Bharath Institute of Higher Education and Research
(Deemed to be University)
Office of the Dean of Engineering,
Sree Balaji Institute of Science and Technology (SBIST),
7, Works Road, Chromepet, Chennai – 600044

SBIST/MAINT/REC/2025-26/003 Date: 01 October 2025

OFFICE ORDER

1. INTRODUCTION

Sree Balaji Institute of Science and Technology (SBIST) is provided with a stable and reliable electrical power supply through the authorized State Electricity Board grid system. The institution ensures adequate electrical infrastructure to support academic, laboratory, research, administrative, and campus facilities in compliance with AICTE infrastructure norms.

The electrical system is designed to meet present load requirements with provision for future expansion in alignment with planned academic growth.

2. SOURCE OF ELECTRICAL POWER SUPPLY

The institution receives primary electrical power from the authorized State Electricity Distribution Authority through the regional grid network.

Key Details:

- Incoming power through dedicated service connection
- Sanctioned Load: _____ kVA
- Connection Type: HT / LT
- Consumer Number: _____
- Tariff Category: Educational Institution

Power is received at the Main Distribution Board (MDB) and distributed safely across campus.

3. ELECTRICAL DISTRIBUTION SYSTEM

The campus distribution architecture includes:

- Main Distribution Board (MDB)

- Sub-Distribution Panels (SDPs)
- Laboratory-specific Distribution Panels
- Isolated Power Lines for critical infrastructure
- Comprehensive Earthing & Grounding System

The system is designed with:

- Proper load balancing
- MCB / MCCB / ELCB protection
- Surge Protection Devices
- Voltage Stabilizers (where required)
- Lightning Protection System

All installations comply with statutory electrical safety standards.

4. CONNECTED LOAD & CAPACITY

Estimated Load Requirement (Phase 1 – 300 Intake)

Component	**Approx Load (kW)**
Classrooms (Lighting & Fans)	40
Laboratories	120
Computer Labs	80
Library	15
Admin Block	20
Auditorium	30
Miscellaneous	25
Total Estimated Load	**330 kW (Approx.)**

Recommended Sanctioned Load: **350–400 kVA**

The electrical infrastructure adequately supports:

- Smart classrooms
- Advanced laboratories
- Server & networking systems
- Air-conditioning (where applicable)
- Campus utilities

Provision exists for load augmentation as future departments are added.

5. BACKUP POWER & GENERATION SYSTEM

To ensure uninterrupted academic and research operations:

5.1 Diesel Generator (DG Set)

- Capacity: _____ kVA
- Installed in dedicated, ventilated generator room
- Acoustic enclosure provided
- Pollution Control Compliance obtained

5.2 UPS & Critical Backup

- 200 kVA UPS system for critical infrastructure
- Online UPS for Server Room
- Emergency lighting backup
- Voltage fluctuation protection

Essential systems receive uninterrupted power supply during grid failure.

6. POWER QUALITY & ELECTRICAL SAFETY MEASURES

To ensure safety and reliability:

✓ Proper Earthing System

✓ Lightning Arresters

✓ Fire-resistant wiring

✓ CO_2 Fire Extinguishers near panels

✓ Surge Protection

✓ Circuit breakers for all labs

✓ Periodic inspection & preventive maintenance

Certified electricians and technical staff monitor the system.

7. ELECTRICAL PANEL ROOM STANDARDS

- Restricted access
- Rubber insulation mats
- Insulated tools
- Danger signage
- Lockable panels
- Fire extinguisher availability

Panel rooms comply with safety norms and are periodically inspected.

8. PREVENTIVE MAINTENANCE SCHEDULE

Activity	Frequency
Earthing Check	Every 6 Months
DG Servicing	Quarterly
Panel Inspection	Monthly
Wiring Inspection	Annually
Transformer Oil Testing (if applicable)	Annually

Maintenance logbook is maintained and verified.

9. ELECTRICAL EMERGENCY RESPONSE PLAN

In case of:

- Power failure
- Short circuit
- Electrical fire
- Transformer malfunction

Standard Procedure:

1. Switch off main panel immediately.
2. Inform Electrical Engineer / Maintenance Officer.
3. Evacuate affected area.
4. Use CO_2 extinguisher if required.
5. Inform Fire & Rescue Services if necessary.

Emergency contact numbers are displayed near electrical panels.

10. ENERGY MANAGEMENT PRACTICES

SBIST promotes sustainable energy practices through:

- LED lighting systems
- Energy-efficient laboratory equipment
- Scheduled maintenance
- Power factor correction measures
- Energy consumption monitoring
- Future solar integration plan
- Annual Energy Audit

Energy conservation awareness is promoted among students and staff.

11. REGULATORY COMPLIANCE

The Electrical Grid Power Supply System complies with:

- AICTE Infrastructure Norms
- NAAC Criterion 4 (Infrastructure & Learning Resources)
- NBA Laboratory Infrastructure Requirements
- Electricity Act, 2003
- State Electricity Board Safety Regulations

All required statutory certificates are maintained in the compliance file.

12. RESPONSIBILITY MATRIX

Sl. No.	Designation	Responsibility
1	Dean	Overall Supervision
2	Administrative Officer	Infrastructure Oversight
3	Electrical Engineer	Technical Monitoring
4	Maintenance Supervisor	Daily Maintenance
5	Safety Officer	Compliance Audit

13. CONCLUSION

The Electrical Grid Power Supply system at SBIST ensures stable, sufficient, and safe electricity distribution across the campus. The infrastructure supports uninterrupted academic and research activities, protects institutional assets, and meets all statutory and regulatory requirements.

The institution remains committed to upgrading and strengthening its electrical infrastructure to meet evolving academic, technological, and sustainability needs.

ANNEXURES

ANNEXURE I – ELECTRICAL LOAD CALCULATION SHEET

Area	Connected Load (kW)	Demand Load (kW)	Remarks

ANNEXURE II – PREVENTIVE MAINTENANCE LOG FORMAT

Date	Activity	Location	Observations	Action Taken	Verified By

ANNEXURE III – DG SET OPERATION LOG

Date	Start Time	Stop Time	Units Generated	Diesel Used	Operator Signature

ANNEXURE IV – ELECTRICAL SAFETY AUDIT CHECKLIST

Parameter	Compliant (Yes/No)	Remarks
Proper Earthing		
Lightning Arrestor Installed		
Panel Room Secured		
Fire Extinguisher Available		
Wiring Condition		
DG Maintenance Record		

TamilNadu Generation and Distribution Corporation Ltd.

High Tension Bill (Provisional) for the Month of April 2024

TANGEDCO CIN No: GST No:33AADCT4784E1ZC

HSN : 27160000 SAC : 996912

**** Electrical Energy & Distribution Services are exempted under GST ****

To:			
	SRI LAKSHMI AMMAL EDUCATIONAL TRUST	Service No.	099094010519
	NO.7, WORKS ROAD,NEW COLONY,CHROMEPET, CHENNAI	Bill No.	H4010519042411
		Date of Bill	03-May-24
		Due Date	09-May-24
		Tariff App. / Bld.	HT III / HT III
	Chengalpattu - 600044	GST No :	111111111111111

Permitted MD :	3000 KVA	Supply Voltage:	11 KV	Tr. CAP.	0 KVA

DETAILS	RATE	CONSUMPTION	AMOUNT (Rs.)
1. Industrial Consumption	8.7 per unit	622943	54,19,604.10
2. Peak Hour Consumption	2.18 per unit	202452	4,40,333.10
3. Night Hour Consumption (5% Rebate)	0.435 per unit	144120 (-)	62,692.20(-)
4. Lavish illumination charges (Entire consumption)	0.435 per unit		0.00
5. Green Tariff charges			0.00
6. Quarters Consumption	0 per unit	0	0.00
7. Commercial Consumption	9.7 per unit	3300	32,010.00
8. Temp. Supply Consumption	12.25 per unit	5350	65,537.50
9. Total Energy Charges			58,94,792.50
10. Demand Charges	562 per KVA	2700	15,17,400.00
11. Total Demand and Energy Charges			74,12,192.50
ADD			
12. Meter Rent(Including 9 %SGST&9 %CGST)			4,460.40
13. Belated Payment Surcharge for Govt service @0.5%			
14. Levy for exceeding con. demand	0 per KVA	0	0.00
15. Compensation Charges for low PF			0.00
16. Harmonics Compensation Charges (Incl. 18% GST)			0.00
17. Cross Subsidy Surcharge (Incl. 18% GST)			0.00
18. Electricity Tax			3,43,902.08
19. Additional Surcharge (Incl. 18% GST)			0.00
20. Adjustment Charges(Affecting) (Incl. 18% GST)			0.00
Rounding off			- 0.08
21. Assessment Amount			77,60,555.00
22. Adjustment Charges(Not Affecting) (Incl. 18% GST)			0.00
23. SD Refund amount / ASD amount if any			
24. Self Generation Tax			0.00
25. Self Generation Tax for Diesel Genset 0.10 /unit			0.00
26. E Tax on consumption from IEX			0.00
Net Total			77,60,555.00
Less: Amount Deductable due to Court Case			0.00
Less: Amount Deductable due to Advance CC			0.00
Tax collected at source			7,761.00
Net Amount Payable			77,68,316.00

Rupees : Seventy Seven Lakhs Sixty Eight Thousand Three Hundred and Sixteen Only

Amount Payable after due date & upto	24-May-24	78,23,999.00	(i.e 15 days Notice Period)
Deduction of TDS under section 194Q			0.00

RTGS Payment should be made for the exact Bill Amount. Any Part/Excess/Short Amount will be rejected.

This Bill is subject to the Audit, Outcome of the Court Cases, etc., if any, before the appropriate forum.

E & OE

FOR DEPUTY FIN. CONTROLLER