

**Petition before
Hon'ble Jharkhand State Electricity
Regulatory Commission for**

**Business Plan Petition for FY 2026-27 to FY 2030-31
of
Steel Authority of India Limited**

SUBMITTED TO:
JHARKHAND STATE ELECTRICITY REGULATORY
COMMISSION (JSERC)

Ranchi

By



SAIL, BOKARO

___th March 2026

Contents

LIST OF TABLES.....	3
LIST OF FIGURES.....	4
LIST OF ABBREVIATIONS	4
1. CHAPTER 1: INTRODUCTION	8
1.1. Background – Power Sector	8
1.2. All India Installed Capacity.....	8
1.3. Integrated Rating of DISCOMs:	10
1.4. Power Sector Reforms and Schemes in the Distribution Sector.....	11
1.5. Draft Electricity (Amendment) Bill 2025 –	12
1.6. Key Regulations of Jharkhand State Electricity Regulatory Commission :-	13
2. CHAPTER 2: SAIL-BSL: POWER DISTRIBUTION IN BOKARO COMMAND AREA	15
2.1. Background	15
2.2. Mission Vision Value Architecture of Town Administration Dept. of SAIL-BSL	17
2.3. SAIL-BSL in Power Distribution in Bokaro Command Area	17
2.4. Challenges and Opportunities of SAIL-BSL	18
2.5. Objective of this petition.....	19
3. CHAPTER 3: PAST PERFORMANCE ANALYSIS	21
3.1. PAST PERFORMANCE ANALYSIS	21
3.2. Number of Consumers	21
3.3. Energy Sales.....	21
3.5. Contracted / Sanctioned load	22
3.6. Distribution losses.....	22
4. CHAPTER 4: POWER DEMAND & ENERGY SALES ASSESSMENT	24
4.1. Regulatory Provisions for Sales Projection	24
4.2. Broad Methodology	25
4.3. Sales and Demand Projection	26
4.4. Energy Requirement and Energy Balance	30
5. CHAPTER 5: POWER PROCUREMENT PLAN.....	31
5.1. Power Purchase.....	31
6. CHAPTER 6: CAPITAL INVESTMENT PLAN.....	32
6.1. Capital Expenditure Plans.....	32
7. CHAPTER 7: HUMAN RESORCE PLAN	40
7.1. HR Philosophy	40
7.2. Existing Manpower details of SAIL-BSL	41
7.3. Retirals	41
7.4. Additional Manpower requirement.....	41
7.5. The Overall Manpower plan.....	44
7.6. Training & Performance Appraisal.....	44

LIST OF TABLES

Table 1: Key Regulation's for Distribution Licensee in Jharkhand.....	13
Table 2: Category-wise Consumer Nos for the period FY 2021-22 to FY 2025-26	21
Table 3: Category-wise Energy Sales for the period FY 2021-22 to FY 2025-26.....	21
Table 4: Category-wise Contracted/Sanctioned Loads (kVA) for the period FY 2021-22 to FY 2025-26	22
Table 5: Actual Distribution Loss for the period FY 2021-22 to FY 2025-26.....	22
Table 6: Analysis of Capital Expenditure	23
Table 7: Projection of number of consumers in Domestic Services - LT Category	26
Table 8: Domestic Services LT – Projected Consumers, Contracted/Sanctioned Load, Energy Sales	26
Table 9: DS-HT category - Projected Consumers, Contracted/Sanctioned Load & Energy Sales	27
Table 10: Commercial Services - Projected Consumers, Contracted/Sanctioned Load & Energy Sales.....	27
Table 11: LTIS category - Projected Consumers, Contracted Load & Energy Sales	27
Table 12: HTS category - Projected Consumers, Contracted/Sanctioned.....	28
Table 13: HT/LT category - Projected Consumers, Contracted Load & Energy Sales.....	29
Table 14: LTIS category - Projected Consumers, Contracted Load & Energy Sales	29
Table 15: Projected number of Category wise Consumers – FY 2026-27 to FY 2030-31	29
Table 16: Projection of Category wise Contracted Load - FY 2026-27 to FY 2030-31	29
Table 17: Projection of Energy Sales – FY 2026-27 to FY 2030-31(MU)	29
Table 18: Energy requirement and Energy balance for Control Period	30
Table 19: Power Procurement Plan for Control Period (in MU).....	31
Table 20: Power Purchase from DVC.....	31
Table 21: Capex Phasing and Capitalisation for FY 2026-27 to FY 2030-31.....	39
Table 22: Total Additional Manpower recruitment proposed.....	44

LIST OF FIGURES

Figure 1: All India installed Capacity (GW) as on March of respective year.....	8
Figure 2: Fuel wise share in installed capacity (%).....	9
Figure 3: Year wise Energy Requirement, Availability & Deficit (FY 15 to FY 25)	9
Figure 4: Energy Requirement, Availability & Deficit (FY 2024-25) for Eastern Region.....	9
Figure 5: All India Year wise Peak Demand, Peak Demand Met & Peak Deficit	10
Figure 6: Peak Demand, Peak Demand Met (FY 2024-25) In Eastern Region.....	10
Figure 7: Category Wise No of Consumers as of FY 2024-25	16

LIST OF ABBREVIATIONS

Sr. No	Abbreviations	Descriptions
--------	---------------	--------------

Business Plan for FY 2026-27 to FY 2030-31

Sr. No	Abbreviations	Descriptions
1.	A&G	Administrative and General
2.	ABT	Availability Based Tariff
3.	ALDC	Area Load Dispatch Centre
4.	AMR	Automatic Meter Reading
5.	APDRP	Accelerated Power Development Reforms Program
6.	ARR	Aggregate Revenue Requirement
7.	AS	Accounting Standard
8.	BTPS	Bokaro Thermal Power Station
9.	CAGR	Compound Annual Growth Rate
10.	CDM	Clean Development Mechanism
11.	CEA	Central Electricity Authority
12.	CERC	Central Electricity Regulatory Commission
13.	CESC	Calcutta Electric Supply Company
14.	CFL	Compact Fluorescent Lamp
15.	CGS	Central Generating Station
16.	CoS	Cost of Supply/ Service
17.	COVID	Corona Virus Disease
18.	CPPs	Captive Power Plants
19.	CS	Commercial Services
20.	CWIP	Capital Work in Progress
21.	DBT	Direct Benefit Transfer
22.	DDUGJY	Deen Dayal Upadhyay Gram Jyoti Yojna
23.	DELP	Domestic efficient Lighting program
24.	DF	Distribution Franchisee
25.	Discom	Distribution Companies
26.	DPS	Delayed Payment Surcharge
27.	DS	Domestic Service
28.	DSHT	Domestic Service High Tension
29.	DSM	Demand Side Management
29.	DSTPS	Durgapur Steel Thermal Power Station
30.	DT	Distribution Transformer
31.	DTC	Distribution Transformer
32.	DVC	Damodar Valley Corporation
33.	EA/The Act	The Electricity Act 2003
34.	ECEA	Electricity Contract Enforcement Authority
35.	ERC	Electricity Regulatory Commission
36.	EV	Electric Vehicles
37.	F&A	Finance & Accounts
38.	FAS	Finance Accounting System
39.	FIs	Financial Institutions
40.	FOR	Forum of Regulators
41.	FY	Financial Year
42.	GFA	Gross Fixed Assets
43.	GoI	Government of India
44.	GW	Giga Watt
45.	HP	Horse Power

Business Plan for FY 2026-27 to FY 2030-31

Sr. No	Abbreviations	Descriptions
46.	HPO	Hydro Purchase Obligation
47.	HR	Human Resource
48.	HRIR	Human Resources and Industrial Relations
49.	HT	High Tension
50.	HTSS	High Tension Special Services
51.	IPDS	Integrated Power Development Scheme
52.	IPDS	Integrated Power Development Scheme
53.	IPP	Independent Power Producers
54.	JBVNL	Jharkhand Bijli Vitaran Nigam Limited
55.	JSEB	Jharkhand State Electricity Board
56.	JSERC	Jharkhand State Electricity Regulatory Commission
57.	JTS	Jamshedpur Town Services
58.	JUSCO	Jamshedpur Utilities & Services Company Limited
59.	JUSNL	Jharkhand Urja Sancharan Nigam Limited
60.	JUUNL	Jharkhand Urja Utpadan Nigam Limited
61.	JUVNL	Jharkhand Urja Vikas Nigam Limited
62.	KRA	Key Result Areas
63.	KV	Kilo Volt
64.	kVA	Kilo Volt Ampere
65.	kVAh	Kilo Volt Ampere Hour
66.	kW	Kilo Watt
67.	kWh	Kilo Watt Hour
68.	LF	Load Factor
69.	LT	Low Tension
70.	LTIS	Low Tension Installation Based
71.	MD	Maximum Demand
72.	MGR	Manager
73.	MOD	Merit Order Despatch
74.	MOEF	Ministry of Environment and Forest
75.	MoP	Ministry of Power
76.	MOU	Memorandum of Understanding
77.	MU	Million Units (Million kWh)
78.	MVA	Mega Volt Ampere
79.	MW	Mega Watt
80.	MYT	Multi Year Tariff
81.	NAPCC	National Action Plan of Climate Change
82.	NEP	National Electricity Policy
83.	NTP	National Tariff Policy
84.	NTPC	National Thermal Power Corporation
85.	O&M	Operation & Maintenance

Business Plan for FY 2026-27 to FY 2030-31

Sr. No	Abbreviations	Descriptions
86.	OA	Open Access
87.	PF	Provident Fund
88.	PFA	Power For All
89.	PLR	Prime Lending Rate
90.	PPA	Power Purchase Agreement
91.	PSD	Power Service Division
92.	PSS	Power Sub-Station
93.	R&M	Repair and Maintenance
94.	RE	Renewable Energy
95.	REC	Renewable Energy Certificate
96.	REDB	Rural Electrification Distribution Backbone
97.	RGGVY	Rajiv Gandhi Gram Vidyutikaran Yojna
98.	RMU	Ring Main Unit
99.	ROE	Return on Equity
100.	RPO	Renewable Purchase Obligation
101.	Rs	Rupees
102.	RTPS	Raghunathpur Thermal Power Station
103.	SAIDI	System Average Interruption Duration Index
104.	SAIFI	System Average Interruption Frequency Index
105.	SAIL	Steel Authority of India Limited
106.	SAP	System Application and Procedure
107.	SAP-IS	Systems Applications and Products - Information System
108.	SBI	State Bank of India
109.	SCADA	Supervisory control and data acquisition
110.	SERC	State Electricity Regulatory Commission
111.	SLDC	State Load Dispatch Centre
112.	SLM	Straight Line Method
113.	SUP	Supervisory
114.	SWOT	Strength, Weakness, Opportunity and Threats
115.	T&D	Transmission and Distribution
116.	TSL	Tata Steel Limited
117.	UDAY	Ujjwal DISCOM Assurance Yojna
118.	UI Charges	Unscheduled Interchange Charges
119.	UMPP	Ultra Mega Power Plant
120.	UNCCC	United Nations Framework Convention on Climate Change
121.	VEI	Village Electrification Infrastructure
122.	VMV	Vision, Mission and Value Architecture
123.	w.e.f	With effect from
124.	WM	Workman
125.	Y-o-Y	Year on Year

1. CHAPTER 1: INTRODUCTION

1.1. Background – Power Sector

- 1.1.1. Power sector is the backbone of economic development in any country. It is an enabler to foster economic development, create jobs, facilitate education, and perform other activities critical for overall development of the society. Similarly, an efficient, resilient, and financially robust power sector is essential for growth of the Indian economy. The Indian power sector has made considerable progress over the years, boosting economic growth in the country.
- 1.1.2. With the considerable growth in energy requirement and energy availability, the annual per capita energy consumption of India has grown significantly over the years. The Per capita consumption of electricity of country has reached 1538 kWh (FY2025). Though the Per capita power consumption of India has grown significantly from 780 kWh in FY 2010 to 1538 kWh in FY 2025; however, it is still on a lower side as compared to the world average of 3788 kWh (2024). The low per capita consumption of electricity in India compared to the world average presents a significant potential for growth in the demand for electricity in India in future.

1.2. All India Installed Capacity

- 1.2.1. The all India installed capacity grew from 268 GW in FY 2015 to 474 GW in September FY2025. The Indian power generation portfolio had been traditionally dominated by Central and State sector Government owned companies. However, post the Electricity Act 2003, and introduction of competitive bidding in 2006, a dramatic shift has been witnessed in private participation in power generation.

Figure 1: All India installed Capacity (GW) as on March of respective year.

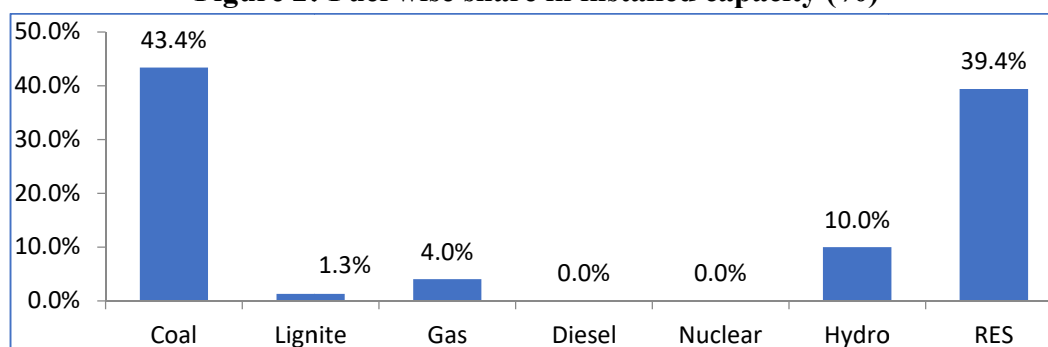


Source: CEA: Monthly Report April 2010-2025, Installed Capacity

- 1.2.2. As on Sep'2025, the total installed Generation capacity in the country was 501GW with 48.9% share of Fossil Fuel based generation plant and 51.1% Non-Fossil Based generation plant.
- 1.2.3. Generation mix is still dominated by coal with over 43.4% of the installed capacity, followed by RES (i.e. wind, solar & other RE) at 39.4%, Hydro at 10%, and rest others at

7.2% as on September, 2025. With more focus on renewable, energy (RE) going forward the share of coal in the overall generation capacity is likely to come down, losing its share to RE. In order to mitigate effect of climate change, government of India has focussed more on renewable capacity addition with target of 500 GW of non-fossil fuel capacity by 2030. (Non-fossil Includes solar, wind, biomass, small hydro, large hydro, and nuclear).

Figure 2: Fuel wise share in installed capacity (%)



Source: Central Electricity Authority, September – 2025 Executive Summary

- 1.2.4. In the past, India has experienced shortages in energy and peak power requirements. However, due to rapid addition in power generation capacity and energy efficiency measures in the last 2 decades, the reported deficit has reduced to a level of 0.1% only in FY 2025.

Figure 3: Year wise Energy Requirement, Availability & Deficit (FY 15 to FY 25)

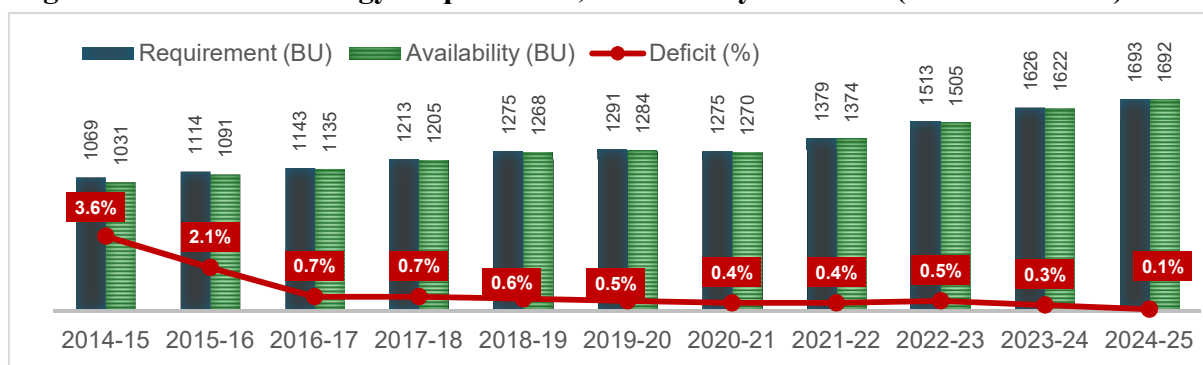
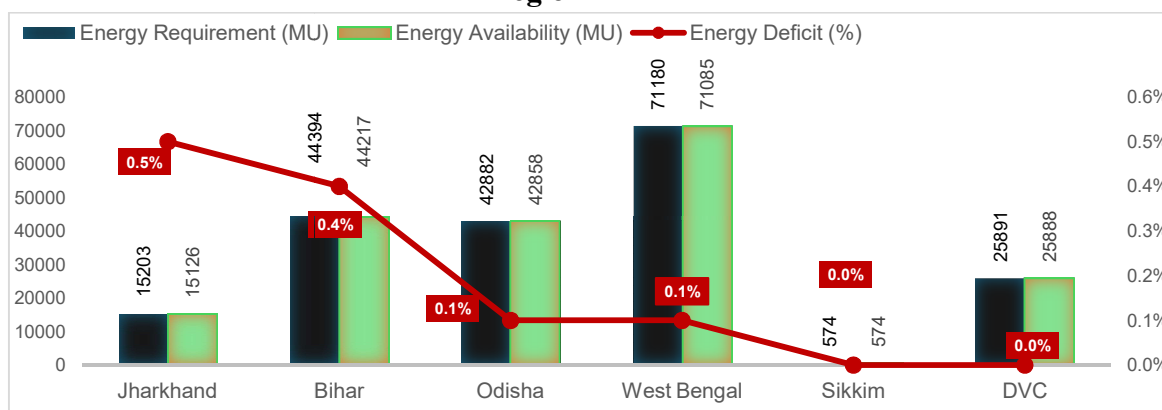
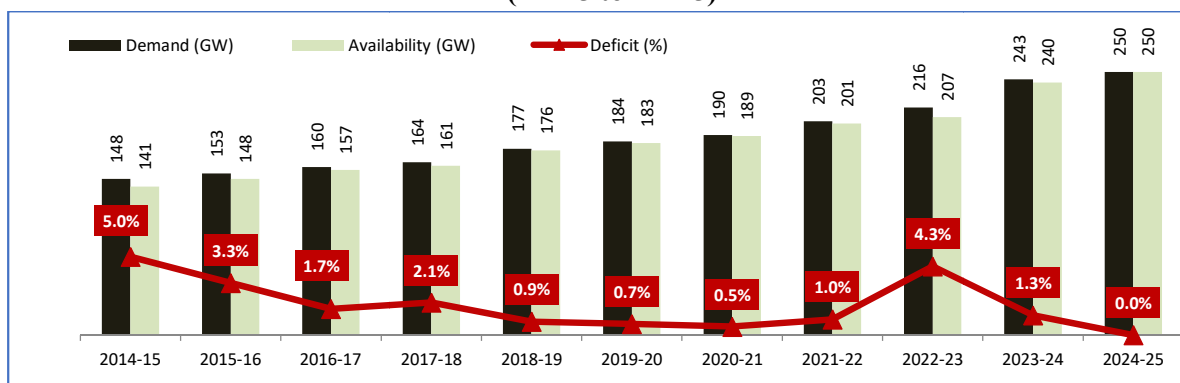


Figure 4: Energy Requirement, Availability & Deficit (FY 2024-25) for Eastern Region



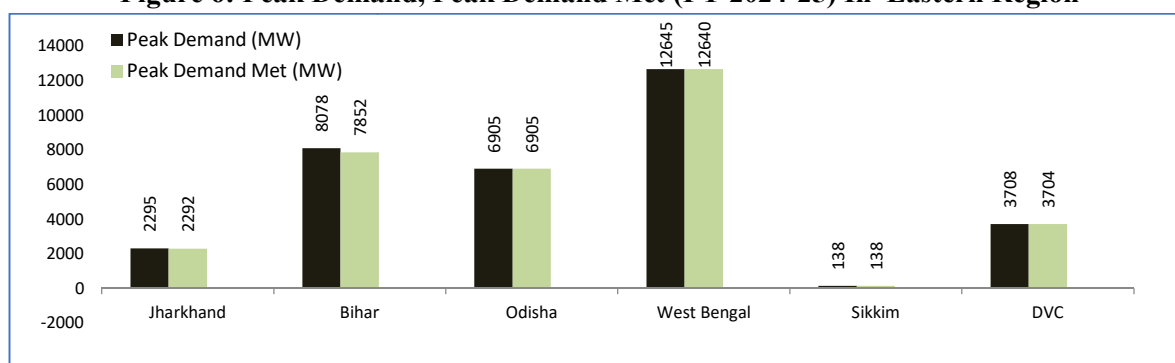
- 1.2.5. Energy demand of states in eastern region is quite low as compared to proportion of its population due to limited industrialization despite rich mineral resources, leading to overall lower level of economic activity in the region.

Figure 5: All India Year wise Peak Demand, Peak Demand Met & Peak Deficit (FY 15 to FY 25)



- 1.2.6. As on FY2024-25, there was no peak deficit in the country in spite of 66% increase in peak demand over the last 10 years. This is primarily because of large addition in generation capacity.

Figure 6: Peak Demand, Peak Demand Met (FY 2024-25) In Eastern Region



- 1.2.7. Most of the Distribution Companies in Eastern Region are also able to meet the peak demand. However financial health of the DISCOMs in eastern region also remains a challenge.

1.3. Integrated Rating of DISCOMs:

- 1.3.1. MoP released 13th Annual Integrated Rating of DISCOMs in Feb'25. The scores and grades of utilities have shown improvement in the 13th Ratings, as compared to the previous year 12th Ratings:
- 1.3.2. Grades have upgraded for 15 DISCOMs and 6 Power Departments, whereas downgraded for 13 DISCOMs from previous year.
- 1.3.3. Among 63 utilities covered in these ratings, 25 DISCOMs and 9 Power Departments saw 'Improving' trend i.e. more than 5% increase in scores from previous year.

- 1.3.4. Number of DISCOMs awarded C or lower grade (C-, D) have reduced from 21 in 12th Ratings (FY23) to 18 in 13th Ratings (FY24).
- 1.3.5. AT&C losses during the year grew from 15.3 percent to 16.3 percent, driven by 1.2% points decrease in collection efficiency.
- 1.3.6. 40 out of 63 utilities saw an improvement in their AT&C losses, with 18 utilities recording a greater than 2 percentage point improvement.
- 1.3.7. Billing Efficiency increased marginally from 86.8% to 86.9% in FY 2023-24.
- 1.3.8. Collection Efficiency decreased by 1.2% points to 96.4% . Only 22 utilities achieved Collection Efficiency at or above the upper threshold (99.5% for both DISCOMs and Power Departments).

1.4. Power Sector Reforms and Schemes in the Distribution Sector

- 1.4.1. Distribution sector is the critical link in the electricity market because revenues ultimately originate from the customer at the distribution end and provide revenue for the entire value chain. The absence of competition, unsustainable cross-subsidies, theft and pilfer of electricity, issues of non-payment and disconnection, increasing Power Purchase Cost, IT implementation issues, unavailability of desired talent/manpower, and some of the issues in policy framework and related infrastructure development have added to the woes of DISCOM's in Indian Power sector.
- 1.4.2. The reform process in the Distribution Sector started with unbundling and privatisation of Orissa State Electricity Board which was funded and guided by World Bank. Thereafter Electricity Regulatory Commissions Act (ERC Act) was enacted in 1998. The Electricity Regulatory Commission's Act primarily focused on Constitution of Regulatory Commissions empowering it with certain functions and powers. Its focus was to distance the government from the tariff determination process.
- 1.4.3. Building upon those reformatory steps, Electricity Act (EA), 2003 was enacted in order to promote competition and efficiency in electricity sector and at the same time to protect interest of consumers. Under provision of the act, Central Electricity Regulatory Commission and State Electricity Regulatory Commissions were formed at Central and State level. Further the process of tariff determination has been taken away from government control and is now decided upon by Regulatory Commission under commercial principles or by way of competitive bidding. The experience so far had been mixed due to creation of regulatory Gaps and assets with several DISCOMs, primarily due to inappropriate
- 1.4.4. The MOP has proposed certain changes in the EA, 2003 and released the Draft Electricity (Amendment) Bill, 2025 for comments. The proposed power reforms are aimed at introducing transparency and accountability to protect the interest of consumers and ensuring healthy growth of the power sector.

1.5. Draft Electricity (Amendment) Bill 2025 –

Key Provisions & Rationale in the draft bill is as flows-

A. Financial Viability

- **Mandatory Cost-Reflective Tariffs:** Regulatory Commissions must set tariffs that fully recover the actual cost of supply, ending chronic DISCOM losses (₹6.9 lakh crore as of 2025).
- **Suo Moto Tariff Determination:** If utilities delay tariff petitions, Commissions can revise tariffs on their own, ensuring annual updates and discipline.

B. Competition & Consumer Choice

- **Multiple Distribution Licensees:** Allows more than one licensee in the same area, using shared networks, to promote competition and efficiency.
- **Universal Service Obligation (USO) Reform:** State Commissions may exempt licensees from USO for large consumers (>1 MW), unlocking demand and reducing cross-subsidies.

C. Cross-Subsidy Rationalization

- **Elimination for Industry & Transport:** Cross-subsidies for manufacturing, railways, and metro railways to be fully eliminated within five years, lowering industrial tariffs and logistics costs.

D. Energy Transition & Market Mechanisms

- **Energy Storage System (ESS):** Legal definition and inclusion in the power system, supporting grid stability and renewable integration.
- **Market Development:** Commissions empowered to introduce market platforms and products (e.g., contracts for difference) to accelerate capacity addition, especially for renewables.
- **Minimum Non-Fossil Targets:** SERCs must set renewable purchase obligations not less than those prescribed by the Central Government.

E. Regulatory Strengthening

- **Accountability:** Expanded grounds for removal of Commission members (wilful violation, gross negligence), with clear procedures.
- **Timelines:** Adjudicatory matters to be disposed within 120 days.
- **Electricity Council:** New high-level body for Centre-State coordination on reforms.

F. Ease of Living & Doing Business

- **Minimum Service Standards:** Uniform benchmarks for supply quality nationwide.
- **Appeal Mechanisms:** Assessment period for unauthorized use capped at 12 months; deposit for appeals reduced to one-third, with hardship waivers.
- **Simplified Licensing:** Removal of “no objection” requirement for defense areas, reducing delays.

G. Infrastructure & Rights

- **Right of Way (RoW):** Provisions for placing and maintaining electric lines, compensation frameworks, and dispute resolution mechanisms.

- **Cybersecurity:** CEA empowered to set standards for integrated power system operations.

1.5.1. In addition to EA 2003, and Tariff Policy, 2016 which forms bedrock of Power Distribution functioning in the country, Central Government has also launched various projects/schemes for improving financial viability of distribution utilities (DISCOMs). Some of the key initiatives of Ministry of Power, for power distribution sector include Integrated Power Development Scheme (IPDS, 2014) which introduced IT and ERP systems in DISCOMs, Ujjwal DISCOM Assurance Yojana (UDAY, 2015) which provided for gradual takeover of DISCOM's debt by State Governments, Revamped Distribution Sector Scheme (RDSS, 2021) which targets nationwide deployment of prepaid smart meters along with other performance improvement measures, Electricity (Right of Consumers) Rules 2020, Electricity Late Payment Surcharge and Related Matters (LPS Rules) 2022, Green Open Access Rules 2022, Electricity Distribution (Accounts and Additional Disclosure) Rules 2024, Standard Operating Procedures for subsidy accounting, pass-through of fuel costs, resource adequacy, time-of-day tariffs and the list goes on.

1.5.2. SAIL-BSL, unlike other state owned DISCOM's has not received any grant from state/central government for various schemes and hence its tariff includes for full cost of GFA added in form of cost element like Depreciation, RoE and Interest cost.

1.6. Key Regulations of Jharkhand State Electricity Regulatory Commission :-

1.6.1. Section 86 of the Electricity Act, 2003 lays down the function of the State Commission which include issuing of distribution license, determination of tariff for supply and wheeling of electricity, regulate electricity purchase and procurement process of distribution licensees among various functions. Further under Section 181 of EA, 2003 SERCs have power to make various regulation to regulate various aspects of Power Sector in their respective states.

1.6.2. In discharge of its function, the Jharkhand State Electricity Regulatory Commission issued various Rules and Regulations applicable in the State of Jharkhand. Some of the key regulations/policies which were issued by the Jharkhand State Electricity Regulatory Commission and Govt. of Jharkhand are outlined below:

Table 1: Key Regulation's for Distribution Licensee in Jharkhand

Sr. No.	Name of the Regulations/Policies
1	Framework for Resource Adequacy Regulations, 2024- Focuses on demand forecast and planning for power procurement.
2	Guidelines for establishment of forum for redressal of Grievances of the Consumers Electricity Ombudsman and Consumer Advocacy Regulations 2020 and its 1st amendment 2022 Guidelines to the Distribution licensee in the state for establishing Forum's for redressal of consumer grievances.
3	JSERC Conduct of Business Regulations 2024- Details manner of filing petitions

Sr. No.	Name of the Regulations/Policies
	before commission and other working
4	Renewable Purchase Obligations and its Compliance, 2016 - Specifies a percentage for procurement of energy generated from such sources on the basis of total consumption of electricity within the area of a distribution licensee
5	Distribution Tariff Regulations, 2025 - Determination of Tariff for Licensees and associated companies and laying down the performance parameters
6	Open Access in Intra – Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Intra-State Open Access) Regulations, 2016 along with its 1st amendment in 2021 for access to and use of the distribution system of Distribution licensees
7	Green Energy Open-access Regulations, 2024- provide non-discriminatory Open Access for Green Energy (Renewable Energy) in State, methodology for the determination of Open Access Charges and Banking Charges etc.
8	Distribution Licensee's Standard of Performance Regulations, 2015 - Stipulates the standards of performance to be adhered by the Distribution licensee
9	Jharkhand Electricity Supply Code 2015 along with its 1 st amendment in 2018.
10	Rooftop Solar PV Grid Interactive Systems and Net /Gross Metering (up to 5 th amendment) Regulations, 2019
11	JSERC (Operation of Parallel Licensees) Regulations, 2019

1.6.3. The power sector in Jharkhand is regulated based on various regulations (including above) notified by Hon'ble Jharkhand State Electricity Regulatory Commission.

2. CHAPTER 2: SAIL-BSL: POWER DISTRIBUTION IN BOKARO COMMAND AREA

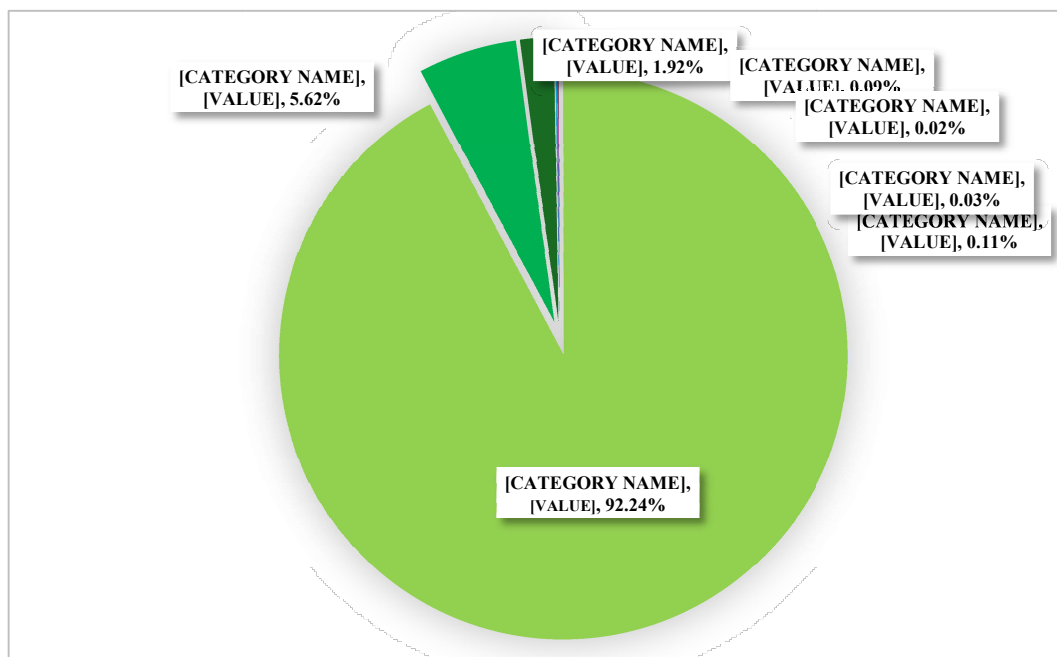
2.1. Background

- 2.1.1. 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.
- 2.1.2. 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.
- 2.1.3. The area of supply of the Petitioner, including the Bokaro Steel Plant and the Bokaro township, is the whole of the area bounded at North: River Damodar, South: River Garga, East: River Garga and West: Bokaro Steel City Railway Station
- 2.1.4. 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.
- 2.1.5. 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.
- 2.1.6. 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 thereafter by C&AG of India.
- 2.1.7. 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.
- 2.1.8. 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 A 24 of the Regulations.
- 2.1.9. 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 file Annual Performance Review report as part of annual review on actual performance as per the timelines specified in the Section A24 of these Regulations.

- 2.1.10. 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.
- 2.1.11. Based on the above premise, this Petition presents the Business Plan and Multi Year Tariff Petition depicting the projections for upcoming control period and the calculation of revenue Surplus/Gap from existing tariff & proposed tariff that should pass on to the consumers.
- 2.1.12. 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.
- 2.1.13. In the year 2024-25, total energy sales to township of SAIL-BSL was 172.80 MU to approx. 34,149 consumers respect to number of consumers of SAIL-BSL across various categories (FY 2024-25) DS LT contributes to approximately 92.24% of the overall consumer portfolio of SAIL-BSL followed by commercial category at 5.62%.

Figure 7: Category Wise No of Consumers as of FY 2024-25



2.2. Mission Vision Value Architecture of Town Administration Dept. of SAIL-BSL

- 2.2.1. The overarching purpose, fundamental values and ethical principles which govern the activities of the Town Administration Department of SAIL-BSL in extending power supply to consumers in its License Area is well captured in the Mission & Vision forms the foundation for its power distribution business planning for future years.
- 2.2.2. The Mission & Vision of Town Administration department of SAIL-BSL forms the guiding principles for Timely delivery of Quality Service at a Reasonable Price while ensuring the sustainable Growth to service more customers.

2.3. SAIL-BSL in Power Distribution in Bokaro Command Area

- 2.3.1. Several years of experience in power distribution operation and maintenance has led to development of effective and efficient processes for customer service, maintenance of Distribution infrastructure, T&D loss management, new connection, billing & collection functions which has helped SAIL-BSL in rolling out power distribution in BOKARO Command Area and achieving the following: -
- 2.3.2. **Uninterrupted Power Supply:** Since beginning SAIL-BSL has focused on providing uninterrupted power supply to its consumers, by sourcing optimal power from reliable sources and operationalizing its processes around customer service thereby helping to boost industrial production and overall economic development in its area of operations.
- 2.3.3. **Quality Power Supply:** SAIL-BSL maintains its distribution network to ensure that issues related to voltage Sag, Swell and flickers are not experienced by its customers. Meters have been installed at key interconnection points including substation and select high value consumers which also monitors harmonics along with other quality parameters.
- 2.3.4. **Customer Service:** SAIL-BSL has established 24 x 7 Call Centres, ensuring better service to its consumers round the clock. Each service request has a service level Guarantee within which service staff intends to attend to the complaint. Systematic feedback is taken for each service complaints attended.
- 2.3.5. SAIL-BSL is continuously working to lower distribution Losses helps to manage lower cost of supply and tariff: Utmost care and attention is taken by SAIL-BSL team to ensure that Distribution loss levels remain at lowest possible levels. SAIL-BSL works on technological options to reduce technical losses, whereas for non-technical losses it continuously engages with stakeholders on related issues.

SAIL-BSL is committed towards taking the best possible measures to maintain its distribution losses at a minimum possible level by adopting pro-active approach and

adopting best practices prevalent in the distribution sector in India.

2.3.6. Comparatively Lower Tariff: Historically, SAIL-BSL has always been able to maintain reasonably lower tariff levels as compared to other utilities in the area. However, with increase in power purchase cost from DVC and other associated cost, the future tariff is expected to move up. Effective management of cost by Generating companies will remain the key to lower tariff going forward. To keep the cost of power procurement low.

2.3.7. 100% metering: SAIL-BSL has a plan to adopt smart meters in retail supply system going forward. Smart meters will allow consumers to see their consumption pattern and optimize electricity bills accordingly.

2.4. Challenges and Opportunities of SAIL-BSL

2.4.1. SAIL-BSL has anticipated certain challenges and opportunities that it will encounter during the control period FY 2021-22 to FY 2025-26.

Key Challenges:

2.4.2. **Allowance of O&M Cost:** O&M Cost is directly proportional to the service levels and T&D losses maintained by the Licensee. Level of work required to maintain the service level is dependent upon the maintenance and safety practices being followed, the level of planning by local authorities in allowing work by multiple agencies in the same area, damages done by other works, etc. SAIL-BSL is undertaking its best efforts to maintain highest level of service and sustain the distribution loss level near technical limit. It puts resources to do the same which results into O&M costs..

2.4.3. **Information Technology and Other Initiatives:** Information Technology and Operation Technology is one of the key enablers to manage operations and provide service to consumers. SAIL-BSL has/will establish the IT initiatives and processes for its operations and to provide hassle free services to its valued customers. These include

—

- a) *24x7 customer complaint Management System*
- b) *SAP – ISU for Billing*
- c) *Power connections applications portal.*
- d) *SAP MM module for material management including stores.*
- e) *SAP PM module for maintenance management.*
- f) *SCADA for Monitoring and Managing Distribution System Operations.*
- g) *Automation of Ring Main units in key areas.*
- h) *Internet facility for communication to stakeholders*
- i) *Remote Meter Monitoring and Reading for high value consumers.*
- j) *Smart metering for retail consumers- pilot started.*
- k) *Multiple Payment Options on company website and Customer applications*

2.4.4. **Health and Safety Management:** The various initiatives undertaken under Health and safety management is as presented in the table below:-

- a) *Hazards identification and risk assessment,*
- b) *Safe Work Procedure for critical tasks.*
- c) *Positive Isolation / Lockout-Tag Out(LOTO)*

- d) 'Safety Observations' by all Officers.
- e) Mock Drills for identified emergency.
- f) PPE, First Aid Kit and Fire Extinguishers
- g) 100 % pre-employment medical examination,
- h) Medical facility to all employees and dependent family,
- i) Regular Health checkup of employees.

2.5. Objective of this petition

2.5.1. The Hon'ble Commission, in exercise of the powers conferred by the EA 2003, notified the Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2025.

2.5.2. Regulation 6.9 of JSERC (Terms & Conditions for Determination of Distribution Tariff) Regulations, 2025 states that:

2.5.3. "6.9 Each Licensee shall file for the Commission's approval a Business Plan approved by an authorized signatory, as per the timelines specified in Section A 24 of these Regulations. "

2.5.4. Further Regulations 6.10 and 6.11 of JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2025 states that:

Quote:

"6.10 The Business Plan shall be filed separately for the Retail Supply and Wheeling Business. As specified in Clause 6.7 of these Regulations, in the absence of segregated accounts for the two Businesses, the Licensee shall prepare an allocation statement and submit the same with the Business Plan."

" 6.11 The Business Plan shall be for the entire Control Period and shall interalia contain:

a) Capital Investment Plan for the entire Control Period commensurate with load growth, distribution loss reduction trajectory and quality improvement measures proposed in the Business Plan. The Capital Investment Plan should also include corresponding capitalisation schedule and financing plan; The Distribution Licensee shall also submit scheme-wise capital structure and cost of financing (interest on debt) and return on equity, Grant, Deposit Works, along with terms of the existing loan agreements, etc., as a part of the Capital Investment Plan;

b) Sales/Demand Forecast for each consumer category and subcategories for each year of the Control Period;

c) Power Procurement Plan based on the sales forecast and distribution loss trajectory for each year of the Control Period. The Power Procurement Plan shall also include energy efficiency, RPO fulfilment, and demand side management measures;

d) A set of targets proposed for other controllable items such as distribution losses, Billing efficiency, Collection efficiency, working capital requirement, quality of supply targets (viz., SAIFI, SAIDI and MAIFI as per the Jharkhand State Electricity Regulatory Commission (Distribution

Licensees' Standards of Performance) Regulations, 2015, and subsequent amendments), etc. The targets shall be consistent with the capital investment plan proposed by the Licensee.

e) Human Resource Plan with manpower planning including details of the estimated year wise manpower addition and retirements for the Control Period to meet the growth in demand/consumers; f) Proposals for Non-Tariff Income with item-wise description and details; g) Proposals in respect of income from Other

Business. Business Plan shall also contain the requisite information for the preceding Control Period:

Provided that requisite information for the preceding Control Period shall include year-wise audited data on Scheme-wise capital investment, distribution loss trajectory, quality improvement measures undertaken, category-wise number of consumers, connected load and sales, source-wise power procurement quantum and cost, Employee, R&M and A&G Expenses along with detailed break up and any other information used for preparing projections of various performance parameters and other components during the Control Period. In case of a new Licensee, such information is required to be submitted for the period of operations up to the start of the Control Period."

Un-Quote

- 2.5.5. In compliance to relevant provisions of Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2025, SAIL-BSL is filing instant Business Plan along with Multi Year Tariff (MYT) Petition for Control Period FY 2026-27 to FY 2030-31.

3. CHAPTER 3: PAST PERFORMANCE ANALYSIS

3.1. PAST PERFORMANCE ANALYSIS

This section elucidates SAIL-BSL's overview of power business into operational and financial performance for the previous years. A comparative analysis of the operational performance for various years in relation to sales, distribution loss, operative indices etc. are discussed herewith. All figures given for FY 2025-26 is based on actual values of first six months and estimated values for rest six months.

3.2. Number of Consumers

Historic trends in category wise number of consumers from FY 2021-22 to FY 2025- 26 is as tabulated below:

Table 2: Category-wise Consumer Nos for the period FY 2021-22 to FY 2025-26

Consumer Category	Formula	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Domestic Services - (DS-LT)	A	30847	29326	31497	28732	29033
Domestic Services – (DS-HT)	B	5	5	7	7	7
Commercial Services (CS)	C	1911	1914	1918	1920	1923
Low Tension Industrial Services (LTIS)	D	34	37	37	37	37
HTS-11 KV	E	25	24	27	30	30
HT/LT	F	656	656	656	656	656
Township Total	$G=A+B+C+D+E+F$	33478	31962	34142	31382	31686
Steel Plant	H	1	1	1	1	1
Total	$I=G+H$	33479	31963	34143	31383	31687

It can be seen that the majority of the consumer additions are in the domestic category followed by the commercial category.

3.3. Energy Sales

- 3.2.1. The category wise sales for the past 5 years are as given in the table below. HT consumers contribute maximum to the sales of SAIL-BSL. The FY 2025-26 energy sales estimates are based on H1 actuals and H2 estimates.

Table 3: Category-wise Energy Sales for the period FY 2021-22 to FY 2025-26

Consumer Category	Formula	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26 (Total)
Domestic Services - (DS-LT)	A	103.00	101.88	92.25	85.95	84.05
Domestic Services – (DS-HT)	B	4.63	6.52	8.31	7.53	7.37
Commercial Services (CS)	C	15.14	16.67	27.45	23.94	24.42
Low Tension Industrial Services (LTIS)	D	0.45	0.45	0.60	0.68	0.71
HTS-11 KV	E	7.78	9.78	10.77	26.19	27.50
HT/LT	F	61.49	61.16	29.72	28.52	26.53
Township Total	$G=A+B+C+D+E+F$	192.49	196.47	169.11	172.80	171.07

Steel Plant	H	1,151.92	1,422.23	1,135.19	1,347.89	1,347.89
Total	I=G+H	1,344.41	1,618.70	1,304.30	1,520.69	1,586.35

3.5. Contracted / Sanctioned load

- 3.5.1. With the overall growth in the economy and subsequently increasing consumer base, the contracted load also increased at a CAGR of 6.85% over the last control period.

Table 4: Category-wise Contracted/Sanctioned Loads (kVA) for the period FY 2021-22 to FY 2025-26

Consumer Category	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26 (Total)
Domestic Services - (DS-LT)	96,021	92,404	90,054	92,300	89,533
Domestic Services – (DS-HT)	4,815	4,815	5,003	5,008	5,873
Commercial Services (CS)	22,451	22,207	23,447	24,374	23,206
Low Tension Industrial Services (LTIS)	870	853	928	930	914
HTS-11 KV	8,893	7,793	10,933	11,440	11,000
HT/LT	33,308	34,163	35,359	37,486	35,079
Steel Plant	45,000	45,000	45,000	45,000	45,000

3.6. Distribution losses

- 3.6.1. Distribution Losses in electricity business primarily consist of
- Technical Losses
 - Non- Technical Losses
- 3.6.2. Technical Losses are dependent on distribution network components like conductor sizes, transformers, switching devices (Circuit breakers and isolators), fuses, length of distribution lines, loading of various lines and transformers. Historically, SAIL-BSL has a very high Distribution loss mainly due to theft in its command area. It has taken several key measures to control the same.
- 3.6.3. The Non-Technical Losses in the system comprise of losses due to following reasons
- a) Un-metered supply connections.
 - b) Error in energy meter connections
 - c) Error in meter reading and data entry.
 - d) Theft and pilferage of energy by un-authorized means
- 3.6.4. SAIL-BSL respectfully submits to the Hon'ble Commission that it has successfully rigorously working to maintain non-technical losses through efficient operational management and error-free metering and installation practices. Multiple cycles of system improvement have been undertaken by SAIL-BSL to achieve and sustain these minimal non-technical losses.
- 3.6.5. SAIL-BSL will be able to sustain low loss levels through the rigorous implementation of a robust metering system and by ensuring that there is no theft, leakage, or pilferage from its distribution network.
- 3.6.6. The trajectory of actual distribution loss over the past 5 years is as presented in the table below:

Table 5: Actual Distribution Loss for the period FY 2021-22 to FY 2025-26

Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26 (expected)
Overall Distribution Losses (%)	35.07%	36.82%	45.24%	44.80%	45%

3.6.7. SAIL-BSL has already being complying with the targets set by the Hon'ble Commission in this regard. SAIL-BSL has been committed towards taking the best possible measures to minimize its distribution losses by adopting pro-active approach and adopting best practices prevalent in the distribution sector in India. However, due to the recent expansion of the network, there has been an increasing trend in the distribution loss, of which SAIL-BSL is taking care of and commits to reduce in near future.

3.5.1. SAIL-BSL is committed to work continuously towards sourcing its power from reliable sources thereby providing 24x7 power supply to its customers at a reasonable tariff.

3.6. Analysis of Capital Expenditure

3.6.1. The Capital Expenditure of SAIL-BSL for the last 5 years is shown as below.

Table 6: Analysis of Capital Expenditure

Particulars	Formula	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26 (Estimated)	Total
Opening GFA	A	44.45	45.52	45.03	62.38	62.14	44.45
Add: Additions during the year	B	1.07	0	17.35	0.00	1.03	19.45
Less: Disposal	C	0	0.49	0.00	0.24	0.00	0.73
Closing GFA	D=A+B-C	45.52	45.03	62.38	62.14	63.17	63.17

3.6.2. Petitioner therefore submits that a capitalization of ~ **Rs. 19.45 Cr.** is expected to be done by the end of control period FY 2021-22 to FY 2025-26. The overall capex is line with the last business plan submitted before Hon'ble Commission

4. CHAPTER 4: POWER DEMAND & ENERGY SALES ASSESSMENT

Peak Demand and energy sales assessment helps the utility understand how much electricity consumers will need in the coming years. It is based on past consumption trends, growth in the number of consumers, changes in usage patterns, and expected economic and industrial activity. By analyzing these factors, the utility can estimate future demand and plan its power purchase and network strengthening accordingly. Accurate sales assessment ensures reliable supply, avoids shortages, and helps in preparing a realistic business plan.

Further, Demand and Sales Assessment is not a onetime exercise but needs to be constantly monitored against actual demand and updated for any major development or change in other external drivers like policies, regulatory developments, industrial growth, changes in specific industry segments, specific information about large project development etc.

4.1. Regulatory Provisions for Sales Projection

4.1.1. The Commission in the Regulation 6.16 of JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2025 has mentioned of business plan submission based on Sales/ Demand Projection for each consumer category, sub-category and for each tariff slab, at different voltage levels, for each year of the Control Period based on recent trends and historical growth. The relevant provisions of the JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2025 are extracted for reference as under:

Quote ...“6.16 The Licensee, in its Business Plan filings, shall forecast sales for each consumer category, sub-category and for each tariff slab, at different voltage levels, for each year of the Control Period based on recent trends and historical growth for the Commission’s review and approval along with the requisite details of category-wise and voltage-wise sales, contracted load, number of consumers, etc.

6.17 The Commission shall examine the forecasts for reasonableness and consistency on the basis of expected growth in the number of consumers, changes in pattern of consumption, seasonal variations, target distribution losses, demand for electricity in previous years and anticipated growth in the next year, and any other factor considered relevant by the Commission, and accordingly approve sales forecast with such modifications as deemed fit for each year of the Control Period.

6.18 Sales of electricity, if any, to electricity traders or another Licensee shall be separately indicated.

6.19 The Licensee shall also indicate category-wise open access consumers along with open access sales. The energy wheeled for them shall be shown separately for: Supply within its area of supply; and Supply outside its area of supply.” ... Un-Quote

4.2. Broad Methodology

4.2.1. Demand and Sales estimates is one of the key elements of power distribution licensee business plan. In this business plan demand estimation has been done for each category of consumer's separately and then it has been added to arrive at the total demand/sales.

4.2.2. The sales estimates for individual consumer category of SAIL-BSL is done in 3 broad steps:

Step 1: Projection of number of consumers for the Control Period

4.2.3. SAIL-BSL has estimated category wise additions in the number of consumers for each year of the control period. Primarily SAIL-BSL has considered the following consumer additions in each category: -

- Average of 4-year addition in the number of consumers for each year of the Control Period and to make the projection more realistic as per the previous trends and specific inputs available with SAIL-BSL, we have multiplied the same with 0.5.
- Addition in number of consumers done based on consumer specific information available to SAIL-BSL about the upcoming network expansion.
- Network extension and constraints

4.2.4. Approach taken for each category is explained separately for clarity in individual section.

Step 2: Contracted/Sanctioned load projection for each consumer category

4.2.5. SAIL-BSL has estimated the Contracted load for each consumer category. This is estimated by CAGR method of last 4-year approved/actual data i.e. FY 2021-22 to FY 2024-25.

Step 3: Sales projections for the Control Period.

4.2.6. Load factor for each category is taken as the average of last 4-year data i.e. FY 2021-22 to FY 2024-25.

4.2.7. The average load factor of the previous approved/actual date for 4 years i.e. FY 2021-22 to FY 2024-25 is multiplied with the projected contracted load and added with the previous year sales (MU) to reach to the estimated sales figure for the Control Period:

Estimated Sales (MU)

= Previous Year Sales (MU)

$$+ \frac{(\text{Incremental Load Addition in kVA}) \times 8760 \times PF \times \text{Load Factor}}{10^6}$$

*PF: Actual Power Factor

4.3.Sales and Demand Projection

Domestic Services – LT

- 4.3.1. Future consumer number projections in domestic services (LT – Urban) category is done based on the past year’s trends.
- 4.3.2. SAIL-BSL submits to the Hon’ble Commission that even though SAIL-BSL is taking all endeavours towards expanding its network, the consumer addition in this category is being limited due to relatively low cost/ free service, consumers are getting from their existing supplier. The availability of power given by present supplier is also appropriate for this consumer category and therefore even after extending network more consumers are not opting for it. Network extension works is also being limited due to low demand in this category, RoW issues, forest clearances and other regulatory/ statutory requirements.
- 4.3.3. Accordingly, SAIL-BSL has taken a considerate view on year-on-year consumer addition numbers in the Domestic service category as provided in the table below:

Table 7: Projection of number of consumers in Domestic Services - LT Category

Consumer Category	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
Domestic Services	29,185	29,338	29,492	29,647	29,802

- 4.3.4. Contracted load for DS-LT is derived by using CAGR method on the actual/approved value of last 4-year data i.e. FY 2021-22 to FY 2024-25.
- 4.3.5. Considering above, the expected number of Domestic Services-LT consumers, their contracted/sanctioned load and Energy Sales in next Control Period as tabulated below:

Table 8: Domestic Services LT – Projected Consumers, Contracted/Sanctioned Load, Energy Sales

Consumer Category	Units	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
No. Of Consumers	Nos	29,185	29,338	29,492	29,647	29,802
Contracted Load	kW	90,003	90,474	90,948	91,425	91,904
Contracted Load	KVA	1,05,885	1,06,440	1,06,998	1,07,559	1,08,122
Energy Sales	MUs	93.15	93.72	94.30	94.88	95.46

Domestic Services (DS-HT)

- 4.3.6. Energy sales to Domestic Services - HT in next Control Period has been estimated based on available specific information.
- 4.3.7. Considering the above the projected number of Domestic - HT consumers, their contracted/sanctioned load and Energy Sales as tabulated below:

Table 9: DS-HT category - Projected Consumers, Contracted/Sanctioned Load & Energy Sales

Consumer Category	Units	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
No. Of Consumers	Nos	7	7	7	7	7
Contracted Load	KVA	5,873	5,873	5,873	5,873	5,873
Energy Sales	MUs	7.95	7.95	7.95	7.95	7.95

Commercial Services

- 4.3.8. For calculating the future projections in Commercial Services category, past year's trends are taken into consideration.
- 4.3.9. Considering the above, number of Commercial consumers, their contracted/sanctioned load and Energy Sales is tabulated below:

Table 10: Commercial Services - Projected Consumers, Contracted/Sanctioned Load & Energy Sales

Consumer Category	Units	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
No. Of Consumers	Nos	1,927	1,928	1,929	1,930	1,931
Contracted Load	kW	23,248	23,260	23,273	23,285	23,297
Contracted Load	KVA	27,351	27,365	27,379	27,394	27,408
Energy Sales	MUs	36.11	36.14	36.16	36.17	36.19

Low Tension Industrial Services (LTIS)

- 4.3.10. For deriving the number of consumers in LTIS based category the no of consumer additions estimated in FY 2024-25 has been considered in FY 2025-26 and FY 2026-27. Accordingly, 1-2 nos. of consumer are estimated to be added from FY 2026-27 to FY 2030-31 in this category.
- 4.3.11. Contracted load for LTIS is derived by using load multiplier method on the last control period data.
- 4.3.12. Considering the above the projected number of LTIS consumers, their contracted load, and energy sales is tabulated below:

Table 11: LTIS category - Projected Consumers, Contracted Load & Energy Sales

Consumer Category	Units	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
No. Of Consumers	Nos	37	38	38	38	38
Contracted Load	kVA	914	939	939	939	939
Energy Sales	MUs	0.47	0.48	0.49	0.49	0.49

High Tension Services (HTS)

- 4.3.13. Consumers from FY 2026-27 to FY 2030-31 year on year has been considered same as last control period considering the constraints in distribution network and source end connectivity. In case department receives any new application; it will appraise the Hon'ble Commission during the true-up exercise. The petitioner has projected all the billing determinants parameters as realistic as possible.
- 4.3.14. Petitioner would like to submit that its current power source connectivity has only limited capacity left for large industrial loads and therefore only limited addition is considered in this category.
- 4.3.15. The average contracted load (KVA) per consumer based on actual/approved value of last 4-year data i.e. FY 2021-22 to FY 2024-25 has been computed for this category. Such contracted load is then multiplied by the no. of consumer estimated to reach to the projected contracted load for this category. The average load factor of the previous years is multiplied with the estimated contracted load and added with the previous year sales to reach to the projected sales figure for this consumer category.
- 4.3.16. Considering the above, number of Commercial consumers, their contracted/sanctioned load and Energy Sales for HTIS Category is given below:

Table 12: HTS category - Projected Consumers, Contracted/Sanctioned Load & Energy Sales

Consumer Category	Units	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
No. Of Consumers	Nos	30	30	30	30	30
Contracted Load	kVA	11,000	11,000	11,000	11,000	11,000
Energy Sales	MUs	29.46	29.46	29.46	29.46	29.46

HT/LT Consumer Category

- 4.3.17. For deriving the number of consumers in HT/LT based category the no. of consumer is kept as per the previous year's trends for projecting the consumer for FY 2026-27 to FY 2030-31 in this category.
- 4.3.18. The average contracted load (KVA) per consumer (based on the actual/approved last 4-year data i.e. FY 2021-22 to FY 2024-25) has been computed for this category. Such contracted load is then multiplied by the no. of consumer estimated to reach to the projected contracted load for this category. The average load factor of the previous years is multiplied with the estimated contracted load and added with the previous year sales to reach to the projected sales figure for this consumer category.
- 4.2.1. Considering the above the projected number of HT/LT consumers, their contracted load, and energy sales is tabulated below:

Table 13: HT/LT category - Projected Consumers, Contracted Load & Energy Sales

Consumer Category	Units	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
No. Of Consumers	Nos	656	656	656	656	656
Contracted Load	kW	35,079	35,079	35,079	35,079	35,079
Contracted Load	kVA	41,269	41,269	41,269	41,269	41,269
Energy Sales	MUs	26.80	26.80	26.80	26.80	26.80

Steel Plant Consumer Category

4.2.2. Hon'ble Commission in its earlier tariff order has considered Steel Plant as HTS-11 Category consumer. The petitioner has kept the consumer number and load same. Considering the constraints at various level, the petitioner has considered the consumption as per true-up year FY 2024-25. The details are given as below:

Table 14: LTIS category - Projected Consumers, Contracted Load & Energy Sales

Consumer Category	Units	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
No. Of Consumers	Nos	1	1	1	1	1
Contracted Load	kVA	45000	45000	45000	45000	45000
Energy Sales	MUs	1,415.28	1,415.28	1,415.28	1,415.28	1,415.28

Summary of No. of Consumers, Contracted Load (KVA) & Energy Sales (MU)

4.2.3. The summary of expected number of consumers, contracted/sanctioned load and Energy Sales in next Control Period is given below:

Table 15: Projected number of Category wise Consumers – FY 2026-27 to FY 2030-31

Particulars	Formula	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
Domestic Services - (DS-LT)	A	29,185	29,338	29,492	29,647	29,802
Domestic Services – (DS-HT)	B	7	7	7	7	7
Commercial Services (CS)	C	1,927	1,928	1,929	1,930	1,931
Low Tension Industrial Services (LTIS)	D	37	38	38	38	38
HTS-11 KV	E	30	30	30	30	30
HT/LT	F	656	656	656	656	656
Township Total	$G=A+B+C+D+E+F$	31,999	32,315	32,633	32,956	33,281
Steel Plant	H	1	1	1	1	1
Total	$I=G+H$	32,000	32,316	32,634	32,957	33,282

Table 16: Projection of Category wise Contracted Load - FY 2026-27 to FY 2030-31

Particulars	UoM	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
Domestic Services - (DS-LT)	kW	90,003	90,474	90,948	91,425	91,904
Domestic Services – (DS-HT)	kVA	5,873	5,873	5,873	5,873	5,873
Commercial Services (CS)	kW	23,248	23,260	23,273	23,285	23,297
Low Tension Industrial Services (LTIS)	kVA	914	939	939	939	939
HTS-11 KV	kVA	11,000	11,000	11,000	11,000	11,000
HT/LT	kW	35,079	35,079	35,079	35,079	35,079
Steel Plant	kVA	45,000	45,000	45,000	45,000	45,000

Table 17: Projection of Energy Sales – FY 2026-27 to FY 2030-31(MU)

Particulars	Formula	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
Domestic Services - (DS-LT)	A	93.15	93.72	94.30	94.88	95.46
Domestic Services – (DS-HT)	B	7.95	7.95	7.95	7.95	7.95
Commercial Services (CS)	C	36.11	36.14	36.16	36.17	36.19
Low Tension Industrial Services (LTIS)	D	0.47	0.48	0.49	0.49	0.49
HTS-11 KV	E	29.46	29.46	29.46	29.46	29.46
HT/LT	F	26.80	26.80	26.80	26.80	26.80
Township Total	G=A+B+C+D+E+F	194	195	195	196	196
Steel Plant	H	1,415.28	1,415.28	1,415.28	1,415.28	1,415.28
Total	I=G+H	1,609.22	1,609.84	1,610.44	1,611.03	1,611.63

4.4. Energy Requirement and Energy Balance

4.4.1. The projection for demand has been arrived by grossing up the above consumption projections with Transmission Loss and Distribution loss. The petitioner has been maintaining lower loss levels through various initiatives of network strengthening, Maintenance practices, 100% metering, Meter testing, and keeping close eye on the network to ensure that there is no theft, leakage, or pilferage from its distribution network. However, the load on the distribution network is increasing steadily, distribution network is spread over in densely populated urban region. Distribution loss levels also vary based on the loading pattern of the consumers.

4.4.2. Hence, the petitioner hereby request the Hon'ble Commission to approve the appropriate loss level in the upcoming control period. The table below depicts the Projected Energy balance for Control Period including percentage distribution loss.

Table 18: Energy requirement and Energy balance for Control Period

Particulars	1	2	3	4	5
	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
Total Energy Sales (MU)- Township	193.94	194.56	195.16	195.75	196.35
Overall Distribution Losses (%)	42%	39%	36%	33%	30%
Energy Required for Township (MU)	334.39	318.95	304.93	292.17	280.50
Energy Sales to Steel Plant	1415.28	1415.28	1415.28	1415.28	1415.28
Total Energy requirement	1749.67	1734.23	1720.21	1707.45	1695.78

4.4.3. The petitioner humbly submits that it has decided to reduce the distribution loss in phased manner i.e. 3% in every year and ultimately it will reach to 30% in FY 2030-31. It will try its best to reduce the distribution loss in its license area. The petitioner humbly submits that distribution loss targets need to be set in such a manner that efficient operations are not penalized for good reasons. The petitioner had been maintaining lower level of distribution losses and would continue to put in efforts to keep losses at

lower levels. The petitioner further submits that addition in transformer and lines is being done to ensure reliable supply and to meet additional demand of consumers.

4.4.4. The petitioner requests the Hon'ble Commission to kindly approve the appropriate loss level for upcoming control period subject to true-up.

5. CHAPTER 5: POWER PROCUREMENT PLAN

5.1. Power Purchase

5.1.1. SAIL-BSL procures power from Damodar Valley Corporation (DVC) at 132 kV level and the same source have been considered for the upcoming control period. In case requirement going more than the projections additional capacity will be tied up with approval of Hon'ble Commission.

5.1.2. The power procurement plan from above mentioned sources for the control period is tabulated below. The rationale for the same is already explained in the Business Plan petition.

Table 19: Power Procurement Plan for Control Period (in MU)

Sr No	Source of Power	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
1	DVC	1749.67	1734.23	1720.21	1707.45	1695.78

Power Purchase from DVC

5.1.3. The expected per unit derived rate for planned energy intake is given below. As per unit rate has the element of both fixed / capacity charge and energy charge, this will vary significantly based on variation in actual power taken from these units.

Table 20: Power Purchase from DVC

Particulars	Unit	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
Quantum	MU	1749.67	1734.23	1720.21	1707.45	1695.78
Power Purchase Cost	Rs. Crore	790.75	807.29	824.78	843.22	862.59
Per Unit Rate	Rs/kWh	4.52	4.66	4.79	4.94	5.09

5.1.4. The petitioner further submits that for long term power sourcing capacity allocation of generating units is done for which fixed/ capacity charges are payable even if energy is not scheduled/ taken from those units. While the above per unit rate is an overall view of expected power purchase cost from DVC; the decision to take more power will be based on the variable/energy rate of individual sources including availability of power in power exchange during outage of DVC units.

- 5.1.5. The petitioner humbly requests the Hon'ble Commission to kindly approve the estimated power purchase cost subject to true-up.

6. CHAPTER 6: CAPITAL INVESTMENT PLAN

6.1. Capital Expenditure Plans

6.1.1. SAIL-BSL is required to submit its Business Plan & Multi Year Tariff (MYT) petition for the Control Period starting April 1, 2026 (FY27) to March 31, 2031 under the provisions of the "Jharkhand State Electricity Regulatory Commission (JSERC) (Terms and Conditions for Determination of Distribution Tariff) Regulations.

6.1.2. Scheme wise Details is discussed in the following section:

A. Procurement of safety related tools and tackles

Bokaro Steel Plant (BSL) undertakes extensive maintenance, erection, and operational activities that require specialized safety-related tools and tackles to ensure safe execution of work. Certain existing tools have aged due to continuous usage and require replacement or augmentation to maintain safety standards and compliance with statutory requirements. To strengthen workplace safety and support safe maintenance practices, it is proposed to procure safety-related tools and tackles as per approved technical specifications. The procurement will be undertaken through a competitive tendering process in accordance with SAIL's procurement guidelines and applicable safety standards. The proposed procurement will enhance operational safety, reduce accident risks, ensure compliance with safety norms, and support efficient maintenance activities.

CAPEX Project Details	Upcoming Control Period											
	Capex Phasing (Rs Cr)						Capitalization Phasing (Rs Cr)					
	Total Scope	FY 27	FY 28	FY 29	FY 30	FY 31	Total	FY 27	FY 28	FY 29	FY 30	FY 31
Procurement of safety related tools and tackles	4.00		1.00	1.00	1.00	1.00	4.00		1.00	1.00	1.00	1.00

B. Procurement of 600 Nos. Air Conditioners (ACs)

Bokaro Steel Plant (BSL) requires reliable air-conditioning systems across offices, control rooms, substations, laboratories, and other critical installations to ensure proper working conditions, protection of sensitive equipment, and operational efficiency. A number of existing air-conditioning units have aged over time, resulting in reduced efficiency, frequent breakdowns, and higher maintenance costs. To maintain adequate environmental conditions and replace obsolete units, it is

proposed to procure 600 Nos. of Air Conditioners of appropriate capacity as per approved technical specifications. The procurement will be undertaken through a competitive tendering process in accordance with SAIL's procurement guidelines, ensuring compliance with energy efficiency and quality standards. The proposed procurement will improve workplace comfort, safeguard critical equipment, enhance energy efficiency, and reduce maintenance issues.

CAPEX Project Details	Upcoming Control Period											
	Capex Phasing (Rs Cr)						Capitalization Phasing (Rs Cr)					
	Total Scope	FY27	FY28	FY29	FY30	FY31	Total	FY27	FY28	FY29	FY30	FY31
Procurement of 600 nos of AC	3.15	1.58	1.58				3.15	1.58	1.58			

C. Procurement of Cables, Wiring and other material -

Bokaro Steel Plant (BSL) operates extensive electrical infrastructure across plant units, utilities, workshops, and township areas, requiring reliable supply of cables, wiring, and associated electrical materials for maintenance, replacement, and ongoing projects. Due to continuous operations, aging infrastructure, and expansion activities, periodic procurement of quality electrical materials is essential to ensure operational continuity, safety, and compliance with technical standards. The existing stock levels of cables, wiring accessories, connectors, and related materials require replenishment to avoid disruptions in preventive and breakdown maintenance activities. Timely procurement will help prevent unplanned outages, reduce safety risks arising from deteriorated wiring systems, and support ongoing capital and modernization works. It is proposed to undertake procurement of required cables, wiring, and other electrical materials through a competitive tendering process in accordance with SAIL's procurement guidelines. The scope will include supply of LT/HT cables, control cables, wiring materials, cable trays, glands, terminations, and other associated accessories as per approved technical specifications. The procurement will ensure compliance with relevant /industrial standards and quality assurance requirements.

CAPEX Project Details	Upcoming Control Period											
	Capex Phasing (Rs Cr)						Capitalization Phasing (Rs Cr)					
	Total Scope	FY27	FY28	FY29	FY30	FY31	Total	FY27	FY28	FY29	FY30	FY31
Procurement of Cables, Wiring and other material	10.50	2.50	2.00	2.00	2.00	2.00	10.50	2.50	2.00	2.00	2.00	2.00

D. Supply and Installation of 15 Nos. High Mast and 49 Nos. Mini Mast Lighting Systems

Bokaro Steel Plant (BSL) requires adequate and uniform illumination in identified plant areas, stockyards, internal roads, material handling zones, and open spaces to ensure safe operations, improved visibility, and enhanced security. Certain locations presently have inadequate lighting coverage, leading to operational constraints and safety concerns, particularly during night shifts. To address these gaps and strengthen lighting infrastructure, it is proposed to undertake supply and installation of 15 Nos. High Mast and 49 Nos. Mini Mast lighting systems at identified locations as per approved technical specifications. The scope will include foundation works, erection, installation of luminaires, cabling, control panels,

testing, and commissioning. The work shall be executed through a competitive tendering process in accordance with SAIL's procurement guidelines. The proposed installation will improve illumination uniformity, enhance operational safety, support uninterrupted plant activities, and strengthen overall security within the premises.

CAPEX Project Details	Upcoming Control Period											
	Capex Phasing (Rs Cr)						Capitalization Phasing (Rs Cr)					
	Total Scope	FY27	FY28	FY29	FY30	FY31	Total	FY27	FY28	FY29	FY30	FY31
Supply and installation of 15 nos of High mast and 49 nos of Mini mast	1.25		1.25				1.25		1.25			

E. HT Undergrounding Work

Bokaro Steel Plant (BSL) has existing overhead Power High Tension (PHT) lines in certain plant and township areas which are exposed to environmental conditions, mechanical damage, and safety risks. Overhead lines are also susceptible to faults due to weather, tree contact, and accidental interference, leading to supply interruptions and increased maintenance requirements. To enhance safety, improve reliability, and reduce fault occurrences, it is proposed to undertake undergrounding of identified PHT lines as per approved technical specifications. The scope will include laying of underground HT cables, associated civil works, jointing, termination, testing, and commissioning through a competitive tendering process in accordance with SAIL's procurement guidelines. The proposed undergrounding will improve system reliability, enhance public and operational safety, reduce maintenance needs, and ensure uninterrupted power supply to critical installations.

CAPEX Project Details	Upcoming Control Period											
	Capex Phasing (Rs Cr)						Capitalization Phasing (Rs Cr)					
	Total Scope	FY27	FY28	FY29	FY30	FY31	Total	FY27	FY28	FY29	FY30	FY31
HT Undergrounding Work	100.00		25.00	25.00	25.00	25.00	100.00		25.00	25.00	25.00	25.00

F. Replacement of complete electrics of 04 pump houses

Bokaro Steel Plant (BSL) operates multiple pump houses supporting critical water supply, cooling systems, and utility operations essential for uninterrupted plant functioning. The existing electrical systems of four pump houses have aged over time and are experiencing wear, obsolescence, and increased maintenance requirements, posing risks to operational reliability and safety. To ensure dependable performance and mitigate the risk of breakdowns, it is proposed to undertake replacement of the complete electrical systems of the identified 04 pump houses. The scope will include replacement of LT panels, switchgear, cabling, protection systems, control wiring, and associated accessories as per approved technical specifications. The work shall be executed through a competitive tendering process in accordance with SAIL's procurement guidelines. The proposed replacement will enhance operational reliability, improve safety standards, reduce failure incidents, and ensure uninterrupted utility services to the plant. The year wise CAPEX and Capitalisation is mentioned in the following Table –

CAPEX Project Details	Upcoming Control Period											
	Capex Phasing (Rs Cr)						Capitalization Phasing (Rs Cr)					
	Total Scope	FY27	FY28	FY29	FY30	FY31	Total	FY27	FY28	FY29	FY30	FY31
Replacement of complete electrics of 04 pump houses	10.97		10.97				10.97		10.97			

G. Smart metering solution at Bokaro Steel Plant

Bokaro Steel Plant (BSL) operates an extensive electrical network supplying power to production units, utilities, substations, and township areas. The existing metering infrastructure at certain locations is conventional and lacks real-time monitoring, detailed energy analytics, and remote data accessibility, limiting effective energy management and timely detection of abnormalities. To strengthen energy monitoring, improve billing accuracy, and enable data-driven decision-making, it is proposed to implement Smart Metering Solutions across identified installations. The scope will include supply, installation, testing, and commissioning of smart meters with communication modules, integration with a centralized monitoring platform, and establishment of a data management system as per approved technical specifications. The implementation will be carried out through a competitive tendering process in accordance with SAIL's procurement guidelines. The proposed solution will enhance transparency in energy consumption, improve load management, enable real-time monitoring, reduce manual intervention, and support energy efficiency and digital transformation initiatives.

CAPEX Project Details	Upcoming Control Period											
	Capex Phasing (Rs Cr)						Capitalization Phasing (Rs Cr)					
	Total Scope	FY27	FY28	FY29	FY30	FY31	Total	FY27	FY28	FY29	FY30	FY31
Smart Metering solution	35.00		12.00	12.00	11.00		35.00		12.00	12.00	11.00	35.00

H. Proposal for Erection of Additional Substation in BSL Township

Bokaro Steel Plant (BSL) undertakes extensive maintenance, erection, and operational activities that require specialized safety-related tools and tackles to ensure safe execution of work. Certain existing tools have aged due to continuous usage and require replacement or augmentation to maintain safety standards and compliance with statutory requirements. To strengthen workplace safety and support safe maintenance practices, it is proposed to procure safety-related tools and tackles as per approved technical specifications. The procurement will be undertaken through a competitive tendering process in accordance with SAIL's procurement guidelines and applicable safety standards. The proposed procurement will enhance operational safety, reduce accident risks, ensure compliance with safety norms, and support efficient maintenance activities.

CAPEX Project Details	Upcoming Control Period											
	Capex Phasing (Rs Cr)						Capitalization Phasing (Rs Cr)					
	Total Scope	FY27	FY28	FY29	FY30	FY31	Total	FY27	FY28	FY29	FY30	FY31
Erection of Additional Substation	1.00		1.00				1.00		1.00			

in BSL Township													
-----------------	--	--	--	--	--	--	--	--	--	--	--	--	--

I. Chemical Earthing –

Bokaro Steel Plant (BSL) operates extensive electrical installations across production units, substations, utilities, and township areas where effective grounding systems are critical for personnel safety, equipment protection, and system reliability. Over time, conventional earthing systems may deteriorate due to soil resistivity variations, corrosion, and aging, leading to higher earth resistance and potential safety risks. To enhance grounding performance and ensure compliance with applicable electrical safety standards, it is proposed to implement a Chemical Earthing System at identified locations within the plant and associated facilities. Chemical earthing provides stable and low earth resistance, improved corrosion resistance, longer service life, and better fault current dissipation, particularly in areas with high soil resistivity. The scope will include survey and testing of existing earthing systems, identification of critical locations, supply and installation of chemical earthing electrodes with backfill compounds, interconnection with existing grid, testing, and commissioning as per approved technical specifications. The work will be executed through a competitive tendering process in accordance with SAIL's procurement guidelines. Implementation of chemical earthing will improve system safety, reduce risk of equipment damage, enhance lightning and fault protection, and support reliable plant operations. The year wise CAPEX and Capitalisation is mentioned in the following Table –

CAPEX Project Details	Upcoming Control Period											
	Capex Phasing (Rs Cr)						Capitalization Phasing (Rs Cr)					
	Total Scope	FY27	FY28	FY29	FY30	FY31	Total	FY27	FY28	FY29	FY30	FY31
Chemical Earthing	1.82	1.82					1.82	1.82				

J. Procurement of 60 nos. of 800KVA Distribution transformer

Bokaro Steel Plant (BSL) operates an extensive power distribution network catering to production units, utilities, and township areas. Certain existing distribution transformers have aged over time and are operating under stressed conditions due to load growth, resulting in increased risk of breakdowns, higher technical losses, and potential supply interruptions.

To ensure reliable power distribution, meet growing load demand, and replace deteriorated units, it is proposed to procure 60 Nos. of 800 kVA Distribution Transformers as per approved technical specifications. The procurement will be undertaken through a competitive tendering process in accordance with SAIL's procurement guidelines, ensuring compliance with relevant BIS and industrial standards. The proposed procurement will strengthen the distribution network, improve voltage stability, reduce failure incidents, minimize downtime, and enhance overall operational reliability of the plant and associated facilities.

CAPEX Project Details	Upcoming Control Period											
	Capex Phasing (Rs Cr)						Capitalization Phasing (Rs Cr)					
	Total Scope	FY27	FY28	FY29	FY30	FY31	Total	FY27	FY28	FY29	FY30	FY31

Procurement of 60 nos. of 800KVA Distribution transformer	8.10	8.10						8.10	8.10				
---	------	------	--	--	--	--	--	------	------	--	--	--	--

K. Procurement of 60 nos. of LT Distribution Panel

Bokaro Steel Plant (BSL) operates an extensive low tension (LT) power distribution network supporting plant operations, utilities, and township infrastructure. Several existing LT Distribution Panels have aged over time and are subject to wear, overloading, and obsolescence, resulting in increased maintenance requirements and potential safety and reliability concerns. To enhance system reliability, ensure safe power distribution, and support ongoing operational and load requirements, it is proposed to procure 60 Nos. of LT Distribution Panels as per approved technical specifications. The procurement will be carried out through a competitive tendering process in line with SAIL's procurement guidelines and applicable standards. The proposed procurement will improve operational safety, reduce breakdown incidents, enhance system stability, and ensure uninterrupted power supply across critical installations. The year wise CAPEX and Capitalisation is mentioned in the following Table –

CAPEX Project Details	Upcoming Control Period											
	Capex Phasing (Rs Cr)						Capitalization Phasing (Rs Cr)					
	Total Scope	FY27	FY28	FY29	FY30	FY31	Total	FY27	FY28	FY29	FY30	FY31
Procurement of 60 nos. of LT Distribution Panel	3.60	3.60					3.60	3.60				

L. Procurement of Aerial Working Platform

Bokaro Steel Plant (BSL) undertakes regular maintenance, and repair works at elevated locations across plant units, substations, lighting systems, workshops, and other infrastructure. At present, such activities are largely dependent on conventional methods such as scaffolding and ladders, which are time-consuming, manpower-intensive, and involve safety risks. To enhance safety, improve operational efficiency, and ensure timely execution of maintenance activities at height, it is proposed to procure an Aerial Working Platform (AWP) with suitable reach and load capacity as per approved technical specifications. The equipment will facilitate safe and efficient access to elevated work areas and reduce dependency on temporary structures. The procurement shall be carried out through a competitive tendering process in accordance with SAIL's procurement guidelines. The proposed acquisition will improve workplace safety, reduce maintenance turnaround time, enhance productivity, and ensure compliance with safety standards. The year wise CAPEX and Capitalisation is mentioned in the following Table –

CAPEX Project Details	Upcoming Control Period											
	Capex Phasing (Rs Cr)						Capitalization Phasing (Rs Cr)					
	Total Scope	FY27	FY28	FY29	FY30	FY31	Total	FY27	FY28	FY29	FY30	FY31
Procurement of Aerial Working	1.22	1.22					1.22	1.22				

Platform													
----------	--	--	--	--	--	--	--	--	--	--	--	--	--

M. Smart Street Lighting Solution at BoSupply and Installation of 15 Nos. High Mast and 49 Nos. Mini Mast Lighting Systems

Bokaro Steel Plant (BSL) requires adequate and uniform illumination in identified plant areas, stockyards, internal roads, material handling zones, and open spaces to ensure safe operations, improved visibility, and enhanced security. Certain locations presently have inadequate lighting coverage, leading to operational constraints and safety concerns, particularly during night shifts. To address these gaps and strengthen lighting infrastructure, it is proposed to undertake supply and installation of 15 Nos. High Mast and 49 Nos. Mini Mast lighting systems at identified locations as per approved technical specifications. The scope will include foundation works, erection, installation of luminaires, cabling, control panels, testing, and commissioning. The work shall be executed through a competitive tendering process in accordance with SAIL's procurement guidelines. The proposed installation will improve illumination uniformity, enhance operational safety, support uninterrupted plant activities, and strengthen overall security within the premises. The year wise CAPEX and Capitalisation is mentioned in the following Table –

CAPEX Project Details	Upcoming Control Period											
	Capex Phasing (Rs Cr)						Capitalization Phasing (Rs Cr)					
	Total Scope	FY27	FY28	FY29	FY30	FY31	Total	FY27	FY28	FY29	FY30	FY31
Supply and installation of 15 nos of High mast and 49 nos of Mini mast	2.500	0.500	0.500	0.500	0.500	0.500	2.500	0.500	0.500	0.500	0.500	0.500

- 6.1.3. The petitioner humbly requests the Hon'ble Commission to kindly approve the estimated Capex and capitalisations subject to true-up.

Table 21: Capex Phasing and Capitalisation for FY 2026-27 to FY 2030-31

Particulars	Capex Phasing Scheme (Rs. Cr.)						Capitalisation (Rs. Cr.)					
	Total Scoping	FY 26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	Total Scoping	FY 26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31
Procurement of safety related tools and tackles	4.00		1.00	1.00	1.00	1.00	4.00		1.00	1.00	1.00	1.00
Procurement of 600 nos of AC	3.15	1.58	1.58				3.15	1.58	1.58			
Procurement of cables and wires	10.50	2.50	2.00	2.00	2.00	2.00	10.50	2.50	2.00	2.00	2.00	2.00
Supply and installation of 15 nos of High mast and 49 nos of Mini mast	1.25		1.25				1.25		1.25			
HT Undergrounding	100.00		25.00	25.00	25.00	25.00	100.00		25.00	25.00	25.00	25.00
Replacement of complete electrics of 04 pump houses	10.97		10.97				10.97		10.97			
Smart Metering solution	35.00		12.00	12.00	11.00		35.00		12.00	12.00	11.00	
Erection of additional substation in BSL Township	1.00		1.00				1.00		1.00			
Chemical Earthing	1.82	1.82					1.82	1.82				
Procurement of 60 nos. of 800KVA Distribution transformer	8.10	8.10					8.10	8.10				
Procurement of 60 nos. of LT Distribution Panel	3.60	3.60					3.60	3.60				
Procurement of Aerial Working Platform	1.22	1.22					1.22	1.22				
Supply and installation of 15 nos of High mast and 49 nos of Mini mast	1.25	1.25					1.25	1.25				
Total	181.86	20.07	54.80	40.00	39.00	28.00	181.86	20.07	54.80	40.00	39.00	28.00

7. CHAPTER 7: HUMAN RESOURCE PLAN

7.1. HR Philosophy

The manpower plan for the Licensee is intrinsically linked to the overall operation and maintenance (O&M) requirements necessary to uphold service levels and operational parameters. SAIL-BSL recognizes its employees as its most valuable asset, as they are responsible for delivering reliable electricity distribution services by operating and maintaining the physical infrastructure deployed across the licensed area.

The distribution network of the Licensee spans diverse geographies, including urban clusters and remote villages, making it susceptible to multiple external interferences such as public movement, vehicular traffic, and environmental factors, damage of utilities by other agencies, in addition to adverse weather conditions. These challenges necessitate a robust and well-trained workforce capable of ensuring uninterrupted operations. It also requires dedicated patrolling of route and assets deployed in the field.

The Licensee commenced its operations in 2004. Recruitment has been carried out gradually to meet the dual objectives of network extension and O&M of existing assets. However, the availability of skilled and competent manpower in the region has remained a persistent challenge, impacting the pace of workforce augmentation.

During the initial years, employees were required to perform multiple functions, demanding multi-disciplinary skills and knowledge. Over the last 22 years, the Licensee's operations have expanded, thereby increasing the complexity of network management.

Despite continuous efforts to recruit, the Licensee has faced limitations in sourcing skilled manpower, resulting in reliance on contract workforce for certain basic O&M activities. Consequently, historical manpower levels have remained below optimal requirements, warranting a comprehensive review of future manpower planning.

This shortfall was primarily due rescheduling of some of the capital schemes and associated manpower additions and availability of suitable candidates to work in the given location.

Further, during the last control period, the Hon'ble Commission introduced regulations on Resource Adequacy Framework, necessitating the creation of a dedicated "Power Management Cell" for power sourcing and procurement. The Petitioner has initiated this cell with one full-time member and some part-time members. and plans to strengthen this team with round-the-clock staffing to optimize power purchase and cost.

Looking ahead, manpower addition is planned to address:

- New network expansion, land acquisition, RoW management and subsequent O&M and customer service for additional consumers.
- New responsibilities arising from regulatory changes, site conditions, ageing assets, cyber security, GIS implementation, digitization of processes, and disconnection/reconnection activities.

Additionally, the Licensee anticipates employee superannuation during the upcoming period, requiring timely recruitment to maintain operational continuity.

7.2. Existing Manpower details of SAIL-BSL

7.2.1. At present SAIL-BSL operates with three types of manpower:

- Permanent Employee in managerial cadre (Degree/Diploma/Graduate/MBA) – Employees under this cadre are directly engaged with day-to-day function of operation, maintenance, application processing & execution of new connection, execution of capex, metering, regulatory function & general management etc. In addition, few persons work for support service-related jobs like HRIR, Procurement, Finance, Administration etc.
- Permanent Employee in role of Supervisor (Diploma/ ITI) - Employees under this cadre mainly supervise work for day-to-day job for maintenance activity and do system operations.
- Permanent Employee in role of Electrician/Lineman/Technical assistant (ITI) - Employees under this cadre mainly work for day-to-day job for operation & maintenance activity.
- Contract Employee on Vendor's role –Employees under this role are engaged through vendor on contract for various works in line, substation, customer service, security, cleaning etc.

7.2.2. Following Section details the retirements and additional manpower requirement arising out of new functional requirement, execution of capital projects/ new network development and its subsequent O&M.

7.3. Retirements

7.3.1. During the next control period approx. **8 employees** will superannuate. Vacancy arising of these retirements need to be filled up accordingly.

7.4. Additional Manpower requirement

7.4.1. Area wise additional manpower requirement and its broad rationale is provided in subsequent section.

7.4.2. **Manpower for 24*7 shift operations:** Managing 24x7 power supply requires **3 shifts** manning of the area with competent engineers and staffs to monitor the load flow, performing routine inspection, operations and attending to breakdowns and customer complaints related to outage of power supply, voltage variations/flickering, sparks, electricity leakage, electric shock, no power complaints etc.

Over the year, between FY22 to FY26, there had been significant increase in network, number of consumers and related 24x7 service requirements in case of any breakdowns/defects in the system. These breakdown / defects arise arising out of damage of utilities by other agencies, overloading by consumers, reason of nature (windstorm, thunder/lightning etc.), ageing of equipment and other reasons. 24x7 service customer service request has almost increased by **50 %** over the last 5 years.

Currently all service requests of the service area are being managed primarily through one centre in a shift and calling off-duty people from home to assist them in cases where more resource is needed. On many occasions, people form maintenance and general and off shift are also required to attend to these calls.

In view of the above, there is a requirement to have two teams to attend to 24x7 service call requests from two different locations. The additional manpower **of 5** for the same is proposed to be deployed in the coming control period.

7.4.3. Power Management including Power purchase/sell from power exchange:

Hon'ble Commission has notified Jharkhand State Electricity Regulatory Commission (Framework for Resource Adequacy) Regulation, 2024 which mandate establishing a planning cell for Resource adequacy related to power procurement planning and around the clock dedicated cell for power purchase/sell in real-time, and to undertake intra-day, day- ahead, week ahead power procurement through Power Exchanges or any other means. In future, SAIL-BSL may enter into Schedule mode of power purchase form DVC. Therefore, the dedicated cell for power procurement planning, power purchase/sell in real-time, and undertaking intra-day, day- ahead, week ahead power procurement through Power Exchanges needs to be strengthened and made with full time members to ensure effective operations. In view of the above, the additional manpower **of 2** for the same is proposed to be deployed in the up-coming control period.

7.4.4. Non-Payment Disconnection: Disconnection-Reconnection of existing consumers is being carried out at field and system by a team of experts. It is proposed to strengthen this group by **3** as the existing team is not able to meet the optimum level of disconnection requirement.

7.4.5. Distribution Network Operation and Maintenance: This constitutes Operation & maintenance of distribution network is for 11 kV RMU, LBS, ABS, 11 kV overhead & underground Line, 11/0.4 kV Distribution Transformer, LT overhead & underground Line, Feeder pillars & LT Distribution box etc. Further in the upcoming control period new distribution network in existing as well as new areas are planned to meet the load growth and enhance reliability. The existing team is maintaining HT Network including RMU, distribution transformer and Feeder pillar etc. with current workforce. However, there is need of improvement in schedule inspection and maintenance of LT Line, Junction boxes & poles to ensure reliable operation and public safety. In addition, utility detection and cable protection team also need to be strengthened due to increase operational area as well increased work other agencies in same cable corridor area. In view of the

above, additional manpower **of 7** for the same is proposed to be deployed in the up-coming control period.

- 7.4.6. **Electrical Protection & Testing:** The testing team performs pre-commissioning testing of all HV equipment like transformer, cable, breaker and protection system and schedule preventive testing, protection trial and scheme checking of HV substations, Cable fault identification etc. While the basic test for checking health of transformer is performed during annual maintenance of the transformer. However, there is need of additional special test on transformer which are more than 10 years old. Moreover, testing of protection relay for RMU could not be performed. To strengthen the periodic testing of distribution transformer and relays of 11 kV RMU, additional manpower is required. In view of the above, additional manpower **of 2** for the same is proposed to be deployed in the up-coming control period.
- 7.4.7. **Safety:** Safety professionals keep a overall eye on the safety practices being followed by the employee in their operations. They assist in Hazard evaluation, Safe working procedures, implementation of permit to work systems, Lockout Tag out Systems, reporting of unsafe act and condition and implementation of safety process.
- 7.4.8. Currently, most of these responsibilities are managed by the professional at SAIL-BSL along with line managers. As activities and area both has increased and will further increase in upcoming control period, in view of the above, additional manpower **of 2** for the same is proposed to be deployed in the up-coming control period.
- 7.4.9. **Information Technology (IT):**
Billing applications need to be strengthened. In view of the above, additional manpower **of 2** for the same is proposed to be deployed in the up-coming control period.
- 7.4.10. **Electrical Project & Construction (EP&C):** In the upcoming control period several capital schemes have been planned and proposed based on key priorities such as Safety, Sustenance, Reliability, Process Improvement, Technology Adoption, and Growth. Most of these schemes are brown filed in nature which demand focused supervision for ensuring safety, quality & timeliness of the scheme. In view of the above, additional manpower **of 2** for the same is proposed to be deployed in the up-coming control period.
- 7.4.11. **Metering Functions:** Metering function is pivotal to the utility as it records energy, keeps its account and contain losses by reducing theft and pilferages which benefits the utility and the consumer both. Additional manpower **of 4** for the same is proposed to be deployed in the up-coming control period.

7.4.12. **Vigilance, Theft, and Inspection:** Supply code Regulation of Hon'ble JSERC mandates authorized officers/assessing officers for doing inspection for theft/unauthorized uses of electricity and the assessment thereafter. This activity is essential to ensure a healthy system and to ensure that the cost of dishonest people is not borne by honest consumer.

It requires regular site visits based on meter data analysis by a competent team of engineers, supervisors and other staff in addition to visits based on specific information from other sources.

7.4.13. Based on some the incidents and meter data analysis trend, In view of the above, additional manpower **of 6** for the same is proposed to be deployed in the upcoming control period.

The petitioner submits that even though area wise manpower has been deliberated above, the same may undergo change because of changing requirement in the field and other unforeseen reasons.

7.5. The Overall Manpower plan

7.5.1. Considering the above, the summary of additional Manpower plan for the control period is given below-

Table 22: Total Additional Manpower recruitment proposed

Sr. No.	Functions	Upcoming Control Period					Total
		FY27	FY28	FY29	FY30	FY31	
1	Manpower for 24*7 shift operations	1		1	2	1	5
2	Power Management including Power purchase/sell	1	1				2
3	Non-Payment Disconnection		1	1		1	3
4	Distribution Network Operation and Maintenance	1	2	1	2	1	7
5	Electrical Protection & Testing		1			1	2
6	Safety	1				1	2
7	Information Technology	1			1		2
8	Electrical Project & Construction (EP&C)			1		1	2
9	Metering Functions		2		1	1	4
10	Vigilance & theft	2	1	1	1	1	6
11	Total	7	8	5	7	8	35

7.5.2. For the **8 person**, who will be superannuating during the next MYT period, manpower needs to be taken with appropriate level of overlapping period anywhere between 3 months to 12 months depending upon the nature of work. They are not included in the summary table as this will be a replacement.

7.6. Training & Performance Appraisal

7.6.1. The training and developmental need of the employee's area assessed, and employees are provided requisite opportunity for improving their skill and

competence level. Officers are also provided assistance of Development Centres conducted by external expert consultants, encouraged to participate in national conferences, subject matter discussions, and Managerial Training Programs to enhance their skills. Employees are encouraged to participate in cross-functional teams and taskforces, acquire more advanced knowledge through participation in various seminars and workshops. For the identified developmental needs employees are sent to best in class training institutes. Training and development is thus a continuous process at SAIL-BSL is helping its workforce to perform better.

- 7.6.2. Performance Appraisal at SAIL-BSL is done through well-established PMS (Performance Management Systems) which encompasses all areas of work of an individual employee.
- 7.6.3. During the process employee also gets an opportunity for self-evaluation of Strengths and weakness and thereby setting goals for the future.
- 7.6.4. During the Control Period FY 2026-27 to FY 2030-31, the Petitioner plans to provide training and skill development activities of minimum five (5) man days / employee / year for each category of employees.
- 7.6.5. The HR processes of SAIL-BSL continuously strives to staff right person for right job, provide opportunity for learning, development and growth to its employees and enable a system where each employee is empowered to deliver its work efficiently.
- 7.6.6. The Petitioner submits that the Business Plan has been prepared based on several inputs and assumptions taken from various sources, past experiences and collective experience of SAIL-BSL team. Even though utmost care is taken to project the key parameters and values in normal course of development the real value may differ reasonably from the projections.
- 7.6.7. The petitioner requests the Hon'ble Commission to kindly consider this submission for approval of the Business Plan.

-----X-----X-----X-----