advances in the field of IoT/AI/ML. An Expression of Interest was floated to capture relevant projects across different areas. Further, multiple projects were selected on the basis of cost, quality and benefits.

It is submitted that, SAIL-BSL is committed to take energy conservation measures in the township. At present, the rating of the arterial lights is 150 W but upon replacing it with the proposed dimmable lights the energy consumption will be reduced by 50 to 60 % i.e., 60-75 W of each streetlight during the night hours, when traffic is low. The proposed system comprises of Street Light Controllers, Network, IoT platform & software application which would remotely manage infrastructure, minimize energy consumption, identify faults, and respond to outages.

SAIL-BSL humbly pray before Hon'ble Commission to allow SAIL-BSL to CAPEX and Capitalised this scheme in FY 2023-24.

**c) Cost of financing:** Rs.4,998,426.02 provided by SAIL-BSL

21/4/23  
Esan



सेल SAIL

सेल, बोकारो इस्पात संयंत्र

परियोजना प्रभाग

टी० आइ० सी० एवं आइ० पी० यू विभाग

इस्पात भवन, बोकारो स्टील सिटी - 827 001, झारखण्ड

कार्यालय आदेश

**1<sup>st</sup> Stage Approval of AMR Scheme**

No: AMR/STG-1/ TE-Electrical/6499/686

Date: 02.11.2023

**SUBJECT: Installation of Electrical grounding system in 11 Kv substation and lightning protection system for township at Bokaro Steel Plant ( AMR/TE-Electrical/6499)**

Management (Director I/c) has accorded "**in-principle (Stage-1) approval**" on the subject proposal of TE-Electrical Department at an estimated cost of INR 448.73 Lakh (Inclusive of GST). (Note :Scanned copies of relevant docs are attached herewith for reference and necessary information/ action).

The details of the Scheme are as follows :

1. **Scheme No.** : AMR/ TE-Electrical/6499
2. **Estimated Cost** : INR 448.73 Lakh(Inclusive of GST)
3. **Date of 1<sup>st</sup> Stage Approval** : 30.10.2023
4. **Executing Agency** : TE-Electrical
5. **Tendering Agency** : Tender & Claim ( Projects Division )
6. **Mode of Implementation** : Turnkey
7. **Mode of Tendering** : OTE
8. **Implementation Schedule:**
  - a) Submission of firmed-up cost proposal for Stage-2 approval : **04 Months**
  - b) Implementation Schedule from the effective date of contract : **12 Months**
9. Following are to be complied with as per AMR procedures dtd Sept 2014:
  - a) Action for **tendering / Purchase** activities may be initiated immediately.
  - b) The **firmed-up cost** of the proposal, prepared by Consultant (Internal or External) may be forwarded to TIC & IPU enclosing the duly approved (Stage-2) Purchase Committee/Tender Committee recommendations for issuance of Stage-2 Office Order.
  - c) **Financial commitment can be made only after getting the regular sanction (i.e. Stage-2 approval).**

**Budget Provision:** Suitable budget provision has been made for the subject proposal in BE (Budgeted Estimate) for 2023-24 under provisions for schemes to be sanctioned in future.

10. **Project Owner** : Shri Kundan Kumar, CGM (TA)
11. **Project Manager** : Shri M. Kumar, Sr. Mgr(TE-Electrical)
12. **Project Key Driver** : Shri D.K. Singh, DGM(TE-Electrical)
13. **Project Coordinator** : Shri Rajul Harkarni, GM(TE-Electrical)

*Amh*  
28.01.2024  
परामर्शदाता (नं० प्र०-वधुल)  
सेल, बोकारो स्टील प्लांट



सेल,बोकारो इस्पात संयंत्र  
परियोजना प्रभाग  
टी० आइ० सी० एवं आइ० पी० यू विभाग  
इस्पात भवन, बोकारो स्टील सिटी – 827 001,झारखण्ड  
कार्यालय आदेश

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7. **Mode of Tendering** : OTE
8. **Implementation Schedule:**
  - a) Submission of firmed-up cost proposal for Stage-2 approval : **04 Months**
  - b) Implementation Schedule from the effective date of contract : **12 Months**
9. Following are to be complied with as per AMR procedures dtd Sept 2014:
  - a) Action for **tendering / Purchase** activities may be initiated immediately.
  - b) The **firmed-up cost** of the proposal, prepared by Consultant (Internal or External) may be forwarded to TIC & IPU enclosing the duly approved (Stage-2) Purchase Committee/Tender Committee recommendations for issuance of Stage-2 Office Order.
  - c) **Financial commitment can be made only after getting the regular sanction (i.e. Stage-2 approval).**

**Budget Provision:** Suitable budget provision has been made for the subject proposal in BE (Budgeted Estimate) for 2023-24 under provisions for schemes to be sanctioned in future.

10. **Project Owner** : Shri Kundan Kumar, CGM (TA)
11. **Project Manager** : Shri M. Kumar, Sr. Mgr(TE-Electrical)
12. **Project Key Driver** : Shri D.K. Singh, DGM(TE-Electrical)
13. **Project Coordinator** : Shri Rajul Harkarni, GM(TE-Electrical)





सेल,बोकारो इस्पात संयंत्र  
परियोजना प्रभाग  
टी० आइ० सी० एवं आइ० पी० यू विभाग  
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कार्यालय आदेश

**1<sup>st</sup> Stage Approval of AMR Scheme**

No: AMR/STG-1/ TE-Electrical/6499/686

Date: 02.11.2023

- **Project Owner** will be responsible for availability of site clearance, utility resources, raw materials, placement of manpower well in advance for commissioning, required shut down/plan for commissioning, PG Test and timely Handing -Taking Over of the Unit.
- **Project Key Driver/ Coordinator** will be the single nodal agency for execution, shut down availability, pre-acceptance quality control, PG Test, Handing Over- Taking Over, preparation of Post Completion Report (PCR), Closure of Contract, Manpower arrangement well in advance to operate and maintain the unit and others as mentioned in AMR Procedure Order.
- **Project Manager** will be held responsible for time or cost overrun and delay in Handing -Taking Over subject to availability of Shut Down, site clearance, Pre-acceptance Quality Control, PG test, placement of manpower for commissioning etc apart from his functions as mentioned in Responsibility Matrix.
- **User Dept/Indenting Deptt in coordination with Executing Agency to ensure that all documents are in order for issuance of NIT in line with CI 8.1 of AMR Procedure.**
- Necessary information/data required for **Post Completion Audit** may be maintained in a proper manner.
- Progress **on tendering / cost firming-up activities** of the scheme may please be communicated to TIC&IPU on monthly basis along with the progress of other sanctioned AMR Schemes.

**NB: The above Office Order must be read along with the Stage-1 ( in-principle) Approval of the Competent Authority, Cost Estimate, Technical Specifications , Eligibility Criteria ( as the case may be ). Clarifications or Discrepancy, if any, must be immediately brought to the notice of TIC&IPU/Project Dept.**

(Posted by TIC & IPU Deptt.)

(93)

**Name of the proposal: Installation of electrical grounding system in 11 KV substations and lightning protection system for township at Bokaro Steel Plant.**

**AMR Scheme#** : AMR/ TE /6499  
**Proposing Deptt.** : TE-Electrical  
**Proposed Amount** : **Rs. 448.73 Lakh** including GST

**Objective of Proposal:** The objective of the proposal is to install electrical grounding system in township 11 KV substations and lightning protection system for public buildings for Safety and uninterrupted power supply to BSL Township.

**Background:**

TA Electrical has over 250 substations across the township. These substations were installed when BSL Township was being constructed. Every substation (Transformer) needs 08 earthings. Earthing also needs for ESS lightning arrestors. The earthing in these substations is old and very much depleted state. This is causing damage to our transformers and equipment installed at consumer premises. The existing earthing was done using conventional methods which need regular maintenance. It is due to lack of proper maintenance and long time span that the pit has lost their electrical useful life. A new technology of chemical earthing has come up, which is having longer life and requires minimum maintenance. Being situated in plateau region new technology of chemical earthing would be best.

Further there are many public buildings in township like ADM, HRD, Trainees Hostels, Nagar Seva Bhawan, Maitree Bhawan, BGH, Bokaro Library, BSL School, Bokaro Niwas, Bokaro club, Director In-charge Bunglow, City Park Hutment, BSL Hanger in ariport, TA HT Section in sector 1, there is no lightening arrestor in functional state and in most of the buildings it is not installed.

In view of above, it is proposed to install grounding system in township 11 KV substation and lightening protection system in public buildings in township.

**Present Proposal**

- i) There are total 250nos of 11kv substations in Township. It is proposed to install 8 pits in each substation (2 nos for AB switch, 2 nos for LT Panel and 4 nos for Transformer) using Chemical Earthing technology.
- ii) This Chemical Earthing system shall be based on ready capsule type, Pipe-in-Pipe technology concept in which, One Galvanized hollow pipe (Electrode) is kept inside another galvanized hollow pipe. The space between the two pipes shall be filled with a specially developed Electrically Conductive Mixture (graphite mould) Solid in set form to reduce earth resistivity. There shall be no requirement to add any other chemical or water at any time after initial installation because of hygroscopic characteristic of Earth Enhancement Compound (EEC).
- iii) The Earth Resistance of Chemical Earthing System should be less than 01 ohm in the grid two earth pits in a system, which ensures a low-impedance path for electrical currents to flow to the earth.



सेल / SAIL  
बी एस एल / BSL  
टिप्पणी पत्र

**Technical Specification (TS) and Cost Estimate:** TC-DB has prepared TS vide DB/BSL/40/TS/012/R1, Sept '23(modified October 2023) and Cost Estimate vide DB/BSL/40/CE/012/R1 dated 06.09.2023 based on inputs data provided by user deptt. TS & CE have been examined and accepted by representative of User Deptt and TSC committee.

**Capital Cost Estimates:**

The capital cost of the proposal "**Installation of electrical grounding system in 11 KV substations and lightning protection system for township at Bokaro Steel Plant**" is estimated at **Rs. 448.73 Lakh** including GST.

**Advantages & Benefits:**

The subject proposal is a necessity for safety. This project will provide Safety of electrical equipment in township substations and human live from unwanted thundering and lightning. Power fluctuation can be avoided by implementation of proper earthing.

<b>Executing Agency</b>	: TE-Electrical
<b>Tendering Agency</b>	: Tender & Claims Deptt (Projects Division)
<b>Project Owner</b>	: Sri Kundan Kumar, CGM(TA)
<b>Project Coordinator</b>	: Sri Rajul Harkarni GM(TE-Electrical)
<b>Representative of project</b>	: Sri M.K. Singh, AGM(P)/E & P
<b>Project Key Driver</b>	: Sri. D.K.Singh, DGM (TE-Electrical)
<b>Project Manager</b>	: Sri M. Kumar, Sr. Mgr(TE-Electrical)

**Mode of Implementation:** Turnkey

**Mode of Tendering:** OTE (Eligibility Criteria duly signed by IPC Attached as Annexure-1)

**SBD 2020 Bid Data sheet compliance**

- a) Part PAC/ Part commissioning/Part PG- shall encompass a total of parts, as follows:
- Part 1 to Part 10:** Each part covers Installation of Electrical Grounding Systems in 25 individual 11kV substations as per the TS.
  - Part 11:** This part covers Installation of 45 nos of Lightning Protection Systems in the township as per the TS.
- b) Surrounding Value- referred to Procedure Order # -22 vide office order ED (Proj.)/02/6(i)/82 dtd 20.07.2021.
- c) Mandatory % towards "Erection and Site Activities"- Minimum 15 % (The cost against erection & commissioning work is approx. 16 % of basic cost as per cost estimate sheet prepared by consultant TC-DB).
- d) Defect liability period shall be the warranty period i.e 5 year from the date of commissioning.
- e) PBG shall remain valid upto the defect liability period i.e 5 year from the date of commissioning.

This may be included as Special Condition of the Contract during Tendering.

**Budget Provision:** Capital Budget of 2023-24 and subsequent years as per need.  
**Manpower:** No additional manpower is required.

**Implementation Schedule**

- a) Submission of firmed-up cost proposal for stage-2 approval : 04 Months.  
b) Implementation Schedule from the effective date of contract : 12 Months.

**IPC recommendation:**

After due deliberation and screening, the Investment Planning Committee (IPC) recommended the proposal for "Installation of electrical grounding system in 11 KV substations and lightning protection system for township at Bokaro Steel Plant." to be tendered out on OTE basis at Capital Cost Estimate of estimated at Rs. 448.73 Lakh including GST.

The proposal for "Installation of electrical grounding system in 11 KV substations and lightning protection system for township at Bokaro Steel Plant." to be tendered out on OTE basis at Capital Cost Estimate of estimated at Rs. 448.73 Lakh including GST as recommended by IPC, requires in-principle (Stage-1) approval of Director-in-Charge, BSL.

Submitted please.

(24)

Rachee  
(Rachee)  
14/10/23

AM(P)/TIC-IPU

GM(P)/PPM, TIC & IPU

As per note n/17 and compliance at note n/20.  
TS has been modified incorporating  
Part PAC / Part Commissioning / Part PG.  
IPC conducted on 12/10/2023, MOM is placed  
opposite:

The proposal at note n/23 requires kind  
approval of Director /c - BSL.

(25)

M. Barua  
14/10/2023

CGM (Proj)/PPM, TIC & IPU

The proposal requires  
kind approval of Dir &c.  
Submitted pl.

Aniso Kishore  
14.10.2023  
Page 3 of 184



~~ED(Proj)~~

~~14/10/2023~~ (96)



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टिप्पणी पत्र

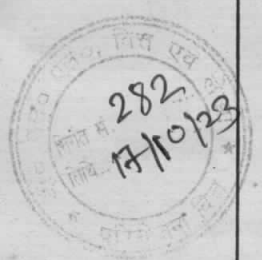
~~ED(F&A)~~

Gm(F&A) / AW AG

Plac Examine

17/10/23 (97)

DSM (Proj Rini - MU)



(28)

**Sub: Installation of Electrical grounding system in 11KV substation and Lightning protection system for township at Bokaro Steel Plant**



The objective of the proposal is to install of Electrical grounding system in 11KV substation and Lightning protection system for township at Bokaro Steel Plant

In compliance with N/17 TS has been modified incorporating Part PAC/Part Commissioning/Part PG by the TC-DB vide DB/BSL/40/TS/012/R1 Dt.12.10.2023 without having any financial implication due to the same. which has been examined and accepted by the user department and IPC.

The proposal for "Installation of Electrical grounding system in 11KV substation and Lightning protection system for township at Bokaro Steel" to be tendered out on OTE basis at an estimated cost of ₹448.73 lakh (inclusive of GST ) as per Revised TS, Cost estimate and eligibility criteria prepared by TC-DB and examined and accepted by user department and duly recommended by IPC in its meeting Dt.12.10.2023 for Stage -I " in principle approval" as proposed vide N/23 may be considered.

This requires kind approval of Director I/c .

(M. Kumar)  
DGM (Project Fin)  
18/10/23

(29)

GM/F&A (Proj Fin)

20/10/23

(30)

(31)

282  
20/10/23  
EOC (Proj Fin)

CGM (F&A)

20/10/23

Director I/c may kindly accord "in principle" stage I approval to the proposal at 10/23 having a capital cost estimate of Rs 448.73 lakhs including GST. The proposal has been recommended by IPC as per the by EOC (Project). 26/10/23

(32)

EOC (F&A)

26/10/23

DDE

(28)

**Sub: Installation of Electrical grounding system in 11KV substation and Lightning protection system for township at Bokaro Steel Plant**



The objective of the proposal is to install of Electrical grounding system in 11KV substation and Lightning protection system for township at Bokaro Steel Plant

In compliance with N/17 TS has been modified incorporating Part PAC/Part Commissioning/Part PG by the TC-DB vide DB/BSL/40/TS/012/R1 Dt.12.10.2023 without having any financial implication due to the same, which has been examined and accepted by the user department and IPC.

The proposal for "Installation of Electrical grounding system in 11KV substation and Lightning protection system for township at Bokaro Steel" to be tendered out on OTE basis at an estimated cost of ₹448.73 lakh (inclusive of GST ) as per Revised TS. Cost estimate and eligibility criteria prepared by TC-DB and examined and accepted by user department and duly recommended by IPC in its meeting Dt.12.10.2023 for Stage -I " in principle approval" as proposed vide N/23 may be considered.

This requires kind approval of Director I/c .

(29)

(M. Kumar)  
DGM (Proj. & Fin)

GM/F&A (Proj Fin)

20/10/23

30

31

282

20/10/23

EOC (Proj)

CGM (Proj)

20/10/23

Director I/c may kindly accord "in principle" stage I approval to the proposal at 10/23 having a capital cost estimate of Rs 448.73 lakhs including GST. The proposal has been recommended by IPC at agreed to by EOC (Projects).

32

25/10/23

EOC (Proj)

26/10/23

DRC

30.10.23

ED (Projects)

02/11/2023

CGM (P) / PPM, TIC-IPU

Anand Kumar  
2.11.2023

SM(hoj) - MB

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**Name of the proposal: Installation of electrical grounding system in 11 KV substations and lightning protection system for township at Bokaro Steel Plant.**

**AMR Scheme#** : AMR/ TE /6499  
**Proposing Deptt.** : TE-Electrical  
**Proposed Amount** : **Rs. 448.73 Lakh** including GST

**Objective of Proposal:** The objective of the proposal is to install electrical grounding system in township 11 KV substations and lightning protection system for public buildings for Safety and uninterrupted power supply to BSL Township.

**Background:**

TA Electrical has over 250 substations across the township. These substations were installed when BSL Township was being constructed. Every substation (Transformer) needs 08 earthings. Earthing also needs for ESS lightning arrestors. The earthing in these substations is old and very much depleted state. This is causing damage to our transformers and equipment installed at consumer premises. The existing earthing was done using conventional methods which need regular maintenance. It is due to lack of proper maintenance and long time span that the pit has lost their electrical useful life. A new technology of chemical earthing has come up, which is having longer life and requires minimum maintenance. Being situated in plateau region new technology of chemical earthing would be best.

Further there are many public buildings in township like ADM, HRD, Trainees Hostels, Nagar Seva Bhawan, Maitree Bhawan, BGH, Bokaro Library, BSL School, Bokaro Niwas, Bokaro club, Director In-charge Bunglow, City Park Hutment, BSL Hanger in ariport, TA HT Section in sector 1, there is no lightening arrestor in functional state and in most of the buildings it is not installed.

In view of above, it is proposed to install grounding system in township 11 KV substation and lightening protection system in public buildings in township.

**Present Proposal**

- i) There are total 250nos of 11kv substations in Township. It is proposed to install 8 pits in each substation (2 nos for AB switch, 2 nos for LT Panel and 4 nos for Transformer) using Chemical Earthing technology.
- ii) This Chemical Earthing system shall be based on ready capsule type, Pipe-in-Pipe technology concept in which, One Galvanized hollow pipe (Electrode) is kept inside another galvanized hollow pipe. The space between the two pipes shall be filled with a specially developed Electrically Conductive Mixture (graphite mould) Solid in set form to reduce earth resistivity. There shall be no requirement to add any other chemical or water at any time after initial installation because of hygroscopic characteristic of Earth Enhancement Compound (EEC).
- iii) The Earth Resistance of Chemical Earthing System should be less than 01 ohm in the grid two earth pits in a system, which ensures a low-impedance path for electrical currents to flow to the earth.

*Handwritten signatures and dates:*  
Pachee 12/10/2023  
A  
Jus  
HOT  
manoj Kumar 12/10/23  
2023-10-12  
Ganesh 12.10.2023

**Technical Specification (TS) and Cost Estimate:** TC-DB has prepared TS vide DB/BSL/40/TS/012/R1, Sept '23 (modified October 2023) and Cost Estimate vide DB/BSL/40/CE/012/R1 dated 06.09.2023 based on inputs data provided by user deptt. TS & CE have been examined and accepted by representative of User Deptt and TSC committee.

**Capital Cost Estimates:**

The capital cost of the proposal **"Installation of electrical grounding system in 11 KV substations and lightning protection system for township at Bokaro Steel Plant"** is estimated at **Rs. 448.73 Lakh** including GST.

**Advantages & Benefits:**

The subject proposal is a necessity for safety. This project will provide Safety of electrical equipment in township substations and human live from unwanted thundering and lightning. Power fluctuation cans avoid by implementation of proper earthling.

<b>Executing Agency</b>	: TE-Electrical
<b>Tendering Agency</b>	: Tender & Claims Deptt (Projects Division)
<b>Project Owner</b>	: Sri Kundan Kumar, CGM(TA)
<b>Project Coordinator</b>	: Sri Rajul Harkarni GM(TE-Electrical)
<b>Representative of Project</b>	: Sri M.K. Singh, AGM(P)/E & P
<b>Project Key Driver</b>	: Sri. D.K.Singh, DGM (TE-Electrical)
<b>Project Manager</b>	: Sri M. Kumar, Sr. Mgr (TA-Elect)

**Mode of Implementation:** Turnkey

**Mode of Tendering:** OTE (Eligibility Criteria duly signed by IPC Attached as Annexure-1)

**SBD 2020 Bid Data sheet compliance**

a) Part PAC/ Part commissioning/ Part PG – shall encompass a total of 11 parts, as follows:

**Part 1 to Part 10:** Each part covers Installation of Electrical Grounding Systems in 25 individual 11kV substations as per the TS.

**Part 11:** This part covers Installation of 45 nos of Lightning Protection Systems in the township as per the TS.

- b) Surrounding Value- referred to Procedure Order # -22 vide office order ED (Proj.)/02/6(i)/82 dtd 20.07.2021.
- c) Mandatory % towards "Erection and Site Activities"- Minimum 15 % (The cost against erection& commissioning work is approx. 16 % of basic cost as per cost estimate sheet prepared by consultant TC-DB).
- d) Defect liability period shall be the warranty period i.e 5 year from the date of commissioning.
- e) PBG shall remain valid upto the defect liability period i.e 5 year from the date of commissioning.
- f) Pre-Bid meeting to be held after 10 days of issuance of NIT.

This may be included as Special Condition of the Contract during Tendering.

Rachee  
12/10/2023

K. Kumar  
12/10/23

*[Signature]*

*[Signature]*

*[Signature]*

*[Signature]*

*[Signature]*

*[Signature]*  
12.10.23

**MOM of Investment Planning Committee (IPC)**

held in the Office of CGM (TA) , on 12.10.2023

(85)

**Budget Provision:** Capital Budget of 2023-24 and subsequent years as per need.

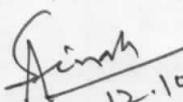
**Manpower:** No additional manpower is required.

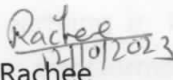
**Implementation Schedule**

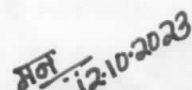
- a) Submission of firmed-up cost proposal for stage-2 approval : **04 Months.**  
b) Implementation Schedule from the effective date of contract : **12 Months.**

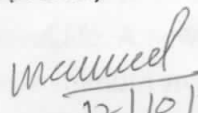
**IPC recommendation:**

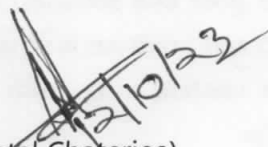
After due deliberation and screening, Investment Planning Committee (IPC) recommends the proposal **"Installation of electrical grounding system in 11 KV substations and lightning protection system for township at Bokaro Steel Plant."** to be tendered out on **OTE basis** at Capital Cost Estimate of estimated at **Rs. 448.73 Lakh including GST.**


  
(A N Singh)  
GM/ TE-Elect.  
(Convener)

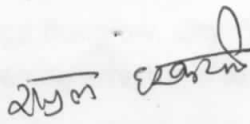
  
Rachee  
AM (P)/TIC&IPU

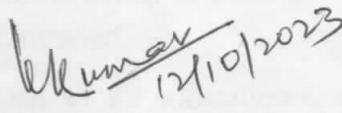
  
(Manoj Kumar)  
AGM (P) /T&C

  
(M K Singh)  
AGM (P) / E&P-NW

  
(Kuntal Chaterjee)  
DGM/(Proj Fin)

  
(Jyoti)  
AGM/TC-DB

  
(Rajul Harkarni)  
GM/TE-Elect.

  
(Kundan Kumar)  
CGM(TA)  
(Chairperson)

**Eligibility Criteria**

**PROJECT: INSTALLATION ELECTRICAL GROUNDING SYSTEM IN 11kV  
SUBSTATION AND LIGHTNING PROTECTION SYSTEM IN TOWNSHIP**

(Ref TS NO: DB/BSL/40/TS/012/R1, OCT'2023)

1. The bidder should be Original Equipment Manufacturer (OEM) of Chemical Earthing Electrode & ESE Type Lighting Arrestor or their authorized dealer. If the bidder is authorized dealer of OEM, the bidder has to submit Manufacturer Authorization Certificate (MAF) (Form-1 of TS Document) signed by authorized representative of the OEM.
2. If OEM, the bidder shall submit ISO certificate/ certificate from any Govt./Govt. authorized agency to show that it is manufacturer of Chemical Earthing Electrode & ESE Type Lighting Arrestor. If the bidder is not OEM, it shall submit manufacturer certificate from the OEM.
3. The bidder should have carried out supply, erection/supervision of erection and commissioning/supervision of commissioning of minimum 1200 nos of Electrical Grounding Systems (Chemical Earthing Type) and minimum 25nos of ESE type Lightning Arrestor systems during last 07 (Seven) years to any of the following Organization from the date of NIT;
  - Government Organization
  - PSU
  - Public Limited Company
  - Joint Venture Company, where at least one partner is Government Organization/ PSU.
4. Self attested Copies of following documents shall be submitted by the bidder in support of Clause- 3:
  - a. Work Order/any other Letter of Award of Work/ Contract Document/ Purchase Order placed by the client.
  - b. Commissioning Certificate/Completion Certificate/Final Acceptance Certificate corresponding to Clause 4(a), by the respective client, where the date of commissioning/completion shall be during last 07 years from the date of NIT.
5. Consortium bidding is not allowed.
6. The average annual financial turnover of the bidder during any three of the last four financial years ending Mar'2023 shall be at least 2 Crores (INR Two Crores).

The bidder shall submit audited annual financial reports of the corresponding three financial years in support of the above.
7. Net worth of the Bidder should be positive in the financial year ending 31<sup>st</sup> March 2023 as per the audited annual accounts.
8. Documents submitted in support of financial eligibility wherever certified by the CA members of ICAI from 01.07.19 onwards, shall contain the Unique Document Identification Number.
9. The bidder should submit an affidavit stating that the eligibility documents furnished by them are genuine.

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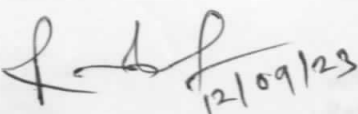
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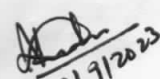


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		TC-DB
	COST ESTIMATE	
	DB/BSL/40/CE/012/R1 Dated 06.09.2023	
Proposal	SUPPLY, ERECTION, TESTING AND COMMISSIONING OF ELECTRICAL GROUNDING SYSTEM IN TOWNSHIP 11kV SUBSTATIONS AND LIGHTNING PROTECTION SYSTEM FOR PUBLIC BUILDINGS AT BSL.	
Ref:	TS No: DB/BSL/40/TS/012/R1, SEPT'23	
	INR in lakhs	Capital cost
	Description	12 Months
A	Design/engineering, development, manufacturing/procurement, inspection, testing & supply, handling & storage at site, erection, testing & commissioning, completion of all related facilities, performance guarantee testing and standard warranty for 05 years of New Generation Grounding pits for 11kv substations and Lightning Protection System on public buildings in BSL township area as per ref TS.	
A1	Design & Engineering	0.85
A2	Supply of equipments, items and technological structures	278.82
A3	Storage, Handling, Erection & Installation of items & Equipments including commissioning and PG Tests of the facilities	58.10
A4	Freight & Insurance	Included
B		337.77
C	Taxes & Duties	
C1	GST @18% on capital cost	60.80
D	B+C1	398.57
E	Engineering & Construction	
E1	Owner's @2.5% on capital cost	8.44
E2	Contractor's	Included
F	D+E1	407.01
G	Contingency(@5%)	20.35
H	F+G	427.36
I	Interest during construction (IDC) for 12 (@) 100 % debt, 10% bank rate)	21.37
J	Total Capital Cost including GST (H+I)	448.73
K	Total Project Cost including GST (J+M)	448.73
L	Package cost estimate for tendering (K-E-G-I)	398.57

**Note:-** Estimate is done on the basis of BQ received from M/S Earthing Solutions Pvt Ltd with ref no: ES/JR/PRO/23-24/101, Dt-06/09/2023.

  
 12/09/23  
 R.L. Meena  
 ADM/TC-DB

  
 12/9/2023  
 कार्यकारी मुख्य महाप्रबंधक/न० प्र०  
 सेल, बेंगलूरु स्टील प्लांट

STEEL AUTHORITY OF INDIA LTD  
BOKARO STEEL PLANT  
BOKARO STEEL CITY



TECHNICAL SPECIFICATION NO- DB/BSL/40/TS/012/R1

FOR

INSTALLATION OF ELECTRICAL GROUNDING SYSTEM IN 11kV SUBSTATIONS AND  
LIGHTNING PROTECTION SYSTEM IN TOWNSHIP

AT

BOKARO STEEL PLANT

OCTOBER'2023

*Signature*

*Signature* 12/10/23

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## **1.0 INTRODUCTION**

### **1.1 General**

Bokaro Steel Plant (BSL) is one of the Integrated Steel Plants of Steel Authority of India Limited (SAIL). The township area in Bokaro Steel Plant has over 250 nos of 11kv rating substations across the township. These substations are very old and the electrical grounding in them is in general in a very depleted state. This sometimes causes damage to the transformers and equipments at the consumer level. The grounding was done using conventional methods which need regular maintenance and have lost their electrical useful life. So it is proposed to adopt the new technology of Chemical Earthing.

Further there are many public buildings in the township in which there are no lightning Protection System in working condition. So it is proposed to install lightning Protection System on these buildings to make them safe.

### **1.2 Intent of the Specification**

The intent of this Tender Specification is to furnish required details for enabling the Bidders to submit their best offers (technical & techno-commercial) for "Supply, erection, installation, testing and commissioning of Electrical Groundings in 11kv substations of township and lightning Protection System on public buildings" in BSL on "turnkey basis" within the stipulated time frame.

## **2.0 SCOPE OF WORK FOR ELECTRICAL GROUNDING SYSTEM**

### **2.1 The Scope of Work of Electrical Grounding system shall include but not limited to the following:-**

Design & engineering, manufacturing/procurement, inspection, testing & supply, handling & storage at site, erection, installation, testing & commissioning, completion of all related facilities, performance guarantee testing and handing over to BSL of New Generation Maintenance Free Electrical Grounding pits for 11kv substations in township area on "Turnkey Basis" to the satisfaction of the purchaser as per specifications and scope defined in this technical documents complete with all accessories including any item or job, which are not mentioned specifically but are required for the efficient and trouble free operation of the equipment/system.

### **2.2 GENERAL REQUIREMENTS:**

- 2.1.1 There are total 250nos of 11kv substations in Township. It is proposed to install 8 pits in each substation (2 nos for AB switch, 2 nos for LT Panel and 4 nos for Transformer) using Chemical Earthing technology.
- 2.1.2 Distance between two consecutive earth pit should be approx 10 ft.
- 2.1.3 The bidder has to identify a suitable new pit digging location and has to erect the new pits at the identified locations.
- 2.1.4 This Chemical Earthing system shall be based on ready capsule type, Pipe-in-Pipe technology concept in which, One Galvanized hollow pipe (Electrode) is kept inside another galvanized hollow pipe. The space between the two pipes shall be filled with a specially developed Electrically Conductive Mixture (graphite mould) Solid in set form to reduce earth resistivity. There shall be no requirement to add any other chemical or water

at any time after initial installation because of hygroscopic characteristic of Earth Enhancement Compound (EEC).

2.1.5 The materials offered shall conform to relevant Indian Standards having high quality and workmanship and capable to perform continuous and satisfactory operations in the actual service conditions at site.

2.1.6 The Earth Resistance of Chemical Earthing System should be less than 01 ohm in the grid two earth pits in a system, which ensures a low-impedance path for electrical currents to flow to the earth.

### 2.3 APPLICABLE STANDARDS:

The earthing system shall conform to the relevant Indian Standard specifications unless otherwise specified.

1.	IS 3043:2018	Code of practice for Earthing
2.	IEC 62561-7	Requirement for earth enhancing compound
3.	IEEE-80-2000	IEEE guide for safety in AC Substation grounding
4.	IS 2629:2021 & IS 4736:2021	For hot dip galvanizing for Iron and steel
5.	IS 13229-2023	Zinc for galvanizing
6.	IS 1161:2019	Steel tube for structural purposes: specification

(Latest revisions and amendments are applicable).

### 2.4 TESTS

All these tests shall be carried out at any government approved or NABL accredited laboratory. The certificate regarding these tests shall be submitted before supply of materials. Dispatch clearance for supply of materials shall be given only when all these certificates are checked and found ok. The issue date of these type tests/tests certificates should not be older than 4(four) years as on scheduled date of opening of the Technical bid. The bidder is required to submit the test certificates consisting parameters/values as mentioned below:

#### 2.4.1 Type Tests/Tests

The Earth Enhancing Compound (BFC), Electrically Conductive Mixture and Earthing Electrode Pipes in the tender should have been successfully type tested/tested for the parameters/values in line with the relevant standards and technical specifications. Following type tests shall be carried out and relevant certificates shall be submitted

- Current carrying capacity test shall be carried out on the concentric pipe electrode as per relevant IS & it shall withstand capacity rating as mentioned in the specifications (i. e. more than 65 KA for 1 sec.)
- Test for the resistivity value of the Earth Enhancing Compound (BFC).
- The GI pipe used for the electrodes shall be confirming to the relevant standard. Test Certificate of the manufacturer should be provided along with the bid.
- Toxic Content test on Conductive materials & earth enhancement material as per standard.
- pH Value Test.
- Measurement of zinc Coating of the Earth Electrodes.
- Leaching Test of heavy metals in the soil.

*2/1/23*



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- h) Chemical Composition Test on electrically conductive material used in earth electrode & Earth Enhancement material (BFC) shall be checked.

#### 2.4.2 Acceptance Test for the materials supplied

The following shall be inspected before or after supply of the material at site:

- i. Inspection of dimensions, finish surface defects, thickness & uniformity of zinc coating, SS Grade as per provisions of IS 2062, 2629, 2633 as applicable on date of enquiry.
- ii. Physical check for concentric pipe type earth electrode and physical dimensions check of the earth electrode i.e wall thickness test, diameter, length and other physical parameters.
- iii. Inspection of inner material of inner and outer pipe shall be physically checked by dismantling any one electrode at the site.
- iv. Electrical properties test on conductive materials (Electrically Conductive Mixture) as specified in the specifications.

If the material has been type tested/tested earlier, the purchaser reserves the right to demand repetition of one or more type tests/tests included in the list of type test/tests on requisite number of samples from any of the lots during the tenure of the supply, in the presence of purchaser's representatives. If the material does not withstand the type test/tests, then the material supplied till then will be liable for rejection.

Apart from the points mentioned above, the inspecting officer may carry out the acceptance tests on the materials as specified in the relevant Indian Standards with latest amendments and in this TS document.

### 3.0 TECHNICAL SPECIFICATION OF ELECTRICAL GROUNDING SYSTEM

#### 3.1 Basic Design and Site/Ambient Condition

- i. Ambient Indoor temperature : 45<sup>0</sup>C (average)  
: 50<sup>0</sup>C (maximum)  
Ambient Outdoor temperature: 55<sup>0</sup>C
- ii. Maximum Humidity: 100%  
However, maximum temperature and maximum humidity may not occur simultaneously.

#### 3.2 Technical Parameters of New Generation Grounding system

##### Design Parameters

- Low resistance/ impedance.
- Excellent electrical conductivity.
- Should require minimum maintenance.
- High corrosion resistance.
- Conductors of sufficient mechanical strength withstanding high fault currents with no evidence of the fusing or deterioration.
- Lower earth resistance which ensures that energy is dissipated into the ground in less time.
- The selected material for grounding conductors should be suitable to sustain without erosion/corrosion/decay inside the earth for many years.

- Mechanically robust and reliable high hot dipped galvanized electrodes should be used for this purpose.
- Dry sand, limestone, granite and any stony ground should be avoided
- Grounding electrodes should not be installed on high banks or made-up soil.
- The earthing pit should be cylindrical in shape with approx diameter of 300mm and approx depth of 3000mm.

### 3.3 GI Grounding Electrodes

- a) The earth electrode is the main component of the grounding system which is in direct contact with the ground and thus provides a means of releasing or collecting earth leakage currents. The material should have good electrical conductivity & should not corrode in a wide range of soil conditions. For effective grounding system the earth electrode shall be manufactured with pipe-in-pipe technology.
- b) Pipe-in-pipe technology concept involves two galvanized steel pipes one inserted inside the other. Both the pipes are subjected to Hot dip galvanization of 80-100 microns. The zinc used for galvanizing should follow Zn 98.0 Grade as per IS: 13229-2023 and process and measurement of hot dip galvanizing should be as per IS: 2629-2-21. The empty space in the pipes shall be filled with a specially developed electrically conductive mixture (graphite mould) solid in set form. For uniform distribution of fault currents an earth electrode must be cylindrical in shape.
- c) Electrically conductive mixture is a graphite based mould along with the required quantity of bonding materials. The mixture is forced (Pressurized) inside the earth electrode in empty space of inner pipe & in empty space between the inner & outer pipe of the earth electrode, in paste form and after solidification of the same the bottom end cap as well as top end cap is provided. The graphite helps in conducting the current. The bonding material helps in keeping all the above bonded together and gives the required strength to the mixture. The top end of the inner pipe is pressed to have flat surface at the top end for connecting to the equipment using the GI strip. Necessary precaution shall be taken as to have no air gap inside the pipe while pressing. The electrically conductive mixture which is machine pressed in the pipes should not disintegrate or collapse when the outer pipe corrodes. Resistivity of the material shall be less than 0.1 ohm meter. Resistivity shall be tested by making a 20cm cube of the material & checking the resistance across the opposite faces of the cube.
- d) Concentric pipe grounding electrode shall consist of inner GI pipe of 40mm diameter & outer GI pipe of 80mm diameter having ISI mark. GI pipes shall be of class B as per IS 1239.

#### Technical Specifications of Grounding Electrode:-

In adherence to the parameters specified in IS 3043, the grounding system shall incorporate the advanced technology of Conductive & Anti Corrosive (CAC) material, ensuring optimal performance and durability. Rigorously tested, **the bidder has to submit certificate of its ability to withstand a tested current exceeding 65 KA/Sec RMS**, highlighting its robust electrical capabilities. The material of electrodes shall be HDGI (Hot Dip Galvanised Iron), renowned for its exceptional conductivity and resistance to corrosion. The design of the system shall feature a Pipe in Pipe (PIP) configuration, maximizing structural integrity and facilitating efficient current dissipation. To validate its quality and compliance, the system shall undergo a comprehensive Short Circuit Test conducted by reputed testing institutions such as CPRI, ERDA, any government-approved test house or NABL accredited laboratories. The electrode length shall measure 3000 mm, guaranteeing sufficient coverage and effective

grounding. The inner pipe diameter shall be 40 mm, accompanied by an inner pipe wall thickness of 2.6 mm, ensuring robustness and stability. Complementing the inner pipe, the outer pipe shall possess a diameter of 80 mm, with a wall thickness of 3.6 mm, enhancing overall structural resilience. The electrode pipe shall be sourced from trusted manufacturers for ensuring quality and reliability. The hot-dip galvanization process shall yield a protective coating of (80 - 100) microns, effectively shielding against corrosion. The inner space of the system shall incorporate an Electrically Conductive Mixture (Graphite Mould) in solid form, guaranteeing optimal electrical conductivity.

**Terminal specifications:-** terminal shall encompass a minimum length of 100 mm, a width of 40 mm, a thickness of 5 mm, and two terminal hole diameter of 10 mm. The terminal should be formed by hydraulic pressing the inner electrode pipe without joint or welding. The pipe shall be pressed by hydraulic press only. No hammered pressed/welding shall be acceptable.

### 3.4 Earth Enhancement Material

Earth enhancement material (Back fill compound) shall be a superior conductive material that improves grounding effectiveness especially in areas of poor conductivity. It shall be placed around grounding electrode in the earth pit to improve the conductivity of earth electrode & ground contact area. The material shall be supplied in sealed moisture proof bags. These bags shall be marked with the name of the manufacturer or trade name, quantity, batch no., date of manufacture etc. It shall have following characteristics.

- a. It should have low resistivity preferably below 0.1 Ohm-meter. (Resistivity shall be tested by making a 20cm cube of the material & checking the resistance across the opposite faces of the cube. Test certificate for the resistivity of the compound shall be carried out at any NABL accredited laboratory and the same shall be submitted along with the bid.
- b. Shall be suitable for installation in dry form or in a slurry form.
- c. Shall have high conductivity, improves earth's absorbing power and humidity retention capability.
- d. Shall be non-corrosive in nature having low water solubility but highly hygroscopic.
- e. It shall not depend on the continuous presence of water to maintain its conductivity.
- f. It should be a little alkaline in nature with pH value of  $> 7$  &  $< 8$ . Test certificate for the same from NABL accredited laboratory to be provided for the compound so designed.
- g. It should have better hygroscopic properties to absorb moisture. It should absorb & release the moisture in the dry weather condition and help in maintaining the moisture around the earth electrode.
- h. It should have capacity to retain more than 10% moisture at 105°C for 03 hours or more and water solubility of less than 01. Test certificate for the same from NABL approved laboratory shall be submitted.
- i. Material shall be in granular form of size 0.1mm to 3mm. Specific gravity of BFC material shall be between 2.5 to 2.7.
- j. Material shall be non-toxic, non-reactive, non-explosive & non-corrosive.
- k. Material shall be thermally stable between temperature range of -10°C to 60°C.
- l. Material shall not decompose or leach out with time.
- m. It shall not pollute the soil or local water table & shall meet environmental friendly requirement for landfill.



- n. It should expand & swell considerably & remove entrapped air to create strong connection between earth electrode & soil.
- o. It should diffuse in to the soil pores & create conductive roots enlarging conductive zone of the earth pit.
- p. It shall neither require periodic charging treatment nor replacement and maintenance. It shall not cause burns, irritation to eye, skin etc.
- q. Minimum quantity requirement for 300mm bore type and 3000mm deep pit shall be 50 Kg.

### **Earth Enhancing Material Specifications**

In accordance with the parameters outlined in IS 3043, the technology utilized shall be CAC (Conductive & Anti-corrosive) harnessing its unique properties for optimal performance. The physical form of the material shall be in the powdered state, allowing for convenient handling and application. The material shall undergo rigorous testing and receive certification from NABL accredited laboratory, ensuring its adherence to recognized quality standards. It shall have compliance with industry standards, including IEEE-80 and IEC 62561-7. The chemical composition of the material shall consist of graphite powder comprising approx 30%, bentonite powder accounting for approx 40%, activated carbon constituting approx 20% and aluminum silicate making up approx 10%. The resistivity of the material shall be less than 0.1 Ohms per meter, indicating its efficient conductive properties. The pH level shall fall within the range of 7 to 8, ensuring a neutral to slightly alkaline environment. With a moisture holding capacity of more than 10% at 105°C for duration of 3 hours, the material shall demonstrate excellent moisture management capabilities. Its solubility in water shall be less than 01, indicating a moderate level of dissolution. As a hygroscopic substance, the material shall exhibit the chemical property of absorbing and retaining moisture from its surroundings.

### **3.5 Grounding Display Board**

The Grounding display board shall be constructed with ACP Board (Aluminum Composite Panel) material. The size of the board shall measure 6-8 inches, ensuring clear visibility of the information displayed. The board shall include essential details such as the Earth Pit Number, Connected equipments details, Ohmic Value Individual, Ohmic Value Grid, Date of Testing, Next Due Date, and Earth Pit Type etc. A comprehensive good contrast colour theme preferably of blue and white shall be employed, enhancing the readability and visual appeal of the display board. Adhering to these specifications, the grounding display board shall serve as an essential tool for effectively communicating critical grounding information in a concise and visually appealing manner.

### **3.6 Earth Pit Cover**

The Earth Pit Cover shall be designed from HDPE material. The cover shall exhibit precise dimensions, with a top diameter ranging from 180 to 200 mm and a bottom diameter ranging from 260 to 300 mm. The height of the cover shall measure approx 242 mm, ensuring optimal coverage and protection. With a weight of approx 2.5 kg, the cover shall possess a sturdy construction while remaining lightweight for ease of handling. The loading capacity of the cover shall be min 3 tons, highlighting its robustness and ability to withstand heavy loads. The material selected for the cover shall be Heavy Duty Polyethylene (or better), chosen for its exceptional durability and longevity. By incorporating this high-quality material, the HDPE Earth Pit Cover shall provide long-



lasting and reliable performance, effectively safeguarding the earth pit and ensuring the integrity of the grounding system.

### **3.7 GI Strip**

Galvanized Iron (GI) strip of size 50 × 6mm for system earthing and GI strip of size 25× 6mm for equipment earthing shall be used for connection from grounding electrode to instrument/equipment. Galvanized Iron strip shall conform to IS 2629-1966 or latest amendment/revisions. GI strip of 50mm wide, 06mm thick and GI strip of 25mm wide, 06mm thick shall be of hot dip galvanized zinc coating of 80-100 microns. All galvanized material shall withstand test as per IS: 2633 (1986). The connection of GI strip from grounding electrode to the equipment shall be in the scope of the bidder. The average length of GI strip per grounding system shall be taken as 10 meter.

## **4.0 SCOPE OF WORK OF LIGHTNING PROTECTION SYSTEM:**

- 4.1** The Scope of Work of ESEAT (Early Streamer Emission Air Terminal) Smart Lightning Protection System and Conventional Lightning Rod (CLR) Air Terminal shall include but not limited to the following:-

Design and/or engineering, manufacturing/procurement, inspection, testing & supply, handling & storage at site, erection, testing & commissioning, completion of all related facilities, performance guarantee testing and handing over to BSL, of ESE Smart Lightning Protection System at the mentioned locations on "Turnkey Basis" to the satisfaction of the purchaser as per specifications and scope defined in tender documents complete with all accessories including any item or job, which are not mentioned specifically but are required for erection, commissioning and efficient & trouble free operation of the equipment/system.

1. Total 41nos of ESE (Early Streamer Emission) Smart Lightning Protection System and 04nos of Conventional Lightning Rod (CLR) Air Terminal are to be installed at the tentative mentioned locations along with its grounding requirements.
2. The successful bidder shall rationalize the installation of ESE system so as to cover maximum area and a calculation/layout of the same shall be submitted to purchaser before installation for their agreement. In case any area is not covered under the radius of protection of ESE Smart Lightning Arrestors at the mentioned locations, in that case only CLR (Conventional Lightning Rod) can be installed along with ESE Air Terminal for the area not covered by ESE Smart Lightning Arrestors. However nos of such conventional lightning rods shall be kept minimum.

### **4.1.1 APPLICABLE STADARDS:**

The Lightning Protection System shall be conformed to the relevant standard specification unless otherwise specified, in line with the requirement of any of the latest applicable standard. The applicable amendments as and when imposed shall be applicable.

1.	IS:3043/2018	Code of practice for Earthing
2.	IEC 62561-7	Requirement for earth enhancing compound
3.	IS:2629 & IS:4736	For hot dip galvanizing for Iron and steel
4.	IS:13229-1991	Zinc for galvanizing
5.	IS:1161/1979	Steel tube for structural purposes: specification
6.	NFC 17-102	Protection against Lightning (Early Streamer Emission Lightning Protection System)
7.	IEC 62305	Protection against lightning

(Latest revisions and amendments are applicable).

#### 4.1.2 Technical Parameters of Lightning Protection System

Vendor shall supply ESE Smart Type & Conventional type Lightning Protection System along with New Generation Grounding System as per NFC 17-102 & IEC-62305 Code and IEC 62561 and accessories as per the followings:

- a. ESE Type Air Terminal shall be as per NFC 17-102 (latest amendment). It shall have the following parameters:
  - i.  $\Delta t$ : Early Streamer Advance Triggering Time shall be 60 $\mu$ -sec.
  - ii. Protection Radius shall be as per NFC 17-102 (relevant clause).
- b. Grounding requirement shall be fulfilled as per clause 2.0 & 3.0 of this TS document.

#### 4.1.3 Technical Parameters of CLR as per IEC-62305 Code

In accordance with the design parameters outlined in the IEC 62305 Code, the conventional lightning rod, specified as the CLR (Conventional Lightning Rod) of the Franklyn Type, shall conform to stringent requirements. The crown, crafted from 99.9% pure copper, shall exhibit exceptional conductivity properties. The crown shall feature a prescribed arrangement of five spikes, strategically positioned for optimal lightning capture. The body of the lightning rod shall consist of a robust molecular copper-bonded solid rod of low carbon mild steel with a copper-bonding of 250 or more microns. The solid rod diameter shall measure 16 mm, ensuring structural integrity and lightning dissipation capabilities. Furthermore, the lightning rod shall possess a length of 1.5 meters with mounting mast of 03 meters length along with mounting accessories, facilitating effective coverage and proper placement. Adhering to these specifications and standards, the conventional lightning rod shall serve as a reliable and efficient means of lightning protection, successfully mitigating the risks associated with atmospheric electrical discharges.

#### 4.1.4 Technical Parameters of ESEAT as per NFC 17-102

The design parameters, as stipulated in NFC 17-102, shall dictate the specifications of the Early Streamer Emission Smart Arrester system, recognized for its advanced technology known as Spark Gap Ion Generation Technology. The system shall exhibit an impressive Radius of Protection, extending up to min 79 meters at Level 1, effectively shielding against potential lightning strikes. Furthermore, the system shall incorporate two or more triggering units. In case one triggering unit malfunctions the other units ensure reliable and

prompt discharge when required. To ensure utmost safety and reliability, the system shall feature an electrically and thermally insulated electronics circuit, guaranteeing optimal performance under various conditions. The receiver element of the system shall comprise a robust SS 304 Rod with a diameter of 20mm, securely capturing lightning discharges. The lightning arrestor shall be tested for minimum 70 KA (8/20 microsecond) current. Certification for the same from CPRI shall be submitted along with the bid. The lightning arrestor shall have triggering advance ( $\Delta t$ ) of 60 microseconds to have swift response capabilities. Constructed from resilient SS 304 material, the system shall embody both strength and durability, adhering strictly to the NFC 17-102 compliance standards.

#### **4.1.5 Lightning Strike Counter:-**

Lighting stroke counter shall be provided with each Lightning Protection System to count the number of lightning strikes. The device shall comply with the IEC 62561-6 standard, which governs the requirements for lightning protection components. The electrical characteristics of the device shall include a minimum current sensibility ( $I_{tc}$ ) of 0.5 kA, indicating its ability to detect lightning currents of at least this magnitude. It shall also have a maximum admissible impulse current ( $I_{mcw}$ ) of 100 kA, which denotes the highest surge current it can withstand without damage. Power for the device shall be provided internally by a battery, offering a long life expectancy of over 10 years before requiring battery replacement. The housing material of the device shall be made of thermoplastic with a UL94 V-0 rating, indicating a high level of fire resistance. Its protection rating shall be of IP67, suggesting excellent resistance to dust and water ingress. The device shall be equipped with an LCD display to provide information and feedback.

It shall handle a minimum of 999,999 events, allowing for comprehensive event logging and tracking. The device is compliant with the IEC 62561-6 standard, ensuring it meets the necessary requirements for lightning protection components. Lightning counter should have been pre-tested in the factory and it shall have more than one count on the display.

#### **4.1.6 Down Conductor**

Two down conductors shall be provided with each ESE/CLR type Smart Lighting Arrestor to Earth Pit. For each down conductor two earth pits shall be provided. Down conductor shall be of minimum 70 sq. mm single core Al armored Cable. Down conductor shall be in a single length. No joints are allowed in between. Conductor insulation shall be black in color. Powder coated 40mm (W)  $\times$  15mm (H) GI trunking 0.8 mm thick with cover to be used for running the wire / cable near Smart LPS drop to earth pit. Trucking to be fixed on wall or flooring with suitable size of GI clamp. Test clamp to be provided as well.

#### **4.1.7 Elevation (Mounting) Mast**

Elevation Mast of Hot Dip Galvanized Iron shall be installed such that ESE / Conventional Type Air terminal tip shall be minimum 5/4.5 meters respectively above the tip of the building being protected. It shall be designed to have adequate strength for wind speed. It shall be bolted with base plate which shall be fixed in concrete, supported by guy wire from four sides. Detailed drawing shall be submitted to purchaser for review and approval.



The Elevation Mast have following specifications:

GI Pipe-40mm diameter with 11KV insulation.

Pipe wall thickness- 2.6 mm

Length-3 meter for CLR & 5 meter for ESE above the tip of the building being protected.

Accessories like GI Base Plate, Guy wire, CC bolts, Copper lugs clamps, D-Cycle and other required accessories shall also be supplied by the bidder.

#### 4.1.8 Inspection and Tests

##### A. Tests:

All these tests shall be carried out at any government approved or NABL accredited laboratory. The certificate regarding these tests shall be submitted before supply of materials. Dispatch clearance for supply of materials shall be given only when all these certificates are checked and found ok. The issue date of these type tests should not be older than 4(four) years as on scheduled date of opening of the Technical bid. The bidder is required to submit the test certificates consisting parameters/values as mentioned below:

##### a. Type Tests/Tests

The Earth Enhancing Compound (BFC) for earthing and Lightning Arrestor in the tender should have been successfully type tested for the parameters/values in line with the relevant standards and technical specifications.

Following type tests/tests shall be carried out:

- i. The bidder shall submit the complete test reports of lightning arrestor (including Short Circuit Test Report) & reports of Type Tests as stipulated in latest relevant IS/IEC with complete Identification, Date & Sl. No., carried out within 04(Four) years from the date of bid invitation from CPRI/ NABL accredited/Govt.
- ii. Lightning Impulse Current Test (tested for 70KA (8/20 microseconds)) for the Lightning Arrestor.
- iii. Test for resistance of the earth enhancing compound (BFC) used for earthing being provided as per IEC -62561.
- iv. Test certificates for chemical & physical properties of Raw materials i.e. Steel Flats/Rods as per IS -2062.
- v. Bidder shall produce Factory Certificate along with Serial No. for each ESE type Smart Lightning Arrestor from Original Equipment Manufacturer during inspection.
- vi. Certificates of CLR (Conventional Lightning Rods) spikes of 99.9 percent purity copper and SS 304 grade of ESE terminal shall be submitted.

##### b. Acceptance Test for the materials to be supplied

The following shall be inspected before or after supply of the material at site. Purchaser/purchaser representative may visit the testing place at their own cost to witness such tests which is to be arranged by the bidder:

- i. Inspection of dimensions, finish surface defects, thickness & uniformity of zinc coating, SS Grade, adhesion test as per provisions of IS 2062, 2629, 2633 as applicable on date of enquiry.
- ii. Physical inspection / verification of the triggering units shall be performed by dismantling any one of the devices. The lightning arrestor should have two or more triggering units.



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If the material has been type tested/tested earlier, the purchaser reserves the right to demand repetition of one or more type tests/tests included in the list of type test/tests on requisite number of samples from any of the lots during the tenure of the supply, in the presence of purchaser's representatives. If the material does not withstand the type test/tests, then the material supplied till then will be liable for rejection.

Apart from the points mentioned above, the inspecting officer may carry out the acceptance tests on the materials as specified in the relevant Indian Standards with latest amendments and in this TS document.

#### **5.0 SPECIAL TERMS AND STANDARD WARRANTY**

- a. Supplier will give a declaration of availability of spares for at least 10 years from the date of commissioning to run the system. The bidder shall also give a declaration against obsolescence of equipments and spares under their scope of supply for minimum period of 10 years.
- b. The bidder shall provide standard warranty of the complete grounding and lightning protection systems for a period of 05 (Five) years from the date of commissioning of the complete system. If the resistance value of the earth pit is found more than 01 Ohms or continuity from earth pit to the equipment is found broken during the warranty period, it shall be rectified by the bidder free of charge or at no additional cost to BSL.

#### **6.0 PENALTY CLAUSE: TIMELY SERVICING/ RECTIFICATION OF DEFECTS DURING WARRANTY PERIOD:**

- a. a. The bidder has to rectify the defects mentioned in clause 5(b) during the warranty period within 07 days of notification by BSL. In case the bidder fails to rectify the defect within 07 days of notification by BSL, a penalty of Rs 1000/day of delay will be charged on the bidder.
- b. Bidder can deposit the penalty amount to BSL within 30 days directly else BSL shall have the right to recover any such penalty amount from the Performance Bank Guarantee (PBG). Cumulative Penalty cannot exceed more than 05% of the total contract value after which BSL shall have the right to get the service /rectification done from alternate sources at the risk and cost of the bidder besides forfeiture of PBG. Bidder shall be liable to reimburse the cost of such service / rectification to BSL. The penalty will be calculated every quarter.

#### **7.0 SPARES, CONSUMABLES, TOOLS & TACKLES**

The scope of work shall include supply of consumables and commissioning spares for the supplied system for execution:

##### **1) Spare Parts**

##### **i) Commissioning spares**

The successful bidder shall supply commissioning spares as may be required for tests and initial operation of installed system till successful completion of commissioning and also as required during performance guarantee test (PGT). The list of commissioning spares (minimum), along with their technical specifications and make, shall be submitted along with the offer as per Format-1.3.

ii) **Imported spares**

A list of imported spares (if any), along with their technical specifications and make, shall be furnished by the bidder.

2) **Consumables**

All consumables required to install the system shall be in the scope of work of the bidder. Such consumables are defined as but not limited to conduit pipes, cables, bolt, nuts, rivets, welding electrodes, seals, packing components etc. for erection of the proposed equipment shall be in the scope of work. The bidder shall furnish the list, along with their technical specifications and make as per Format-1.5.

3) **Special Tools, Tackles and Instruments**

The scope of work shall include supply of 10 nos of Digital Earth Resistance Tester. The bidder shall furnish a complete list of all special tools, tackles and instruments required for operation and maintenance of the installed system as per Format-1.4. The supply of these items shall be under the scope of the successful bidder.

**8.0 QUALITY ASSURANCE**

The successful bidder shall furnish a plan of quality assurance in respect of site works as well as supplies proposed to be followed for the purpose of assuring the quality of equipment and workmanship at various stages. The Quality Assurance Plan shall be mutually discussed and approved by BSL.

**9.0 HAZARD/RISKS**

The bidder shall identify any hazard / risks which may result in fatal accidents/ severe damage to human health and safety, damage to equipment, and material resulting in loss of time, and having cost implication. The bidder will carry out the above assessment and formulate appropriate action plan to prevent such incidents. This action plan shall be submitted to the SAIL/BSL before start of the work.

**10.0 STORAGE & MATERIAL HANDLING**

- a. The storage and material handling will be the bidders responsibility.
- b. All equipments shall be packed properly for prevention of damage during transit & storage. The bidder shall have to arrange for safe & secured storing of the materials in a space provided by BSL inside the plant premises.
- c. The bidder shall arrange to transport, unload and store at site all the equipment and materials. The equipment shall be suitably packed and protected before transporting. Supplier shall bear the sole responsibility for any damage/theft before installations of items.
- d. To transport and/or remove the materials/equipment from their respective storage areas/ space to the respective erection/work site/location shall be successful bidder's responsibility.
- e. All arrangements and equipments for smooth erection and commissioning works like crane etc., if required, shall be arranged by the bidder.

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#### **11.0 COMPLETION TIME AND PROJECT IMPLEMENTATION SCHEDULE**

1. The project shall be commissioned within 12 months from the effective date of contract.
2. The Bidder/Supplier shall submit a Time Bar Chart in consultation with BSL indicating starting and completion of dates of each activity, i.e. inspection, supply, installation, erection, testing & commissioning of the system along with their offer. The work shall be completed as per bar chart of implementation schedule.

#### **12.0 COMPLETENESS OF PROJECT**

All the ratings of equipments /items mentioned in this Technical Specification shall be considered minimum and indicative. However, actual ratings shall be decided mutually during detail engineering, for which no extra claim on price by the bidder shall be entertained.

Any equipment/work specifically not mentioned but considered essential to make the specific work complete in all respect shall be deemed to be included in scope of the bidder and for which no extra payment beyond the rate quoted shall be payable.

#### **13.0 EXCLUSION & DEVIATION:**

The bidder shall clearly specify the exclusion and deviations, if any in the offer from the scope of work specified in the TS as per Schedules Format-1.1 and Format-1.2.

#### **14.0 DRAWINGS / DOCUMENTS / DATA TO BE FURNISHED**

- A. The Bidder shall furnish the tender in three copies. Following drawings/documents shall essentially be furnished in the technical part along with the bid:-
  - i. Make, Model of each item and complete BOQ for Grounding/Earthing System and Lightning Protection System (ESE & Conventional system).
  - ii. Technical specification, literature, catalogues etc. of offered equipments.
  - iii. List of deviations and exclusions, if any (in Format#1.1 and Format#1.2 ).
  - iv. Implementation schedule in the form of Bar chart.
  - v. Site visit and assessment declaration (Annexure-II).
  - vi. Manufacturer Authorization Form (MAF) from the OEM if the bidder is not an OEM (in Form#1)
  - vii. All the documents required as per Eligibility Criteria.
- B. The bidder shall submit the following drawings/documents for approval and reference in 03 sets after placement of Purchase Order/Work Order:-
  - i. Data Sheet for each equipments/items.
  - ii. GA and schematic drawings for complete system.
  - iii. Installation drawing for equipment/item.
  - iv. Quality Assurance plan of each item of the project.
  - v. Operation and Maintenance Manual: These manuals shall include the complete specification of the offered system, sub assemblies, configuration details, and explanation of each and every parameter, fault details with possible reasons, troubleshooting steps, diagnostic procedures and detailed commissioning procedures.
  - vi. Any drawing/documents/catalogue/Manual/Calculation, which are specifically not mentioned above but found essential for approval/reference during basic and detail engineering stage, will also be submitted by the Bidder.



vii. The bidder shall submit all the relevant drawings & documents for purchaser's approval prior to commencement of any manufacturing/project implementation/ordering activities.

C. The bidder shall submit 03 sets of all final approved drawing and 03 sets of as built drawings/documents in folders after commissioning of complete system along with pen drive.

#### **15.0 EMPLOYER'S OBLIGATION**

- a. Employer shall provide a site for storage of the equipment/ material. However, construction of temporary sheds/barricades for the temporary stores premises as well as safety & security of equipment shall be in the Bidder's scope. The Bidder shall transport to site and store all the equipment / materials under his scope of supply properly and cover the equipment / spares which are necessary for insurance. No risk shall lie with the Employer for any damage or theft either during transportation, handling, storage and erection.
- b. The purchaser shall provide power from the nearest source available in the township from the individual site location wherever necessary.

#### **16.0 SAFETY**

- a. All statutory safety rules and regulations prevailing in the area and as prescribed by the company shall be observed by the bidder. The bidder shall acquaint himself with the guidelines set forth by Bokaro Steel Plant in this regard in their SBD for adherence to the same during the progress of work at site.
- b. The bidder shall be responsible for paying strict attention to statutory regulations for prevention of accidents and to other safety rules. The regulation for prevention of accidents shall be displayed by the bidder at appropriate places. Notices and danger boards and proper barricading shall also be provided and displayed, prominently at appropriate places if required.
- c. The bidder shall acquaint himself with all the relevant statutory regulations such as Indian Electricity Rules and other statutory rules.
- d. All working personnel must have insurance of ESIC (Employees State Insurance Corporation)
- e. Work at height certificate/permit of all workmen working on height.
- f. Supervisor for job must hold Safety Supervisor Certificate.
- g. The bidder must have a valid Electrical Contractor License at the time of execution of the job.
- h. Prior to commencing any work at site, the bidder shall obtain clearance from the Purchaser's Engineer/Safety Department and shall abide by all the safety rules and regulations of the plant.
- i. The bidder shall enforce necessary safety measures for all personnel working at site and must have electrical supervisory license for the person supervising the electrical equipment.
- j. The bidder shall plan and execute his work in such a way that any other work executed or under progress by other agencies is not interfered with or damaged.
- k. All other safety requirements as per SBD.



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## **17.0 FIRE PREVENTION**

- i. Adequate fire prevention precautions shall be taken and other safety appliances including first Aid Box shall be provided during execution, testing & commissioning work.
- ii. The storage area for the equipment and other construction material shall be essentially well protected from all probable causes of fire and the area shall be well equipped with necessary firefighting equipment to extinguish the fire caused by reasons beyond one's control.

## **18.0 SITE VISIT AND OTHER REQUIREMENTS**

The bidder shall visit the site and discuss with the employer, if required, regarding any technical clarification and satisfy himself with respect to the nature and extent of work involved. The bidder shall also obtain first-hand information regarding location, work terrain, climate condition, railways, roads, airports and communication etc. before offering the bid for the job. Site visit declaration (in Annexure-II) is to be submitted along with the offer .

## **19.0 SPECIAL INSTRUCTION TO THE TENDERER**

- 1) The specifications forms a part of the overall document and shall be read in conjunction with SAIL/BSL's General Conditions of Contract (GCC), available for download at SAIL Tender Website, for supply, erection, and commissioning of all such items and equipment. However, wherever the clauses stipulated in GCC are in contradiction with those stated herein, the clauses mentioned in this document shall prevail.
- 2) It shall be deemed that the tenderer has clearly understood the content and meaning of the specification, requirement and scope of work.
- 3) The tenderer may inspect the site at his own cost prior to quoting to make themselves aware of the nature and scope of work and site condition prevailing. The tenderer shall declare in the tender that he has visited the existing substations and Lightning Arrestor locations of BSL and specifically studied the site and concerned plant, equipment and components.
- 4) If the tenderer needs any clarification from the purchaser, the same shall be sought in writing from the purchaser in advance so that the quotation can be submitted in time on receipt of clarifications.
- 5) The tenderer shall do all the enabling works required for the said package such as temporary shed, construction of site office, equipment storage shed, adequate illumination during construction, erection and fencing etc. at his own cost.
- 6) The equipment offered should be complete with all the components and accessories, which are normally required for completion of the installation, its efficient performance and ease of maintenance.
- 7) This tender specification shall be taken for the purpose of tendering and design concept, and shall not be taken as final and firm for completion of the project. The successful tenderer shall be responsible for the successful and satisfactory completion of the system from concept stage till operation stage.
- 8) The installation of all equipment, laying of cables and pipes & wiring shall conform to the application codes and practices as per the Indian standards & shall be executed to comply with latest Indian Electricity rules as regards safety, earthing of equipment & other essential provisions specified therein. All installation shall be done in an approved manner & acceptable to the employer.

- 9) The tenderer shall be responsible for the quality of workmanship/material and any defect as pointed out by the purchaser during or after execution of work, shall be made good as directed by the purchaser without any extra cost to the purchaser.
- 10) The purchaser intends that all the equipment shall be procured indigenously. However, if the tenderer feels that the equipment or part thereof will have to be imported by him, a detailed list of such equipment shall be furnished in the technical bid of their offer for review by the purchaser.
- 11) All items of equipment in the specification shall be complete in all respects & any equipment, device, components not covered in this specification but essential for completeness of the project shall be included in the bidder's scope without any extra cost to the purchaser.
- 12) All equipment shall be packaged properly for prevention of damage during transit and storage.
- 13) Supply and installation of loose erection accessories, erection consumables and other materials shall be in the scope of bidder.
- 14) Testing and commissioning of all the equipment. The equipment shall be commissioned unit by unit as per the site conditions and instructions of Engineer-in-charge.
- 15) All necessary cabling work for successful installation of entire equipment shall be in the scope of work.
- 16) All civil work needed for installation of all equipment is in the scope of bidder.
- 17) All relevant tools and tackles for erection jobs are to be arranged by bidder.
- 18) All accessories like wires, cables, electrodes, lightning arrestor rods, nuts and bolts etc. shall be supplied by bidder.
- 19) **Language and Units:** All name plates, drawing, operating and maintenance instructions shall be in English language. Calibration of all instruments, dimensions, technical data, weights and quantities shall be in Metric Units.

*The Quantities taken into consideration are Minimum Indicative Quantity required to complete the job as per the Tender Technical Specification on Turnkey basis. The Bidder must include all items in their scope, required to render the System complete in all respects as per site requirement / condition on turnkey basis, even though every individual item(s) may not be mentioned specifically, for which, no extra payment shall be payable by BSL.*

## 20.0 PAC, CC, PG & FAC

There is provision of Part Certificate for Preliminary Acceptance, Commissioning & Performance Guarantee. The Part Certificate shall encompass a total of 11 parts, as follows:

**Part 1 to Part 10:** Each part covers Installation of Electrical Grounding Systems in 25 individual 11kV substations as per the TS.

**Part 11:** This part covers Installation of 45 nos of Lightning Protection Systems in the township as per the TS.

#### 1. **PRELIMINARY ACCEPTANCE CERTIFICATE (PAC)**

On completion of the facilities by the bidder, the facilities shall be checked to prove that the facilities have been supplied and installed as per contract and after installation, facilities are fit for start-up and commissioning. The Successful Bidder shall carry out PAT in presence of BSL according to the test procedures, to be prepared by the Bidder and approved by BSL. After liquidation of all the defects and after fulfilling all the provision of clause 24 of GCC of Standard Bidding Document (SBD), BSL shall issue Preliminary Acceptance Certificate (PAC) for the subsequent commissioning of facilities.

#### 2. **COMMISSIONING CERTIFICATE (CC)**

After successful erection of the Earth Pit:-

1. Continuity from earth pit to equipment shall be checked.
2. Resistance value of the earth pits shall be measured. It should be less than or equal to 01 Ohms in the grid of two earth pits. Calibration certificate of the test instrument by which the resistance is to be measured shall be submitted at the time of resistance measurement.

The system shall be considered commissioned after fulfilling of above parameters and all the provisions of clause 25 of GCC of Standard Bidding Document (SBD). After that BSL shall issue Commissioning Certificate (CC).

#### 3. **PERFORMANCE GUARANTEE CERTIFICATE (PGC)**

Three months after commissioning, the bidder shall submit the facilities for Performance Guarantee test.

PG Parameters for Electrical Grounding and Lightning Protection System:-

1. Continuity from earth pit to equipment shall be checked.
2. Resistance value of the earth pits shall be measured. The resistance value of the grid of two earth pits shall be less than or equal to 01 Ohms. Calibration certificate of the test instrument by which the resistance is to be measured shall be submitted at the time of resistance measurement.

On successful completion of Performance Guarantee Test and all the provisions of clause 27 of GCC of Standard Bidding Document (SBD), Performance Guarantee Certificate shall be issued by BSL.

#### 4. **FINAL ACCEPTANCE (FAC)**

Final acceptance shall be given for the complete facility after the completion of warranty period of 05 years as per the provisions of clause 28 of GCC of Standard Bidding Document (SBD)

**Annexure-I**

**Tentative Bill of Material (BOM)**

SN	Item	Qty
1	GI grounding electrode	2180 Nos
2	BFC soil enhancing compound bags	4360 Nos
3	Earthing display board	2180 Nos
4	Earth Pit cover	2180 Nos
5	GI strip 50x6 mm	5000 Mtr
6	GI strip 25x6 mm	15000 Mtr
7	Digital Earth Resistance tester	10 Nos
8	ESE Air Terminal	41Nos
9	CLR Air Terminal	04 Nos
10	Lightning Stroke Counter	45 Nos
11	Mounting Mast 5 mtr and accessories	45 Nos
12	Down conductor 70 sq mm Al cable	3000 mtr



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**Annexure-II**

**DECLARATION OF SITE VISIT**

**(To be filled up by the Bidder)**

I, hereby, declare that I have visited the site to understand the site conditions, and acquainted myself with atmosphere prevalent therein. I have also understood the extent of total works involved for this package.

Signature of the Bidder:

Seal of company Name:

Designation:

**DETAILS OF AUTHORISED PERSON OF BIDDER DURING TENDER EVALUATION**

1. Name of Project: \_\_\_\_\_
2. Tender No. : \_\_\_\_\_
3. Name & Address of Bidder : \_\_\_\_\_
4. Name of authorized person (TECHNICAL) : \_\_\_\_\_
5. Email address : \_\_\_\_\_
6. Mobile No. : \_\_\_\_\_
7. Aadhaar No : \_\_\_\_\_
8. Name of alternate authorized person (TECH) : \_\_\_\_\_
9. Email address : \_\_\_\_\_
10. Mobile No. : \_\_\_\_\_
11. Aadhaar No : \_\_\_\_\_
12. Name,of authorized person (COMMERCIAL) : \_\_\_\_\_
13. Email address : \_\_\_\_\_
14. Mobile No. : \_\_\_\_\_
15. Aadhaar No : \_\_\_\_\_
16. Name of alternate authorized person (COMM) : \_\_\_\_\_
17. Email address : \_\_\_\_\_
18. Mobile No. : \_\_\_\_\_
19. Aadhaar No : \_\_\_\_\_

Authorised Signatory

(63)

**FORM # 1**

**[Sample Manufacturer Authorization Form (MAF) from the OEM]**

Ref. No.: \_\_\_\_\_

Date \_\_\_\_\_

To,  
Chief General Manager (Projects) Commercial, Tender & Claims  
Steel Authority of India Limited  
Bokaro Steel Plant, Ispat Bhawan  
Bokaro Steel City – 827001,  
BOKARO, JHARKHAND (India)

**Subject: Authorization / Undertaking for extending Service & Spares Support**

Ref.:    Bid    Reference    No.: \_\_\_\_\_ Dated: \_\_\_\_\_

Sir, I/We, M/s \_\_\_\_\_ [name & address of the OEM] who are Original Equipment Manufacturer (OEM) of the \_\_\_\_\_ as listed in the BOM do hereby authorize M/s \_\_\_\_\_ [name and address of the bidder] to quote for the Contract with you as per the above referenced tender for the equipment(s) as mentioned above and manufactured by us. I/We also take full responsibility for both replacement of original Spare Parts & SLAs as per the content & Scope of Work of the reference Tender for the entire period of the Contract.

Yours truly/faithfully,

For [type name of the firm here]

Signature of Authorized Signatory

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Phone No.: \_\_\_\_\_

Place: \_\_\_\_\_

Date: \_\_\_\_\_

[Affix Seal of the Organization here]

*[Note: The Bidder shall require the Original Equipment Manufacturer (OEM) to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Original Equipment Manufacturer (OEM) and should be duly signed by the person who has proper authority to sign documents that are binding on the Original Equipment Manufacturer (OEM). SAIL/BSL has all the right to verify for the same from the OEM. The Bidder must include it in its bid]*

**Format-1.1****LIST OF EXCLUSIONS**

Sl. No.	Reference clause of TS	Details of Exclusions	Reasons

Signature of the Bidder

Seal of company

Name

Designation



Format-1.2

LIST OF DEVIATIONS

Sl. No.	Reference clause of TS	Details of Deviations	Reasons

Signature of the Bidder

Seal of company

Name

Designation

**Format-1.3****LIST OF COMMISSIONING SPARES**

(To be filled by the Bidder)

Bidder shall tabulate below item wise the list of commissioning spares necessary for the equipment offered. Additional sheet of like format may be used if necessary.

Sl.No.	Description of items	Quantity recommended	Make

Signature of the Bidder

Seal of company

Name

Designation

**Format-1.4**

**LISTS OF SPECIAL TOOLS AND TACKLES**

Sl. No.	Description	Quantity	Make

Signature of the Bidder

Seal of company

Name

Designation

16739  
**STEEL AUTHORITY OF INDIA LIMITED**  
**BOKARO STEEL PLANT**  
**TOWN ADMINISTRATION DEPARTMENT**  
**BOKARO STEEL CITY.**  
ALLOTMENT OF PLOTS IN CITY CENTRE/SECTOR MARKETS OF BOKARO STEEL CITY

1. Applications are invited for allotment of plots of 80 sq.m. size in different Sectors/ City Centre of Bokaro Steel City for transaction of business

2. Prescribed application forms etc. will be available in the office of Sr. Land & Estate Officer (L) from 15.5.87 to 26.5.87 on all working days except Sundays and holidays (on Saturday upto 13.00 hrs only) on payment of Rs. 20/- (Rs. 10/- for SC/ST applicants) non-refundable, towards the cost of the application forms and detailed terms and conditions, which may be deposited from 15.5.87 to 23.5.87 at the counter of Steel Authority of India Limited, Bokaro Steel Plant, Bokaro Steel City. The cash receipt in token of such deposit must be produced before the Sr. Land & Estate Officer (L) on or before 26.5.87 failing which the Company will not be responsible for non-issue of application form etc. In no case such receipts will be received after 26.5.87 by the Sr. Land & Estate Officer (L).

3. The applications in sealed covers will be received upto 6.6.1987 in the office of the Sr. Land & Estate Officer (L), Steel Authority of India Limited, Bokaro Steel Plant, Bokaro Steel City.

4. Applicants must have completed 18 years on the date of application.

5. Female applicants, if married, must indicate the name of her husband.

6. Applications (a) received after 6.6.1987

- (b) on plain paper (c) without requisite earnest money
- (d) not properly filled in (e) with cuttings & erasures
- (f) not legible and (g) incomplete will be summarily rejected.

7. Preference will be given in allotment to SC/ST/Displaced persons as per rules prescribed by the Company from time to time.

8. SC/ST applicants must enclose a certificate from the SDO in proof that they belong to SC/ST Community.

9. Displaced persons whose land has been acquired for and delivered to Bokaro Steel Plant must enclose a photostat copy of Displaced Certificate from the Directorate, Project Land & Rehabilitation, Govt. of Bihar, Dhanbad. Those who have not vacated their homestead lands, though acquired, will not be given preference as displaced persons for this purpose.

28.02.2024  
 अतिरिक्त सहायक निदेशक  
 महाप्रबन्धक (नो. प्रो-विद्युत)  
 सेल, बोकारो स्टील सिटी



10. The intending applicants will have to deposit an amount of Rs. 2,000/- (Rs. 1,000/- for SC/ST applicants) as earnest money alongwith their applications by Demand Draft drawn on State Bank of India in favour of Steel Authority of India Limited, Bokaro Steel Plant, Bokaro Steel City. Money in no other form will be accepted. The earnest money deposited by the allottees alongwith the application will be adjusted at the time of issue of offer of allotment against the amounts payable by the allottee. Earnest money shall stand forfeited if the applicant fails to observe the terms and conditions of the offer of allotment within the time specified therein. In case the application is not considered for allotment, earnest money shall be refunded to the applicant.

11. The plots will be allotted for 33 years on the basis of agreement for lease. Selected candidates will have to pay :-

- (a) Premium @ Rs. 2 lakhs per acre.
- (b) Land rent @ 1% of the premium amount.
- (c) Service charge @ Rs. 5,000/- per acre per annum (Provisional), and
- (d) Security money @ 2% of the premium amount or minimum of Rs. 1,000/-.

The rates are subject to revision by the Company from time to time. In addition, the prospective allottees will have to pay earnest money @ 10% of the premium amount which will be refunded after the building is completed as per approved design and drawings within the stipulated period failing which the same is liable to be forfeited.

12. Applications must be accompanied by duly attested passport size photographs (latest photographs two numbers) duly signed by the applicant on the photo. In case of partnership firm photos of all the partners duly signed by them alongwith attested copy of registered partnership deed must also accompany the application. If the applicant is a Company, the constitution of the Company and the nature of the interest of the applicant in the said company should also be disclosed.

13. Applicants should not be a spouse or dependent of SAIL employees.

14. Applicants should not have a plot of land or shop allotted by Bokaro Steel Plant either at Bokaro Steel City or at mines township at Kiriburu, Meghahatuburu, Bhawanathpur and Kuteshwar. If the applicant is a firm and the allotment is made in the name of the firm or either of the partners then no allotment will be made in the name of the firm and or the said partner or partners.

15. The trade applied for and location i.e. City Centre or Sector Market must be superscribed on the top of the envelope in the block letters as well as on the application form at the specified place. If adequate number of plots are not available at the place specified in the application, Management reserves the right to consider the application for an alternative location or reject the application.

16. The applicant for certain specific trade must enclose a photo copy of the concerned documents i.e. licence, permit etc. which is statutorily required to run that particular trade.

17. SAIL, Bokaro Steel Plant reserves the right to reject any or all applications without assigning any reason therefor.

4305

Premium - 8000  
Rent - 2012  
Semi - 1000

4199 5000Rs.



INDENTURE OF LEASE

THIS INDENTURE OF LEASE IS MADE ON THIS THE 28 DAY OF August 2001  
(TWO THOUSAND ONE) BY AND BETWEEN:-

STEEL AUTHORITY OF INDIA LIMITED, Bokaro Steel Plant, a Company registered and incorporated under the companies Act, 1956, having its registered office at Ispat Bhawan Lodi Road, New Delhi-110003 and one of its units Bokaro Steel Plant, situated at Bokaro P.O. & P.S. Bokaro Steel City in the District of Bokaro (previously Dhanbad) hereinafter called and referred to as the LESSOR which expression shall unless excluded by or repugnant to the context be deemed to mean and include its successors, assigns, legal representatives, executors, administrators, Managing Director, Chief Town Administrator ( L&E ), Sri Kamal Kumar Prasad, S/o Late Jegeshwar Prasad, of the ONE PART.

AND

Smt. Anita Kiran, W/o Sri Kishor Prasad, resident of Village - Godakhar, P.O. - Hirodih, Distt. - Kodrama, Presently residing at Qr. No. 181, Sector-III/D, Bokaro Steel City, hereinafter called and referred to as the LESSEE which expression shall unless excluded by or repugnant to the context be deemed to mean and include his/her/its heirs, executors, administrators, assigns, successors and legal representatives of the OTHER PART.

ii. WHEREAS Bokaro Steel Plant owns and possesses all such lands measuring more or less 1227.87 acres (One thousand two hundred twenty seven acres & eighty seven decimals ) of land besides other lands in village Harila, Pargana Khaspol, Thana Chas, Distt. Bokaro (previously Dhanbad), by virtue of having been

Handwritten notes on the left margin:

- Handwritten name: *Kandam Nani*
- Date: *02.8.2001*
- Signature: *[Signature]*
- Text: *क. ५०० प्रस्तावित*
- Text: *मुख्य प्रशासक (मृ. एवं सं.)*
- Text: *नगर प्रशासन विभाग*
- Text: *बुध, बोकारो स्टील प्लांट*

Handwritten notes at the bottom left:

- फैक्टरी - 35*
- 198*
- 3968*

Handwritten notes at the bottom left:

- 18*





Handwritten: 02/8/2001

के. के. प्रसाद

मुख्य नगर प्रशासक (सू. एवं स.)

नगर प्रशासन विभाग

बेल गंगा रोड स्टील प्लांट

delivered possession on 30.12.1964 from Bihar Government through Directorate Project Lands & Rehabilitation, Dhanbad which has been duly acquired under declaration No. 4799 dated 31.05.1962 published in Extra Ordinary issue of Bihar Gazette dated 31.05.1962 for the purpose of construction of 4th. Steel Plant at Bokaro for the erection of Iron & Steel Plant, ancillary works and Industries, Township, amenities and any other work incidental to the construction of the Steel Plant including rehabilitation etc.

AND

NOW THIS INDENTURE OF LEASE WITNESSETH and the LESSOR and the LESSEE agree upon settle and accept the following terms, conditions and covenants.

1. THAT in consideration of the expenses to be incurred by the LESSEE in the construction of the messuage and building, hereinafter mentioned and the provisional premium of Rs 80,240.00 (Rupees Eighty thousand two hundred forty only) paid by the LESSEE to the lessor on or before the execution of these presents (the receipt thereof the lessor doth hereby admit and acknowledge) and promise to pay further amount of the premium which may be finally determined by the Lessor, depending on the acquisition cost and compensation which the lessor may have to finally bear against acquisition of land and the said final premium shall be payable by the Lessee at any time during the continuance of this lease, forthwith on demand without demur and also in consideration of the annual rent and of the Lessee's covenants hereafter reserved and contained the lessor doth hereby demise unto the Lessee ALL THAT the piece and parcel of vacant land particularly described in the schedule hereunder written (hereinafter referred to as the demised land) for the term of thirty three years from the 2nd day of May, 2001 which period can be extended



Handwritten note:  
 12/8/2007  
 1000 रुपये (1000 Rupees)  
 नगर प्रशासन विभाग  
 नगर बोर्ड के कार्यालय

-: 6 :-

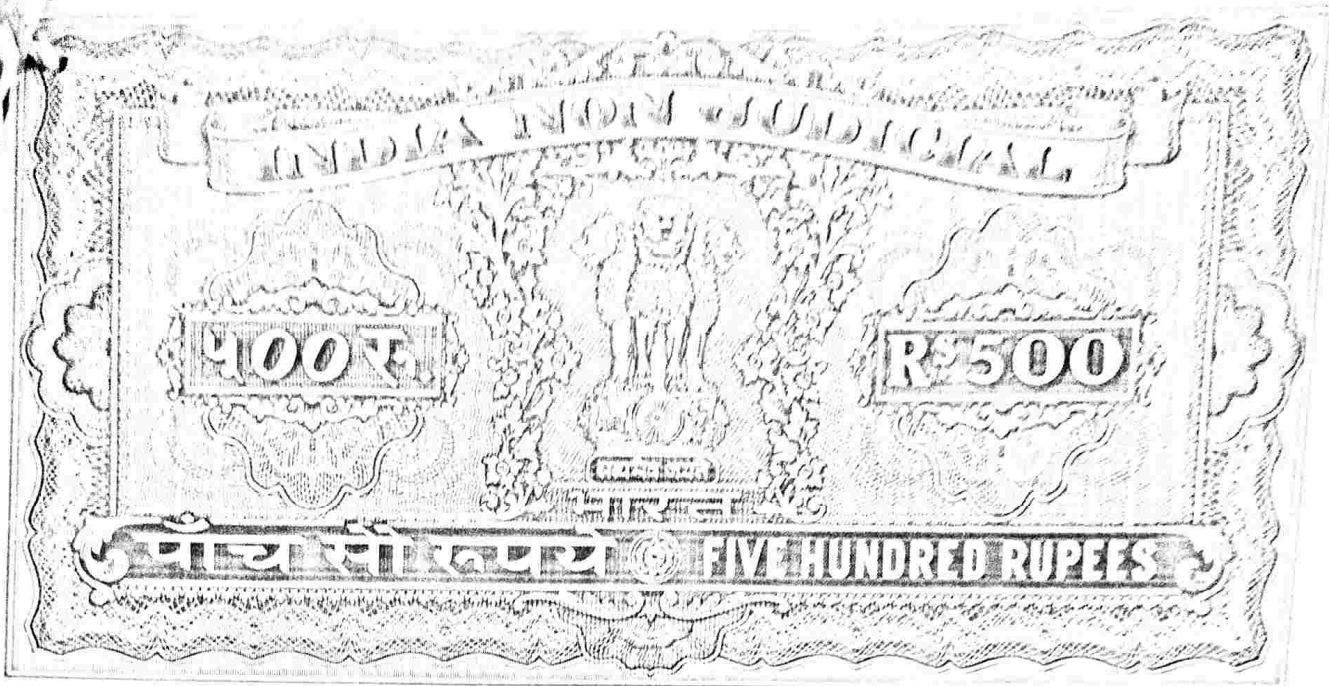
4(c) That the lessee will not erect or build and permit to be erected or built on the demised land any messuage or buildings other than those approved by the lessor in writing and will not make any addition to or alteration of buildings, if any, existing thereon without the prior approval in writing of the lessor, provided however, and it is distinctly stipulated and agreed that no application for the grant of such permission for alteration or addition will be entertained by the lessor unless they are satisfied that the proposed structure or building or addition or alteration has any bearing on the purpose for which the lessee has taken lease of the demised land and the period of lease and in this respect the decision of the lessor shall be binding, final and conclusive.

5. As regards electrical installations to be made in the buildings or structures to be constructed by the lessee on the demised land and for the maintenance thereof and payment of electrical bills, etc. the lessee shall always abide by the undernoted conditions, that is to say :-

- (a) The lessee shall observe, install, test and commission all electrical installations as per Indian Electricity Rules, 1956 and Indian Electricity Act, 1910 and its subsequent modification, if any. The lessee shall provide proper lightening conductor and earthing arrangements for safety purpose.
- (b) The lessee shall allow inspections of all electrical installations to the LESSOR'S representatives at any reasonable time.
- (c) No electrical installation work, including additions, alterations, repairs and adjustment to the existing installations shall be carried out by the lessee except such replacement of lamps, fans, fuses, switches, low voltage domestic appliance and fittings as will in no way alter its capacity or character which may be carried out by the lessee through and by an electrical contractor licensed in this behalf by the State

Handwritten signature/initials





- 7 :-

Government and under the direct supervision of a person holding a certificate of competency issued or recognised by the State Government. These shall be carried out only after obtaining the permission in writing from the lessor. The names of licensed electrical contractor who shall be carrying out the work and his licensed supervisor will be intimated by the lessee in writing to the LESSOR.

(d) The lessee shall pay electricity and other charges as decided by lessor from time to time. The lessee will pay the charges for the energy consumed by him as per bill made and presented for and on behalf of the lessor without any deduction or abatement, whatsoever notwithstanding any dispute or differences which may be raised by him regarding the bill and that in the event of non-payment of the bill for any reason or cause whatever, within 15 days from the date of presentation thereof to the lessee, the lessor will be entitled to and is hereby authorised to switch off or disconnect the supply of electric line and/or the supply of electrical energy without any notice to him and the lessor will not in any way be liable for any loss or damages, etc. thereby caused to the lessee. Regarding the electrical bill in dispute the same will be decided by the LESSOR and if the amount of bill is reduced because of such decision, the excess amount thereof will be adjusted or refunded by the lessor in accordance with such decision.

The consumption of energy by the lessee would be according to the meter installed in the premises by the lessee duly tested and sealed by the LESSOR.

The safety of the meter shall be the responsibility of the lessee and damages to it will be repaired at the cost of the lessee.

Notwithstanding the covenants aforesaid the electricity and other charges as decided by the LESSOR from time to time will be only ad hoc, subject to the final decision regarding the tariff, other charges by the appropriate statutory or other competent authorities. The right of the LESSOR to realise such tariff charges, etc. shall be

Handwritten note: 07/8/2007

Handwritten note: 10/10/2007

बिजली धर  
के. के. प्रसाद 07/8/2008  
मुख्य नगर प्रशासक (मू. एवं स.)  
नगर प्रशासन विभाग  
देस, बीकानेर स्टेशन थाना

8

applicable retrospectively.

(e) The lessee shall not dishonestly abstract power for use by means other than that employed by the LESSOR and is liable for disconnection of power with forfeiture of deposit in case he is deemed to have adopted questionable means of drawing power in the opinion of the lessor whose verdict will be final. The resumption of supply will be effected only after remittance of a fresh security deposit.

(f) The Lessor does not guarantee continuous supply of electricity and no claim for compensation due to failure of power or due to any allied causes shall be entertained by the LESSOR.

(g) The LESSOR will be at liberty to disconnect the supply of electricity after giving 24 hours notice in case electrical installations are not maintained in proper condition by the lessee and in default of his observance of the provisions of the Indian Electricity Rules in force.

(h) That in the event of any deviation from the approved plan and specification being detected by the Lessor in the construction of the building by the Lessee and in the event of any breach on the part of the Lessee of any of the terms and conditions of the lease deed the LESSOR shall be at liberty to disconnect the electric connection and water supply from the building and/or structure constructed by the Lessee after giving 15 days notice to the Lessee.

(i) A security deposit amounting to three months consumption of electricity will have to be deposited by the Lessee IN ADVANCE with the Lessor and the receipt thereof produced to the Electrical Engineer concerned before energy can be switched on to his premises.

(j) Breaking of seals of energy meters by the lessee or his agent or his servant is forbidden and if any breakage is found the Lessee will be liable for an imposition of

Handwritten: 12/8/2007  
कै० के० प्रसाद  
मुख्य नागर प्रशासक (मू० एवं स०)  
नगर प्रशासन विभाग  
सिवा, गोकुली स्टेशन रोड

- 9 -

fine of Rs.1,000/- for every such incident.

(k) Power supply to the lessee requiring power above 30 KW will be provided at 11 KV through our 11 KV sources and all expenditure on account of the above has to be borne by the lessee.

(l) The lessee shall use disc antenna over the buildings subject to the approval of the LESSOR.

6. THAT the lessee will not use the demised land and/or the building to be erected as aforesaid for any purpose other than that for which it has been demised, without prior consent in writing of the lessor whose decision will be final and binding on the lessee.

7. THAT the lessee will keep, the new building to be erected as and all additions thereto and all other buildings at any time erected and standing on the demised land and the walls, drains and appurtenance thereof in good and substantial repair and inhabitable, tenantable and sanitary condition.

8. THAT in addition to the rent and the municipal rates, taxes and assessment and all other outgoings mentioned in clause 3(b) above the lessee shall pay monthly and every month service charge for water, electricity, sanitation, etc. at such rate and in such manner as may be fixed and decided by the lessor from time to time. Directions and circulars issued by the LESSOR from time to time in this connection will be deemed as part of this agreement. The lessor shall be at liberty to determine the quantity and volume of water and electricity to be supplied for the lessee's use and in this respect the decisions of the lessor shall be binding on the lessee. The lessee shall have no claim against the lessor for any reduction of such supplies or temporarily non-supply thereof by the lessor due to non-availability of the same or on account of breakdown of machinery or damages in the supply line or pipe or other reasons whatsoever over which the lessor has no control.

29

-: 20 :-

DETAILS OF SCHEDULE OF LAND

Plot for the purpose of "Auto Spare Parts, Hardware", City Planning Department,  
Bokaro Steel Plant, Drawing No. BP-05109

Its Plot No. GB-5 along with various other plots.

Area: 80.24 sq. m.

Sector-IV, City Centre

Sub-Division: Chas, Distt. Bokaro.

BOUNDARY

- A) North: By portion of C.S. Plot No. 1138 & 1136 or Plot No. GB-6.
- B) South: By portion of C.S. Plot No. 1138 or Plot No. GB-4
- C) West: By portion of C.S. Plot No. 1138 or BSL land
- D) East: By portion of C.S. Plot No. 1138 or Plot No. GB-24.

CORRESPONDING TO ORIGINAL SURVEY SETTLEMENT PLOT NUMBERS:

RECORDED : As Raiyati. 1138(P)

APPERTAINING TO:-

KHATA NO. 307  
MOUZA - Harila,  
THANA NO. 12  
SUB DIVISION : Chas.  
DISTRICT : Bokaro.



- 21 :-

IN WITNESS WHEREOF the parties hereto have executed these presents the day, month and year first above written.

Signed, sealed and delivered on behalf of the Lessor by its  
Dy Town Administrator/Chief Town Administrator(Land & Estate),  
Steel Authority of India Limited, Bokaro Steel Plant, Bokaro Steel City  
in the presence of:

Harun Mune  
02/8/2001  
Chief Town Administrator/  
Dy. Town Administrator,  
Steel Authority of India Limited,  
Bokaro Steel Plant, Bokaro Steel City.  
(SIGNATURE OF THE LESSOR)

NAME OF TWO WITNESSES:

1. Shri. S. M. 352261
2. Shri. S. M. 183400

उप. नाम प्रमाणक (पू. एवं तं.)  
नगर प्रशासन विभाग  
शेरा, बोकारो स्टील शहर

SIGNED, SEALED AND DELIVERED BY THE  
LESSEE IN THE PRESENCE OF :

NAME OF TWO WITNESSES :

1. Shri. Yugal Kishor Bhowmik,  
Oriental Jew. Co. Ltd.  
B-24, City Centre, B. S. City
2. Shri. M. Modi 181-III/D B. S. City.

Anita Kisan  
02/8/2001  
(SIGNATURE OF THE LESSEE)

The original and duplicate are true and exact reproduction of each other.  
Typed by Jugal, Bokaro Words - 6234 approximately.

Jugal

As per order of the Hon'ble High Court  
Patna Ranchi Bench.

Anita Kisan  
02/8/2001

## MONTH WISE STANDARD PERFORMANCE LEVELS FOR FY 2022-23

SL No	Parameter	Quarter wise / Month wise Number of Complaint received and redressed in FY 2022-23											
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
1	No light in BSL Township	15006	15010	15500	15020	16400	16420	16450	16451	16450	14550	15100	15200
2	Breakdown in BSL Township	495	495	495	495	565	565	565	564	565	455	444	447
3	Preventive Maintenance in BSL Township	58	60	50	61	70	71	69	68	68	50	50	56
4	Repair Maintenance of Street Light in BSL Township	1980	1981	1900	1982	2200	2240	2240	2245	2244	2000	2000	2000
5	LT to HT Distribution Transformer failure in BSL Township	3	5	6	6	9	9	1	0	5	3	1	1
6	Testing of Meter	8	2	10	28	42	37	29	10	21	13	12	20
7	Replacement of meter	8	2	10	28	42	37	29	10	21	13	12	20

*Handwritten signature*  
28.10.2023

अमर नाथ सिंह  
ग्रहप्रबन्धक (न० प्र०-विद्युत)  
सहायक सहायक सहायक

*Handwritten signature*  
23.08.23

MONTH WISE STANDARD PERFORMANCE LEVELS FOR FY 2023-24

SL No	Parameter	Quarter wise / Month wise Number of Complaint received and redressed in FY 2023-24									
		Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	
1	No light in BSL Township	15100	15090	15001	8531	29414		15200	15199	15205	
2	Breakdown in BSL Township	440	441	440	769	985		437	428	435	
3	Preventive Maintenance in BSL Township	50	49	45	249	79		56	56	56	
4	Repair Maintenance of Street Light in BSL Township	1990	1991	1980	4000	4376		2000	2001	2000	
5	LT to HT Distribution Transformer failure in BSL Township	1	3	6	3	2	3	3	1	1	
6	Testing of Meter	47	31	51	53	29	59	55	20	21	
7	Replacement of meter	47	31	51	53	29	59	55	20	21	

Handwritten signature and date: 05.10.23  
Official stamp: 05.10.23  
Official stamp: 05.10.23



## Annexure R



सेल / SAIL  
बी एस एल / BSL  
टिप्पणी पत्र

## Consumer Awareness Program

As per the direction of the Hon'ble Commission in the Tariff Order dated 22.06.2023, for better consumer service and timely redressal of consumer complaints, SAIL-BSL would like to conduct a quarterly Customer Interaction Meeting (CIM) for the redressal of consumer complaints at General Manager level at TA Electrical, Nagar Sewa Bhawan, Bokaro Steel City.

CIM is a consumer participatory. Here consumers can address their grievance. The same will be heard by the General Manager, TA Electrical. CIM proceedings will be recorded and photographed. Further, the Consumer will be issued with an acknowledgement indicating time to resolve the problem.

In CIM, once consumer registers complaint, complaint will be heard at the General Manager level. If the complaint is not addressed within the stipulated time by the concerned, the complaint will be escalated to next authority.

In case, if the consumer is not satisfied with the service, consumer can appeal to Consumer Grievance Redressal Forum (CGRF), which is a quasi judicial body. The appointment of CGRF-Chairman has already been initiated and upon taking charge the contact details would be published in the newspaper and SAIL-BSL TA website.

Following are the tentative list of activities but not limited to for the consumer awareness program:

1. Procedure for obtaining a new connection, disconnection, reconnection, change in load/name/tariff category.
2. Procedure for payment of electricity bills including the online mode.
3. Awareness on tariff schedule and Schedule of General Charges approved by the State Electricity Regulatory Commission.
4. Issues related to installation of meters/maintenance/replacement.
5. Standards of Performance including quality to be maintained and services to be provided by SAIL-BSL.
6. Complaint handling procedure and GrievanceRedressal Mechanism at CGRF.

Date and Venue of the CIM would be decided 2 weeks prior to such meeting based on the availability of the concerned officials and shall be intimated to the consumers via newspaper advertisement, notice board and SAIL-BSL TA website.

*राजुल हर्करनी*

राजुल हर्करनी  
RAJUL HARKERNI  
महाप्रबन्धक (नगर सेवा-विद्युत)  
General Manager (TA - Electrical)  
सेल, बोकारो इस्पात संयंत्र  
SAIL, Bokaro Steel Plant

*राजुल हर्करनी*

अनुराध सिंह  
महाप्रबन्धक (नगर सेवा-विद्युत)  
सेल, बोकारो इस्पात संयंत्र



**Annexure: True up year tables**

Steel Authority of India Limited (SAIL)- Bokaro Steel Plant (BSL)

Projection of Sales, Customers &amp; Connected load

**Form No: F1a****Sales**

S. No.	Category	PY										CY				Control Period	
		FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21		FY 21-22		FY 22-23		FY 23-24				FY 24-25	
		Trued Up	Trued Up	Trued Up	Trued Up	MT Order (Case no. 07 of 2017)	Actual	MT (Case no. 13 of 2022)	Actual	MT (Case no. 13 of 2022)	Actual	MT (Case no. 13 of 2022)	Actual (Apr-Sep)	Estimated (Oct-Mar)	Estimated (Apr-Mar)	MT (Case no. 13 of 2022)	Estimated
1	DS-LT	102.84	101.65	119.46	88.52	170.38	95.30	98.51	103.00	101.84	101.88	105.27	51.28	54.68	105.96	108.85	110.20
2	DS-HT	9.14	8.35	6.41	5.85	6.58	6.00	6.07	4.63	6.13	6.32	6.20	3.36	3.36	6.72	6.27	6.92
3	CS	15.74	18.18	18.44	21.65	19.84	13.92	15.07	15.14	16.31	16.67	17.66	10.55	6.95	17.51	19.12	18.38
4	LTS	0.54	0.48	0.45	0.62	0.50	0.45	0.45	0.45	0.45	0.45	0.45	0.22	0.23	0.45	0.45	0.45
5	HTS	8.39	7.93	8.54	11.14	41.06	10.25	10.76	7.78	11.30	9.78	11.86	5.40	4.38	9.78	12.45	9.78
6	HT-LT	50.79	52.04	56.27	58.52	50.17	60.86	61.49	61.49	63.33	61.16	65.23	32.62	32.62	65.23	67.19	67.19
	<b>Tomship Total</b>	<b>187.44</b>	<b>188.61</b>	<b>209.57</b>	<b>186.31</b>	<b>288.53</b>	<b>186.77</b>	<b>192.34</b>	<b>192.49</b>	<b>199.36</b>	<b>196.47</b>	<b>206.68</b>	<b>103.43</b>	<b>102.22</b>	<b>205.65</b>	<b>214.31</b>	<b>212.92</b>
7	Steel Plant	427.57	897.17	1,116.54	913.42	472.93	1,031.68	1,134.85	1,448.41	1,248.34	1,422.25	1,373.17	531.23	841.94	1,373.17	1,510.49	1,510.49
	<b>GRAND TOTAL</b>	<b>615.01</b>	<b>1085.78</b>	<b>1,326.11</b>	<b>1,099.73</b>	<b>761.46</b>	<b>1,218.46</b>	<b>1,327.20</b>	<b>1,648.90</b>	<b>1,447.70</b>	<b>1,618.70</b>	<b>1,579.85</b>	<b>634.66</b>	<b>944.16</b>	<b>1,578.82</b>	<b>1579.85</b>	<b>1579.85</b>

**Number of Customers:**

S. No.	Category	PY										CY				Control Period	
		FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21		FY 21-22		FY 22-23		FY 23-24				FY 24-25	
		Trued Up	Trued Up	Trued Up	Trued Up	MT Order (Case no. 07 of 2017)	Actual	MT (Case no. 13 of 2022)	Actual	MT (Case no. 13 of 2022)	Actual	MT (Case no. 13 of 2022)	Actual (Apr-Sep)	Estimated (Oct-Mar)	Estimated (Apr-Mar)	MT (Case no. 13 of 2022)	Estimated
1	DS-LT	32,297	32,893	33,608	28,471	34,330	27808	28087	30847	28388	29,326	28,652	29,321	29,907	29,907	28,939	30906
2	DS-HT	6	5	5	5	10	5	5	5	5	5	5	5	5	5	5	5
3	CS	1,775	1,802	1,828	1,859	1,831	1,900	1,919	1,911	1,939	1,914	1,959	1,764	1,782	1,782	1,979	1,800
4	LTS	35	33	33	33	35	34	34	34	34	34	37	34	31	32	32	34
5	HTS	8	16	16	20	14	20	21	25	22	24	23	25	25	25	24	26
6	HT-LT	650	656	656	656	656	656	656	656	656	656	656	656	656	656	656	656
	<b>Tomship Total</b>	<b>34,777</b>	<b>35,405</b>	<b>36,146</b>	<b>31,835</b>	<b>36,876</b>	<b>30,423</b>	<b>30,722</b>	<b>33,478</b>	<b>31,824</b>	<b>31,962</b>	<b>31,329</b>	<b>31,802</b>	<b>32,408</b>	<b>32,408</b>	<b>31,637</b>	<b>33,027</b>
	Steel Plant	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	<b>GRAND TOTAL</b>	<b>34,778</b>	<b>35,406</b>	<b>36,147</b>	<b>31,836</b>	<b>36,877</b>	<b>30,424</b>	<b>30,723</b>	<b>33,479</b>	<b>31,825</b>	<b>31,963</b>	<b>31,330</b>	<b>31,803</b>	<b>32,409</b>	<b>32,409</b>	<b>31,638</b>	<b>33,028</b>

**Connected Load**

S. No.	Category	Unit	PY										CY				Control Period	
			FY 17-18	FY 18-19	FY 19-20	FY 20-21		FY 21-22		FY 22-23		FY 23-24				FY 24-25		
			Trued Up	Trued Up	Trued Up	MYT Order (Case no. 07 of 2017)	Actual	MYT (Case no. 13 of 2022)	Actual	MYT (Case no. 13 of 2022)	Actual	MYT (Case no. 13 of 2022)	Actual (Apr-Sep)	Estimated (Oct-Mar)	Estimated (Apr-Mar)	MYT (Case no. 13 of 2022)	Estimated	
1	DS-LT	kW	93,682	95,070	95,070	87,607	95,070	96,021	96,021	96,982	92,404	97,952	97,952	98,932	98,932	98,932	98,932	
2	DS-HT	kVA	4,815	4,815	4,815	12,291	4,815	4,815	4,815	4,815	4,815	4,815	4,565	4,565	4,565	4,815	4,815	
3	CS	kW	14,100	13,902	14,180	13,670	14,464	24,463	22,451	24,953	22,307	25,453	20,874	22,126	22,126	25,963	21,540	
4	LTS	HP	993	993	991	1,017	991	1,001	870	1,012	853	1,023	820	821	821	1,034	853	
5	HTS	kVA	5,109	5,109	6,668	6,194	6,668	7,002	8,893	7,353	7,793	7,721	9,978	9,978	9,978	8,108	7,793	
6	HT-LT	kW	29,771	29,771	30,813	26,891	31,891	33,008	33,008	34,163	34,163	35,359	17,679	18,210	18,210	36,596	35,188	
	Township Total		1,48,470	1,49,660	1,52,537	1,47,670	1,53,899	1,66,310	1,66,057	1,69,278	1,62,235	1,72,323	1,51,868	1,54,632	1,54,632	1,75,448	1,71,121	
	Steel Plant	MVA	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	
	GRAND TOTAL		1,48,515	1,49,705	1,52,582	1,47,715	1,53,944	1,66,355	1,66,102	1,69,323	1,62,280	1,72,368	1,51,913	1,54,677	1,54,677	1,75,493	1,71,166	

# Steel Authority of India Limited (SAIL)- Bokaro Steel Plant (BSL)

## Summary of Power Purchase from Own Stations and Other Sources

### Form No: F4

Sl No	Source	FY 22-23						FY 23-24						FY 24-25					
		Energy Units (MU)	Rs Crs.	Paise/Unit	Energy Units (MU)	Rs Crs.	Paise/Unit	Energy Units (MU)	Rs Crs.	Paise/Unit	Energy Units (MU)	Rs Crs.	Paise/Unit	Energy Units (MU)	Rs Crs.	Paise/Unit	Energy Units (MU)	Rs Crs.	Paise/Unit
		MYT (Case no. 13 of 2022)			Actual			MYT (Case no. 13 of 2022)			Estimated (April- March)			MYT (Case no. 13 of 2022)			Estimated		
(F) DVC		1469.85	664.81	452.30	310.95	134.58	432.79	1,602.82	753.95	452.00	228.50	120.57	527.66	1748.61	855.43	470.00	236.58	129.83	548.76
Grand Total		1469.85	664.81	452.30	310.95	134.58	432.79	1602.82	753.95	452.00	228.50	120.57	527.66	313.58	150.71	470.00	236.58	129.83	548.76

Energy input data based on bills raised by DVC to SAIL BSL						
Month	FY 2022-23			FY 2023-24		
	Net Energy consumed as per bills(kWh))	PPC(Rs.)	Rs./KWh	Net Energy consumed as per bills(kWh))	PPC(Rs.)	Rs./KWh
Apr	12,66,90,000	53,15,08,209	4.20	11,84,82,000	70,46,19,537	5.95
May	11,84,11,000	55,61,55,966	4.70	11,79,20,000	62,06,11,469	5.26
Jun	12,73,48,000	55,69,53,857	4.37	11,89,65,000	58,95,88,898	4.96
Jul	12,38,41,000	56,07,06,166	4.53	10,37,03,000	60,11,70,039	5.80
Aug	11,48,88,000	56,46,06,253	4.91	12,27,65,810	60,90,51,449	4.96
Sep	11,90,10,000	69,60,08,740	5.85	11,95,16,000	57,02,60,565	4.77
Oct	14,98,99,975	53,87,56,353	3.59	14,98,99,975	79,18,60,837	5.28
Nov	14,00,93,289	66,36,73,095	4.74	14,00,93,289	74,00,56,087	5.28
Dec	15,23,06,763	54,05,84,935	3.55	15,23,06,763	80,45,74,924	5.28
Jan	15,77,81,231	68,58,46,268	4.35	15,77,81,231	83,34,94,318	5.28
Feb	13,76,68,287	53,26,25,367	3.87	13,76,68,287	72,72,45,785	5.28
Mar	16,25,67,487	62,92,65,718	3.87	16,25,67,487	85,87,78,171	5.28
Total (Rs. Crore)	1,630.51	705.67	4.33	1,601.67	8,451.31	5.28

Steel Authority of India Limited (SAIL)- Bokaro Steel Plant (BSL)

Repair & Maintenance Expenditure

Form No: F5

S.No.	Particulars	PY		CY				Control Period	
		FY 22-23		FY 23-24				FY 24-25	
		MYT (Case no. 13 of 2022)	Actual	MYT (Case no. 13 of 2022)	Actual (Apr-Sep)	Estimated (Oct-Mar)	Estimated (Apr-Mar)	MYT (Case no. 13 of 2022)	Estimated
1	Plant and Machinery	3.67	4.19	4.55			2.86	5.42	4.74
2	Building								
3	Civil Works								
4	Hydraulic Works								
5	Lines, Cables Net Works etc.								
6	Vehicles								
7	Furniture and Fixtures								
8	Office Equipments								
9	Spare Inventory for maintaining Transformer redundancy								
10	Sub station maintenance by private agencies								
11	Any other items (Capitalisation)								
Total		3.67	4.19	4.55			3.82	5.42	4.74

# Steel Authority of India Limited (SAIL)- Bokaro Steel Plant (BSL)

## Employee Cost and Provisions

### Form No: F6

	Particulars	PY		CY		Control Period	
		FY 22-23		FY 23-24		FY 24-25	
		MYT (Case no. 13 of 2022)	Actual	MYT (Case no. 13 of 2022)	Estimated (Apr-Mar)	MYT (Case no. 13 of 2022)	Estimated
<b>A</b>	<b>Employee's Cost</b>						
1	Salaries						
2	Dearness Allowance						
3	Other Allowances & Relief						
a	Allowance details						
b							
c							
d							
4	Medical Expenses Reimbursement						
5	Leave Travel Assistance						
6	Fee & Honorarium						
7	Incentives/Awards Including That In Partnership Project (Specify Items)						
8	Earned Leave Encashment						
9	Tuition Fee Re-Imbursement						
10	Leave Salary Contribution						
11	Payment Under Workman'S Compensation And Gratuity						
12	Subsidised Electricity To Employees						
13	Staff Welfare Expenses						
<b>B</b>	<b>Apprentice And Other Training Expenses</b>						
<b>C</b>	<b>Payment/Contribution To PF Staff Pension And Gratuity</b>						
1	Terminal Benefits						
a)	Provident Fund Contribution						
b)	Provision for PF Fund - Invested						
	Not Invested						
c)	Pension Payments						
d)	Gratuity Payment						
e)	Leave Encashment Payment						
2	Any Other Items						
	<b>Total C</b>						
<b>D</b>	<b>Bonus/Exgratia To Employees</b>						
<b>E</b>	<b>Grand Total</b>	<b>8.81</b>	<b>9.51</b>	<b>9.35</b>	<b>8.41</b>	<b>9.92</b>	<b>8.41</b>
<b>F</b>	<b>Capitalization</b>						
	<b>Balance Item 'F' Appropriate For (E)-(F)</b>						
<b>G</b>	<b>Relevant Indices Of Wages Increase (As At The Beginning &amp; End Of The Year)</b>						
	WPI						
	CPI						
<b>H</b>	<b>Relevant Factor</b>	<b>5%</b>		<b>5%</b>	<b>0%</b>		<b>0%</b>
	Gn						



# Steel Authority of India Limited (SAIL)- Bokaro Steel Plant (BSL)

## Repair & Maintenance Expenditure

**Form No: F7**

S.No.	Particulars	PY		CY				Control Period	
		FY 22-23		FY 23-24				FY 24-25	
		MYT (Case no. 13 of 2022)	Actual	MYT (Case no. 13 of 2022)	Actual (Apr-Sep)	Estimated (Oct-Mar)	Estimated (Apr-Mar)	MYT (Case no. 13 of 2022)	Estimated
A)	Administration Expenses								
	Sub-Total of Administrative Expenses								
B)	Other Charges								
	1 Fee And Subscriptions Books And Periodicals								
	2 Printing And Stationery	0.86	4.01	0.86			3.55		3.55
	3 Advertisement Expenses (Other Than Purchase Related) Exhibition & Demo.								
	4 Contributions/Donations To Outside Institute / Association								
	5 Electricity Charges To Offices								
	6 Water Charges								
	7 Any Study - As per requirements								
	8 Miscellaneous Expenses								
	9 Public Interaction Program								
	10 Any Other expenses		0.81				0.72		0.72
	Sub-Total of other charges		4.82				4.26		4.26
C)	Legal Charges & Petition filing fees								
D)	Auditor'S Fee/ Consultancy Services								
E)	Freight - Material Related Expenses								
F)	Departmental Charges		0.84				0.74		0.74
G)	Total Charges								
H)	Capitalization								
I)	Total Charges Chargeable to Revenue Expenses	2.63	5.66	2.79			5.00	2.96	5.00

# Steel Authority of India Limited (SAIL)- Bokaro Steel Plant (BSL)

## Fixed Assets and Provisions for depreciations

### Form No: F8

FY 2022-23												
MYT												
Sl.No	Particulars	Gross Fixed Assets				Provision For Depreciation				Net Fixed Assets		
		At Begning of Year	Addition During Year	Adjustments & Deduction	At End Of Year	Rate of Depreciation	At Begning of Year	Addition During Year	Adjust- ments & Deduction	At End Of Year	At The begning of Year	At the End Of Year
E.	Any other items											
	<b>Total</b>	48.24	11.49		59.73	4.22%	1.96	2.28		4.24	46.28	55.49

	FY 2023-24										
	MYT										
	Gross Fixed Assets				Provision For Depreciation					Net Fixed Assets	
Particulars	At Begning of Year	Addition During Year	Adjustments & Deduction	At the End Of Year	Rate of Depreciation	At Begning of Year	Addition During Year	Adjust- ments & Deduction	At End Of Year	At The begning of Year	At the End Of Year
Any other items											
Total	59.73	11.49		71.21	4.22%	4.24	2.76		7.00	55.49	64.21

	FY 2023-24										
	MYT										
	Gross Fixed Assets				Provision For Depreciation				Net Fixed Assets		
Particulars	At Begning of Year	Addition During Year	Adjustments & Deduction	At the End Of Year	Rate of Depreciation	At Begning of Year	Addition During Year	Adjust-ments & Deduction	At End Of Year	At The begning of Year	At the End Of Year
Any other items											
Total	71.21	1.00		72.21	0.04	7.00	3.03		10.03	64.21	62.18

	FY 2022-23										
	Actual										
	Gross Fixed Assets				Provision For Depreciation					Net Fixed Assets	
Particulars	At Begning of Year	Addition During Year	Adjustments & Deduction	At End Of Year	Rate of Depreciation	At Begning of Year	Addition During Year	Adjust- ments & Deduction	At End Of Year	At The begning of Year	At The End Of Year
Total	45.52	-	0.49	45.03	4.22%	-	1.91	-	1.91	45.52	43.12

	FY 2023-24										
	Estimated										
	Gross Fixed Assets				Provision For Depreciation					Net Fixed Assets	
Particulars	At Begning of Year	Addition During Year	Adjustments & Deduction	At the End Of Year	Rate of Depreciation	At Begning of Year	Addition During Year	Adjust- ments & Deduction	At End Of Year	At The begning of Year	At the End Of Year
Total	45.03	20.97		66.00	4.22%	1.91	2.34		4.25	43.12	61.75

	FY 2024-25										
	Estimated										
	Gross Fixed Assets				Provision For Depreciation					Net Fixed Assets	
Particulars	At Begning of Year	Addition During Year	Adjustments & Deduction	At the End Of Year	Rate of Depreciation	At Begning of Year	Addition During Year	Adjust-ments & Deduction	At End Of Year	At The begning of Year	At the End Of Year
Total	66.00	5.99		71.99	4.22%	4.25	2.91		7.17	61.75	64.83

Year wise Capitalisation of Proposed Schemes								
Particulars (Rs. Cr.)	2022-23		2023-24				2024-25	
	MYT	Actual	MYT	Actual (April-Sept.)	Estimated (Oct.- March)	Estimated (April-March)	MYT	Estimated
11KV Feeder Augmentation in BSL Township	7.80	10.58	7.80	2.71	2.31	5.02		
Installation of Arterial Lights with LED Fixtures in BSL township	2.12	2.08	2.12	1.34	0.81	2.16		
30 No's of High Mast Towers with LED Fixture in BSL township	0.57	-	0.57	0.98	0.16	1.13		
Smart Street Lighting Solution								0.50
Procurement of Cables, Wiring and other material	1.00	-	1.00	-	-	-	1.00	1.00
Chemical Earthing						-	4.49	4.49
<b>Total</b>	<b>11.49</b>	<b>12.66</b>	<b>11.49</b>	<b>5.03</b>	<b>3.28</b>	<b>8.31</b>	<b>5.49</b>	<b>5.99</b>

# Steel Authority of India Limited (SAIL)- Bokaro Steel Plant (BSL)

## Interest and Finance charges

**Form No: F9**

Particulars	PY		CY		Control Period	
	FY 21-22		FY 22-23		FY 23-24	
	MYT	Actual	MYT	Estimated (Apr-Mar)	MYT (Case no. 13 of 2022)	Estimated
Interest and Finance Charges on Long Term Loans / Credits from the FIs/banks/organisations approved by the State Government						
<b>Net Total Of Interest &amp; Finance Charges : For Revenue Account: C-D</b>	<b>1.91</b>	<b>1.40</b>	<b>2.41</b>	<b>1.87</b>	<b>2.54</b>	<b>2.48</b>
Particulars	PY		CY		Control Period	
	FY 22-23		FY 23-24		FY 24-25	
	MYT (Case no. 13 of 2022)	Actual	MYT (Case no. 13 of 2022)	Estimated (Apr-Mar)	MYT (Case no. 13 of 2022)	Estimated
Net Loan-Opening	18.35	16.50	24.11	14.59	29.39	26.93
Additions	8.04	0.00	8.04	14.68	0.70	4.19
Repayment during the year	2.28	1.91	2.76	2.34	3.03	2.91
Net Loan-Closing	24.11	14.59	29.39	26.93	27.06	28.21
Average Loan	21.23	15.54	26.75	20.76	28.23	27.57
Weighted Average Rate of Interest on Loan (%)	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
<b>Interest on Loan</b>	<b>1.91</b>	<b>1.40</b>	<b>2.41</b>	<b>1.87</b>	<b>2.54</b>	<b>2.48</b>



Steel Authority of India Limited (SAIL)- Bokaro Steel Plant (BSL)

Interest on Working Capital

Form No: F18

Sl.No.	Particulars	PY		CY		Control Period	
		FY 22-23		FY 23-24		FY 24-25	
		MYT (Case no. 13 of 2022)	Actual	MYT (Case no. 13 of 2022)	Estimated (Apr-Mar)	MYT (Case no. 13 of 2022)	Estimated
1	1/12th of O&M expenses for the Distribution Business						
2	Receivables equivalent to 2 months of revenues from sale of electricity at existing tariff	123.47	14.28	134.49	16.96	146.57	22.84
3	Maintenance Spares (1 % of GFA)	0.48	0.46	0.60	0.45	0.71	0.66
4	Less: 1/12th of Total Power Purchase Cost	(55.40)	(11.21)	(62.83)	(10.05)	(71.29)	(10.82)
5	Less: Consumer Security Deposit						
6	<b>Total Working Capital (1+2+3-4-5)</b>	<b>68.55</b>	<b>3.52</b>	<b>72.26</b>	<b>7.36</b>	<b>75.99</b>	<b>12.68</b>
7	Rate of interest (SBI PLR on 1st April)	10.50%	10.50%	10.50%	12.05%	10.50%	12.05%
8	<b>Interest on Working Capital</b>	<b>7.20</b>	<b>0.37</b>	<b>7.59</b>	<b>0.89</b>	<b>7.98</b>	<b>1.53</b>

Steel Authority of India Limited (SAIL)- Bokaro Steel Plant (BSL)

Existing and Proposed Tariff

**Form No: T1**

Existing and Proposed Tariff				
Category	FY 2024-25			
	Existing Component of tariff		Proposed Component of tariff	
	Energy Charges	Fixed/Demand Charges	Energy Charges	Fixed/Demand Charges
	(Rs/k Wh)	(Rs/con/month or Rs/ k VA/M)	(Rs/k Wh)	(Rs/con/month or Rs/ k VA/M)
DS-LT	3.25	80.00	4.23	90
DS-HT	2.80	75.00	3.64	90
CS	5.70	125.00	7.41	150
LTIS	4.60	150.00	5.98	175
HTS	5.10	300.00	6.63	345
HT/LT	5.70	125.00	7.41	150
Note: Categories may be considered taking into account the categories prevailing in the area of supply.				

# Steel Authority of India Limited (SAIL)- Bokaro Steel Plant (BSL)

Revenue from current Tariff in true up years

Form No: T2

FY 2022-23															
Sl.No.	Tariff Category	No. of consumers	Consumption-Slabwise (MU)	Contract Demand/Connected Load (KW /KVA /HP)	Energy Charge (Rs/KWh)	Monthly Demand Charge (Rs/KVA)	Fixed Charge (Rs./conn./month)	Demand Charges Total in Rs. Crs.	Fixed Charges Total in Rs. Crs.	Variable Charges Total in Rs. Crs.	Rebates/Surcharges Total in Rs. Crs.	TOTAL BILLED AMT (RS.CRS)	Average Billing Rate (ABR) in Rs/unit	Average Cost of Supply (Rs./ Unit)	Existing Cross Subsidy
1	DS-LT	29326	101.88	92404	3.25		80	-	2.82	33.11		35.93	3.53		45%
2	DS-HT	5	6.52	4815	2.8	75		0.43	-	1.83		2.26	3.46		44%
3	CS	1914	16.67	22207	5.7	125		3.33	-	9.50		12.83	7.70		97%
4	LTIS	37	0.45	853	4.6	150		0.15	-	0.21		0.36	8.01	7.91	101%
5	HTS	24	9.78	7793	5.1	300		2.81	-	4.99		7.80	7.97		101%
6	HT/LT	656	61.16	34163	5.7	125		5.12	-	34.86		39.99	6.54		83%
7	Township Total	31962.00	196.47					11.85	2.82	84.50		99.16	5.05		
FY 2023-24															
Sl.No.	Tariff Category	No. of consumers	Consumption-Slabwise (MU)	Contract Demand/Connected Load (KW /KVA /HP)	Energy Charge (Rs/KWh)	Monthly Demand Charge (Rs/KVA)	Fixed Charge (Rs.)	Demand Charges Total in Rs. Crs.	Fixed Charges Total in Rs. Crs.	Variable Charges Total in Rs. Crs.	Rebates/Surcharges Total in Rs. Crs.	TOTAL BILLED AMT (RS.CRS)	Average Billing Rate (ABR) in Rs/unit	Average Cost of Supply (Rs./ Unit)	Existing Cross Subsidy
1	DS-LT	29907.42	105.96	98,932	3.25		80	-	2.87	34.44		37.31	3.52		50%
2	DS-HT	5	6.72	4,565	2.8	75		0.41	-	1.88		2.29	3.41		48%
3	CS	1781.64	17.51	22,126	5.7	125		3.32	-	9.98		13.30	7.60		107%
4	LTIS	32.24	0.45	821	4.6	150		0.15	-	0.21		0.35	7.89	7.07	112%
5	HTS	25.25	9.78	9,978	5.1	300		3.59	-	4.99		8.58	8.77		124%
6	HT/LT	656	65.23	18,210	5.7	125		2.73	-	37.18		39.91	6.12		87%
7	Township Total	32407.55	205.65					10.20	2.87	88.68		101.75	4.95		
FY 2024-25															
Sl.No.	Tariff Category	No. of consumers	Consumption-Slabwise (MU)	Contract Demand/Connected Load (KW /KVA /HP)	Energy Charge (Rs/KWh)	Monthly Demand Charge (Rs/KVA)	Fixed Charge (Rs./conn./month)	Demand Charges Total in Rs. Crs.	Fixed Charges Total in Rs. Crs.	Variable Charges Total in Rs. Crs.	Rebates/Surcharges Total in Rs. Crs.	TOTAL BILLED AMT (RS.CRS)	Average Billing Rate (ABR) in Rs/unit	Average Cost of Supply (Rs./ Unit)	Existing Cross Subsidy
1	DS-LT	30506	110.20	98,932.00	3.25		80	-	2.93	35.81		38.74	3.52		47%
2	DS-HT	5	6.92	4,815.00	2.8	75		0.43	-	1.94		2.37	3.43		46%
3	CS	1800	18.38	23,540.00	5.7	125		3.53	-	10.48		14.01	7.62		103%
4	LTIS	34	0.45	853.00	4.6	150		0.15	-	0.21		0.36	8.01	7.42	108%
5	HTS	26	9.78	7,793.00	5.1	300		2.81	-	4.99		7.80	7.97		107%
6	HT/LT	656	67.19	35,188.00	5.7	125		5.28	-	38.30		43.58	6.49		87%
7	Township Total	33027.00	212.92					12.20	2.93	91.72		106.85	5.02		

# Steel Authority of India Limited (SAIL)- Bokaro Steel Plant (BSL)

## Revenue from proposed Tariff

### Form No: T3

FY 24-25														
S.No.	Tariff Category	No. of consumers	Consumption-Slabwise (MU)	Contract Demand/ Connected Load (KW /KVA /HP)	Energy Charge (Rs/KWh)	Monthly Demand Charge (Rs/KVA)	Fixed Charge (Rs./conn./month)	Demand Charges Total in Rs. Crs.	Fixed Charges Total in Rs. Crs.	Variable Charges Total in Rs. Crs.	TOTAL BILLED AMT (RS. CRS)	Average Billing Rate (ABR) in Rs/unit	Average Cost of Supply (Rs./ Unit)	Existing Cross Subsidy
1	DS-LT	30506	110.20	98932	4.23		90		3.29	46.56	49.85	4.52	7.42	61%
2	DS-HT	5	6.92	4815	3.64	90		0.52		2.52	3.04	4.39		59%
3	CS	1800	18.38	23540	7.41	150		4.24		13.62	17.86	9.72		131%
4	LTIS	34	0.45	853	5.98	175		0.18		0.27	0.45	9.96		134%
5	HTS	26	9.78	7793	6.63	345		3.23		6.49	9.71	9.93		134%
6	HT/LT	656	67.19	35188	7.41	150		6.33		49.79	56.12	8.35		113%
7	Township Total	33027	212.92	-	-			14.50	3.29	119.24	137.03	6.44		
	Hike				30%	15%								



Steel Authority of India Limited (SAIL)- Bokaro Steel Plant (BSL)

Profit and Loss Account

Form No: S1

<b>Profit &amp; Loss Account</b>		
	<b>Particulars</b>	<b>PY</b>
		<b>FY 22-23</b>
<b>A</b>	<b>Revenue</b>	
1	Revenue from sale of power	85.68
2	Other Non-tariff income	
3	Revenue subsidies	
	<b>Total Revenue or Income</b>	<b>85.68</b>
<b>B</b>	<b>Expenditure</b>	
1	Purchase of Power from Own Stations	
2	Purchase of Power from Other Sources	134.58
3	Intra-State Transmission Charges	
4	Repairs and Maintenance	4.19
5	Employee costs	9.51
6	Administration and General expenses	5.66
7	Net prior period credit/(charges)	
8	Other Debits, Write-offs	
9	Return on Equity	1.96
10		
11	Less: Expenses Capitalized	
<b>C</b>	<b>PBDIT</b>	
<b>D</b>	<b>Depreciation and Related debits</b>	<b>1.91</b>
<b>E</b>	<b>PBIT</b>	
1	Interest & Finance Charges	1.40
2	Interest on working capital	0.37
3	Less: Interest Capitalized	
<b>F</b>	<b>Total Interest and Finance Charges</b>	<b>1.77</b>
<b>G</b>	<b>TOTAL EXPENDITURE</b>	<b>159.57</b>
<b>H</b>	<b>Profit/Loss before Tax</b>	<b>73.89</b>
<b>I</b>	<b>Income Tax provisions</b>	
<b>J</b>	<b>Profit/Loss after Tax</b>	

# Steel Authority of India Limited (SAIL)- Bokaro Steel Plant (BSL)

## Annual Revenue requirement

### Form No: S4

Annual Revenue Requirement		Form No: S4							
		All figures in Rs Crores							
S. No.	Particulars	PY		CY				Control Period	
		FY 22-23		FY 23-24				FY 24-25	
		MYT (Case no. 13 of 2022)	Actual	MYT (Case no. 13 of 2022)	Actual (Apr-Sep)	Estimated (Oct-Mar)	Estimated (April- March)	MYT (Case no. 13 of 2022)	Estimated
	Power Purchase (MU)	1,469.85	310.95	1,602.82	170.12	58.37	228.50	1,748.61	236.58
	Sale of Power (MU)	1447.70	196.47	1579.85	103.43	102.22	205.65		212.92
	Township Loss %	10.00%	36.82%	10.00%			10.00%	10.00%	10.00%
	<b>1 Receipts</b>								
a	Revenue from Tariffs & Miscell. Charges	740.83	85.68	806.91			101.75	879.4	106.85
b	Revenue subsidy from Govt.								
	<b>Total</b>	<b>740.83</b>	<b>85.68</b>	<b>806.91</b>			<b>101.75</b>	<b>879.4</b>	<b>106.85</b>
	<b>2 Expenditure</b>								
a	Purchase of Power from Own Stations								
b	Purchase of Power from Other Sources	664.81	134.58	753.95	80.75	23.28	120.57	855.43	129.83
c	Transmission & Load Dispatch charges								
d	O&M Expenses	15.12	19.36	16.69			17.24	18.3	18.15
e	Depreciation	2.28	1.91	2.76			2.34	3.03	2.91
f	Interest on Working Capital	7.20	0.37	7.59			0.89	7.98	1.53
g	Interest on Loans	1.91	1.40	2.41			1.87	2.54	2.48
h	Return on Equity	2.35	1.96	2.85			2.41	3.12	3.00
i	Interest on Consumer Security Deposit								
j	Income Tax								
k	Foreign Exchange Rate variation								
l	Lease Charges								
m	Sharing of Gains and Losses of O&M		-4.24						
	Other (Misc.)-net prior period credit/ (charges)								
	<b>Total</b>	<b>693.67</b>	<b>155.33</b>	<b>786.25</b>			<b>145.31</b>	<b>890.40</b>	<b>157.89</b>
	<b>3 Reasonable Return</b>								
	<b>4 Other Income</b>								
a	Non-Tariff Income								
b	Income from Other Business								
	Receipts on account of cross subsidy surcharge and								
c	additional surcharge from open access customers								
d	Other								
	<b>5 Annual Revenue Requirement (2)+(3)-(4)</b>	<b>693.67</b>	<b>155.33</b>	<b>786.25</b>			<b>145.31</b>	<b>890.40</b>	<b>157.89</b>
	<b>6 Surplus(+) / Shortfall(-) : (1)-(5)</b>	<b>-47.16</b>	<b>69.65</b>	<b>-20.66</b>	<b>0.00</b>	<b>0.00</b>	<b>43.57</b>	<b>83.49</b>	<b>51.04</b>
	before tariff revision								
	<b>7 Tariff Revision Impact</b>								<b>137.03</b>
	<b>8 Surplus(+) / Shortfall(-) : (6)-(7)</b>								<b>20.86</b>
	after tariff revision								

Steel Authority of India Limited (SAIL)- Bokaro Steel Plant (BSL)

Return on Equity

**Form No: S5**

Return on Equity							
All figures in Rs Crores							
S. No.	Particulars	PY		CY		Control Period	Control Period
		FY 22-23		FY 23-24		FY 24-25	
		MYT	Actual	MYT	Estimated (Apr-March.)	MYT	Estimated
1	Opening Balance of Equity	14.47	13.49	17.91	13.49	21.36	19.78
2	Net Additions during the Year	3.45	0.00	3.45	6.29	0.3	1.80
3	Closing Balance of Equity	17.91	13.49	21.36	19.78	21.66	21.58
4	Average Balance of Equity	16.19	13.49	19.64	16.64	21.51	20.68
5	Rate of Return (%)	14.50%	14.50%	14.50%	14.50%	14.50%	14.50%
6	<b>Return on Equity</b>	<b>2.35</b>	<b>1.96</b>	<b>2.85</b>	<b>2.41</b>	<b>3.12</b>	<b>3.00</b>

Steel Authority of India Limited (SAIL)- Bokaro Steel Plant (BSL)

Energy balance

Form No: S7

Energy Balance					Form No: S7	
Particulars	PY		CY		Control Period	
	FY 22-23		FY 23-24		FY 24-25	
	MYT (Case no. 13 of 2022)	Actual	MYT (Case no. 13 of 2022)	Estimated (April- March.)	MYT (Case no. 13 of 2022)	Estimated
<b>1 Purchase of Power</b>						
Power from Own Stations						
Power from Other Sources						
<b>Total Power Available for Sale or Energy Input</b>	<b>1,469.85</b>	<b>1,733.18</b>	<b>1,602.82</b>	<b>1,601.67</b>	<b>1,748.61</b>	<b>1,747.07</b>
<b>Power available for sale to township</b>	<b>221.52</b>	<b>310.95</b>	<b>229.65</b>	<b>228.50</b>	<b>238.13</b>	<b>236.58</b>
<b>2 Energy Sales within the state</b>						
a) LT Sales	118.60	119.00	123.38	123.91	128.40	129.03
b) HT Sales	80.76	77.47	83.29	81.73	85.91	83.89
c) EHT Sales	1248.34	1422.23	1373.17	1373.17	1510.49	1510.49
<b>Total Energy Sales</b>	<b>1447.70</b>	<b>196.47</b>	<b>1579.85</b>	<b>205.65</b>	<b>1724.80</b>	<b>212.92</b>
<b>3 Distribution Loss(%)</b>	<b>10.00%</b>	<b>36.82%</b>	<b>10.00%</b>	<b>10.00%</b>	<b>10.00%</b>	<b>10.00%</b>
<b>4 Intra State Transmission Loss</b>						
<b>5 Net Energy Requirement for sale in state</b>						
<b>6 Energy available for inter state sale</b>						
<b>7 Inter State Transmission Loss</b>						
<b>8 Tradable Power</b>						



Steel Authority of India Limited (SAIL)- Bokaro Steel Plant (BSL)

Truing Up

Form No: S8

Truing Up		Form No: S8	
S. No.	Particulars	PY	
		FY 22-23	
		MYT	Actual
	<b>Power Purchase (MU)</b>	1,469.85	310.95
	<b>Sale of Power to Township (MU)</b>	221.52	196.47
	<b>Loss %</b>	10.00%	36.82%
<b>1</b>	<b>Receipts</b>		
<b>a</b>	Revenue from tariffs & Miscell. Charges	740.83	85.68
<b>b</b>	Subsidy from Govt.		
	<b>Total</b>	<b>740.83</b>	<b>85.68</b>
<b>2</b>	<b>Expenditure</b>	693.65	155.32
<b>a</b>	Purchase of Power from Own Stations		
<b>b1</b>	Purchase of Power from Other Sources		
<b>b2</b>	Purchase of Power from Other Sources	664.81	134.58
<b>c</b>	Transmission & Load Dispatch charges		
<b>d</b>	O&M Expense	15.11	19.36
<b>e</b>	Depreciation	2.28	1.91
<b>f</b>	Interest on Working Capital	7.20	0.37
<b>g</b>	Interest on Loans	1.91	1.40
<b>h</b>	Interest on Consumer Security Deposit		
<b>i</b>	Income Tax		
<b>j</b>	Foreign Exchange Rate variation		
<b>k</b>	Return on equity	2.35	1.96
<b>l</b>	Lease Charges		
<b>m</b>	Other (Misc.)-net prior period credit/ (charges)		
<b>n</b>	Sharing of Gains and Losses of O&M		-4.25
	<b>Total</b>		
<b>3</b>	<b>Reasonable Return</b>		
<b>4</b>	<b>Other Income</b>		
<b>a</b>	Non-Tariff Income		
<b>b</b>	Income from Other Business		
<b>c</b>	Receipts on account of cross subsidy surcharge and additional surcharge from open access customers		
<b>d</b>	Other		
<b>5</b>	<b>Annual Revenue Requirement (2)+(3)-(4)</b>	<b>693.65</b>	<b>155.32</b>
<b>6</b>	<b>Surplus(+)/ Shortfall(-) : (1)-(5) before tariff revision</b>	(47.18)	69.64
<b>7</b>	<b>Tariff Revision Impact</b>		
<b>8</b>	<b>Surplus(+)/ Shortfall(-) : (6)-(7)after tariff revision</b>		

# Steel Authority of India Limited (SAIL)- Bokaro Steel Plant (BSL)

## T&D Losses in HT/LT System

### Form No: P2

T&D Losses in LT and HT system							
	Particulars	PY		CY		Control Period	
		FY 22-23		FY 23-24		FY 24-25	
		MYT	Actual	MYT	Actual (Apr-Mar)	MYT	Estimated
F	Overall Losses						
1	Energy In (A1+B1+C1+D1+E1)	221.52	310.95	229.65	228.50	238.13	236.58
2	Energy Sales (A5+B5+C5+D5+E4)	199.36	196.47	206.67	205.65	214.31	212.92
3	Total T&D Loss (2/1)*100%	10.00%	36.82%	10.00%	10.00%	10.00%	10.00%