### ENERGY AUDIT REPORT

### M E S COLLEGE

MARAMPALLY





Accredited Energy Auditor: AEA-33 Empanelled Accredited Energy Auditor: EmAEA-33 Bureau of Energy Efficiency, Government of India.



Empanelled Energy Auditor: EMCEEA-0211F, EMC (Energy Management Centre-Kerala.)



Executed by



### ENERGY AUDIT REPORT M E S COLLEGE

### MARAMPALLY





#### Energy Audit Report MES College, Marampally Report No: EA 1084/EA 2023 November



Empaneled Accredited Energy Auditor, AEA 33 Bureau of Energy Efficiency Government of India



Empaneled Energy Auditor, EMCEEA-0211F, Energy Management Centre Government of Kerala.



Authorized Energy Auditor, GEDA/ENC/EAC: Autho/2014/8/103/2316, Gujarat Energy Development Agency Government of Gujarat

Empaneled Energy Auditor, India SME Technology Services Ltd A joint Venture of SIDBI, SBI, Indian Bank, Oriental Bank of Commerce & Indian Overseas Bank

### About OTTOTRACTIONS

OTTOTRACTIONS established in 2005, is an organization with proven track record and knowledge in the field of energy, engineering, and environmental services. They are the first Accredited Energy Auditor from Kerala for conducting Mandatory Energy Audits in Designated Consumers as per Energy Conservation Act-2001. Government of Kerala recognized and appreciated OTTOTRACTIONS by presenting its prestigious "The Kerala State Energy Conservation Award" for the best performance as an Energy Auditor. Ottotractions is an ISO 9001-2015, ISO 17020-2012 and ISO 14001-2015 Certified organization, which ensures the quality of its services.

### Acknowledgement

We were privileged to work together with the administration and staff of MES College, Marampally We are grateful to them for the timely help extended to complete the audit and bringing out this report.

With gratitude, we acknowledge the diligent effort and commitments of all those who have helped to bring out this report.

We also take this opportunity to thank the bona-fide efforts of audit team for unstinted support in carrying out this audit.

We thank our consultants, engineers and backup staff for their dedication to bring this report.

Thank you.

For OTTOTRACTIONS

B V Suresh Babu Accredited Energy Auditor AEA 33, Bureau of Energy Efficiency Government of India

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This is to certify that

The data collection has been carried out diligently and truthfully;

All data monitoring devices are in good working condition and have been calibrated or certified by approved agencies authorised and no tampering of such devices has occurred;

All reasonable professional skill, care and diligence had been taken in preparing the energy audit report and the contents thereof are a true representation of the facts;

Adequate training provided to personnel involved in daily operations after implementation of recommendations; and

The energy audit has been carried out in accordance with the Bureau of Energy Efficiency (Manner and Intervals of Time for the Conduct of Energy Audit) Regulations, 2010.

> SURESH BABU B V ACCREDITED ENERGY AUDITOR (AEA 33) BUREAU OF ENERGY EFFICIENCY GOVERNMENT OF INDIA

Executive Summary							
	Consolidated Cost Benefit Analysis of I		ncy Impro	vement P	rojects		
	MES College	e, Marampally	 1		-		
SI No	Projects	Investment	Cost saving	SPB	Energy saved		
NU		(Lakhs Rs)	(Rs)/Yr	Months	kWh/Yr		
1	Energy Saving in Lighting by replacing existing 53 No's T8 (40W) Lamps to 18W LED Tube	0.16	0.078	24.35	1119		
2	Energy Saving in Lighting by replacing existing 98 No's T12 (55W) Lamps to 18W LED Tube	0.29	0.182	19.38	2600		
3	Energy Saving by replacing existing 350 No's in-efficient ceiling fans with Energy Efficient Five star fans	10.50	0.461	273.32	6586		
4	Installation of 70kWn Solar Power						
	Total	49.45	13.46	88.33	106118		
(The saving are projected as per the assumed operation time observed based in the discussions with the plant officials. The data of saving percentages are taken from BEE guide books and field measurements.)							



## 1 Introduction

A detailed energy audit has been carried out at MES College, Marampally by OTTOTRACTIONS in November 2023. During the energy audit energy saving opportunities has been identified to help improving energy efficiency of the facility. OTTOTRACTIONS is an Accredited Energy Auditor of Bureau of Energy Efficiency and Empaneled Energy Auditor of Energy Management Centre, Government of Kerala.

This energy audit report complies with the clauses in *Energy Conservation Act, 2001* on mandatory energy audit (**Form 4** [refer regulation 6(2)] guidelines for preparation of energy audit report) and complies with the G.O (Rt) No.2/2011/PD dated 01.01.2011 issued by Government of Kerala on mandatory energy audit.

### **1.1.** General Building details and descriptions

M.E.S. College Marampally is a Government Aided college affiliated to Mahatma Gandhi University, Kottayam, established in the year 1995. The College has reaccredited by NAAC with A+ Grade (CGPA, 3.38) which is the first ever highest grade in the State as per the revised process of accreditation. The campus is located in a rural area between the towns of Aluva and Perumbavoor, set in salubrious lush green surroundings in close vicinity of the river Periyar and proximate Cochin International Airport.

The governance and the management of the college are anchored in the principles of Muslim Educational Society (Regd.), Calicut which is one of the largest minority



educational agencies in Kerala. The establishment facilitated new directions in the field of higher education by offering a significant number of vocational (Model II) and technical programmes in tune with the demands of job market.

Occupancy Details				
Particulars	2022-23			
Total Students	2671			
Staffs	217			
Total Occupancy of the college	2888			

For calculating specific energy consumption, the total built-up area is taken into account.

### Energy audit team

The Energy Audit team is listed below. Besides this list various domine experts also participated in this project.

- 1. Suresh Babu B V, Accredited Energy Auditor, AEA 33
- 2. B. Zachariah, Chief Technical Consultant
- 3. Abin Baby, Project Engineer
- 4. Jomon J S, Project Engineer
- 5. Vishnu S S, Project Engineer
- 6. Reshma, Data Analyst
- 7. Anjana B S, Project Assistant



### 2 Process description

The energy audit has been carried out at at MES College, Marampally. The following is the baseline data of this building.

	BASELINE DATA SHEET FOR GREEN AUDIT						
1	Name of the Organisation	MES College, Marampally					
2	Address (include telephone, fax & e-mail )	MES College Marampally North Vazhakulam, Aluva Ernakulam (Dist), Kerala, India Pin 683105					
3	Year of Establishment	1995					
4	Name of building and Total No. of Electrical Connections/building	MES	College	e (2)			
5	Total Number of Students	Boys		Girls		Total	2671
6	Total Number of Staff				217		
7	Total Occupancy				2888		
8	Total area of green cover				60%		
9	Type of Electrical Connection	HT	0	LT		2	
10	Total Connected Load (kW)				98		
11	Average Maximum Demand (KVA)				-		
12	Total built up area of the building (M <sup>2</sup> )			1:	23300		
13	Number of Buildings				3		
14	Average system Power Factor				0.99		
15	Details of capacitors connected				Nil		
16	Transformer Details (Nos., kVA,	TR 1					
10	Voltage ratio)	0		-		-	
17	DG Set Details (kVA, )	DG1	DG2	DG3	DG4	DG5	Remarks
17		125	30				
		Rat	ting	Nos.		Re	emarks
18	Details of motors	5 tc	010	2	2		
			o 50				
		Abov	/e 50				



# **3** Energy and utility system description

3.1.1 Electricity

Electricity is purchased from KSEB under Two LT 6A Ndom Connections, the details are given below. A 125 kVA and 30 kVA Diesel Generator are in operation at this campus

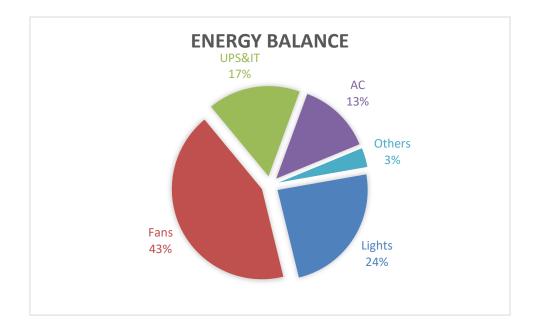
	MES College, Marampally				
1	Name of the Consumer	MES College, Marampally			
2	Tariff	LT-6A Ndom			
3	Consumer Numbers	1155846010859, 1155841015860			
4	Connected Load Total (kW)	98			
5	Annual Electricity Consumption (kWh)	86318			

### **3.2. Thermal Energy / Transportation**

13 Vehicles are operated from college for transportation. LPG is used for experiments in the lab and diesel is used to operate Diesel Generators.



### **4** Energy Balance



43 % of the total energy consumed in this facility is used to operate Fans. Lighting uses 24% UPS and IT Uses 17%. Others uses 3% and 13% AC.



# **5** Performance evaluation of major utilities and process equipment's /systems.

### 5.1. List of equipment and process where performance testing was done.

- 5.1.1. Electrical System
- 5.1.2. Lighting & Fans

### 5.2. Results of performance testing

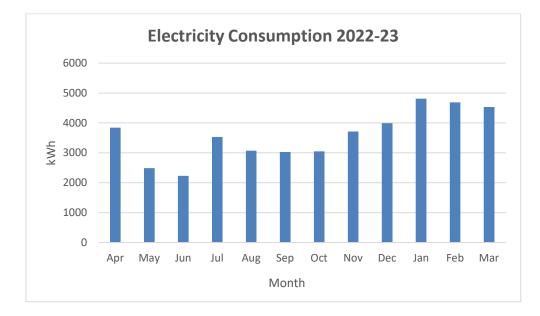
### 5.2.1. Electrical System

The average unit cost of electricity is **7.54 Rs/kWh**. This is taken as the basis for the financial analysis of electrical energy efficiency projects. The information on average energy consumption is taken from the historical electricity bill analysis.

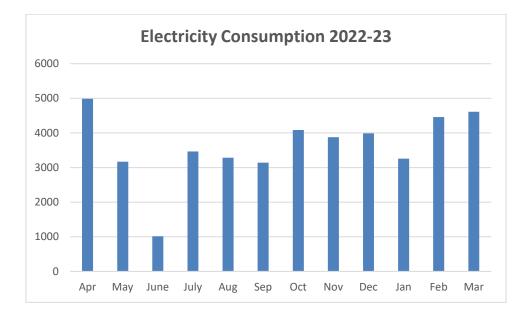


Electricity Bill Details (2022-23)								
Name of the	e Consu	imer		MES College, Marampally				
Connected	Load (k	W)	82	Consu	imer no	1155846010859		
Tariff		LT-6	A Ndom	Sec	ction	Vazhakulam		
Month	kWh	Fixed charge (Rs)	Energy charge (Rs)	Duty (Rs)	Meter rent (Rs)	Total amount to be paid (Rs)		
Apr	3840	5330	32421	3242.1	0	40993		
May	2490	5330	23470	2347.0	0	31147		
Jun	2230	5330	21746	2174.6	0	29251		
Jul	3530	5330	30365	3036.5	0	38732		
Aug	3070	5740	27316	2731.6	0	35787		
Sep	3030	5740	27050	2705.0	0	35495		
Oct	3050	5740	27183	2718.3	0	35641		
Nov	3715	5740	31592	3159.2	0	40491		
Dec	3990	5740	33415	3341.5	0	42497		
Jan	4810	5740	38852	3885.2	0	48477		
Feb	4690	5740	38056	3805.6	0	47602		
Mar	4530	5740	36995	3699.5	0	46435		

### **Electricity Consumption**



Electricity Bill Details (2022-23)								
Name of th	e Cons	umer		MES College, Marampally				
Connected	l Load (	kW)	16	16 Consumer no 1155841015860				
Tariff		LT-6/	A Ndom	Section	Vaz	hakulam		
Month	kWh	Fixed charge (Rs)	Energy charge (Rs)	Duty (Rs)	Meter rent (Rs)	Total amount to be paid (Rs)		
Apr	4986	1040	32559	3256	15	36869		
May	3169	1040	20694	2069	15	23818		
June	1015	1040	6628	663	15	8346		
July	3467	1056	22640	2264	15	25974		
Aug	3286	1120	21458	2146	15	24738		
Sep	3143	1120	20524	2052	15	23711		
Oct	4085	1120	26675	2668	15	30478		
Nov	3876	1120	25310	2531	15	28976		
Dec	3987	1120	26035	2604	15	29774		
Jan	3259	1120	21281	2128	15	24544		
Feb	4460	1120	29124	2912	15	33171		
Mar	4610	1120	30103	3010	15	34249		





### **Diesel**

The campus has two Diesel Generator. The details of Diesel consumption are given below.

Diesel Consumption Details						
Year	Transportation	Generator	Total	cost		
real	in L	in L	in L	in Rs		
22-23	4189	189	4378	420900		

	Base Line Energy Data				
	MES College, Marampally				
		2022-23			
1	Electricity KSEB (kWh)	86318			
2	Electricity DG (kWh)	568			
3	Electricity Solar, Off grid (kWh)	3194			
4	Electricity (KSEB + DG + Off grid) kWh	90080			
5	Electricity Grid Tied (kWh)	12775			
6	Diesel (L)	4378			
7	LPG (kg)	2533.33			
8	Biogas generated/year (kg)	1650.00			

	Energy Consumption Profile				
SI No	Evel Evel	2022-23			
31110	Fuel	kCal			
1	Electricity	77468601			
2	Diesel	45973966			
3	LPG	3040000			
4	Biogas	7700000			
	Total 161542566				



### Lighting

					Light	ts		
SI. No	Building	Location	LED- T	LED- sq	LED- 20W	Т8	T12	LED- 18 W
1		Silver Jubilee Hall						27
2		Classroomx8	16					
3		Classroomx3	6					
4		Departmentx4						16
5		Library	25					3
6		Computer Lab		10				
7		3D animation Lab		10				
8	ck	2D animation	4		30			
9	South block	Stop motion Lab	2					
10	uth	Research Lab	4					
11	Sol	Examination hall	14					
12		Audio Vision room	6					
13		Corridor	17					
14		Integrated chemisty Lab	16					
15		Classroomx6	6				18	
16		Classroomx3					6	
17		Advaced electronic lab					1	
18		Department				8	7	
19	E.K Abdul Khad er Block	Classroomx15	30				30	
20	Blc Blc	Canteen					12	
21		Microbiology Labx2	2			2		
22		Corridor				10		
23		Biotechnology Labx3	27					
24		Classroomx16	1			32	16	
25	ock	Reception						9
26	Blo	Classroomsx6	6				6	
27	nin	Electronics Lab	7			1	2	
28	Admin Blo	Store	2					
29		Principal Room						14
30		Exam control Room						6
31		IQAC						9
32		Conference Room						32
33	Hoste I	Hostel(6 rooms)	12					
34	оН	Hostel(66 rooms)	66					
		Total	269	20	30	53	98	116



### Lux Measurement

		MES College, Marampally	
SI.No	Floor	Location	Avg. Lux
1		Silver Jubilee Hall	112
2		Library	125
3		Computer Lab	134
4		3D animation Lab	133
5	с <mark>у</mark>	2D animation	123
6	South block	Stop motion Lab	111
7	uth	Research Lab	124
8	So	Examination hall	125
9		Audio Vision room	126
10		Integrated chemisty Lab	125
11		Advaced electronic lab	123
12		Department	80
13		Reception	80
14	×	Electronics Lab	135
15	300	Store	89
16	Admin Block	Principal Room	134
17	d m	Exam control Room	164
18		IQAC	153
19		Conference Room	159



### **6** Energy efficiency in utility and process system

The specific energy consumption is normally taken as the ratio of total energy consumed to the total are of building.

	OTTOTRACTIONS- ENERGY AUDIT										
	MES College, Marampally										
	Energy Performance Index (EPI)										
SI No	Particulars	2022-23									
1	Total building area (m <sup>2</sup> )	123300									
2	Annual Energy Consumption (kCal)	161542566									
3	Annual Energy Consumption (kWh)	187840									
4	Total Energy in Toe	16.15									
5	Specific Energy Consumption kWh/m <sup>2</sup>	1.52									

### The Energy Performance Index (EPI) is

### 1.52 kWh/m<sup>2</sup>

The Energy Performance Index (EPI) of 2022-23 may be taken as benchmark.



### **T** Evaluation of energy management system

### **Energy management policy**

There is no written energy policy available, but environment policy is available which includes energy conservation also. A draft energy management policy is given below. The management may constitute an energy management policy and display the same in the plant to motivate the staff.

### MES COLLEGE, MARAMPALLY ENERGY POLICY

(Draft)

We are committed to optimally utilize various forms of energy in a cost effective manner to effect conservation of energy resources. We are committed to conserve the energy which is a scarce resource with the requisite consistency in the efficiency, effectiveness in the cost involved in the operations and ensuring that production quality and quantity, environment, safety, health of people are maintained. We are also committed to increase the renewable energy share of the total energy we use.

We are also committed to monitor continuously the saving achieved and reduce its specific energy consumption by minimum of 2% every year.

Date -----

Head of the Institution



### 7.1. Energy management monitoring system

- Energy Management Cell has to be constituted with an objective to revise action plan for energy conservation thereby reducing the production cost.
- Energy conservation tips/ posters are displayed in crucial points.
- Use of renewable energy has to be encouraged.

### **7.2.** Training to staff responsible for operational and Documentation.

- The staff and students need to be made more aware of the importance of energy saving and management.
- Log books shall be maintained to record Electricity Consumption and Diesel consumption.
- Meter reading shall be taken and compared with KSEB regularly.
- Better operating practices regarding appliances and fixtures should be taught to the staff.

#### 7.3. Best Practices

- Have solid Waste management program
- Conducted Green Audit.
- Have different social and environmental clubs
- Installed LED bulbs
- Installed 10kWp Solar Power plant in the campus
- Conducted Energy Conservation Training Programs



# 8

### Energy Conservation Measures and Recommendations

	Executive	Summary													
	Consolidated Cost Benefit Analysis of Energy Efficiency Improvement Projects														
	MES College, Marampally														
SI	No Projects saving saved														
INU	No (Lakhs Rs) (Rs)/Yr Months kWh/Yr														
1	Energy Saving in Lighting by replacing														
2	Energy Saving in Lighting by replacing existing 98 No's T12 (55W) Lamps to0.290.18219.38260018W LED Tube0.290.18219.382600														
Energy Saving by replacing existing3350 No's in-efficient ceiling fans with10.500.461273.326586Energy Efficient Five star fans															
4	Installation of 70kWp Solar Power														
Total         49.45         13.46         88.33         106118															
(The saving are projected as per the assumed operation time observed based in the discussions with the plant officials. The data of saving percentages are taken from BEE guide books and field measurements.)															



OTTOTRACTIONS- ENERGY AUDI	1
Energy Saving Proposal	
Energy Saving in Lighting by replacing existing 53 No's LED Tube	T8 (40W) Lamps to 18W
Existing Scenario	
53 numbers of T8(40 W) lamps were identified during the ener facility. During discussion with officers it is observed that the a fittings are of 30%.	
Proposed System	
The existing T8 may be replaced to LED Tube of 18W in phase savings will be of 55% (inclusive of improved light output and consumption)	
consumption	
Financial Analysis	
	2400
Financial Analysis	2400 53
Financial Analysis Annual working hours (hr)	
Financial Analysis         Annual working hours (hr)         No of fittings	53
Financial Analysis         Annual working hours (hr)         No of fittings         Total load (kW)	53 2.12
Financial Analysis         Annual working hours (hr)         No of fittings         Total load (kW)         Annual Energy Consumption (kWh)         Expected Annual Energy saving for replacing all fittings	53 2.12 2035
Financial Analysis         Annual working hours (hr)         No of fittings         Total load (kW)         Annual Energy Consumption (kWh)         Expected Annual Energy saving for replacing all fittings (kWh)	53 2.12 2035 1119
Financial Analysis         Annual working hours (hr)         No of fittings         Total load (kW)         Annual Energy Consumption (kWh)         Expected Annual Energy saving for replacing all fittings (kWh)         Cost of Power (Rs)	53 2.12 2035 1119 7.00

	OTTOTRACTIONS- ENERGY AUD	ЛТ
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Energy Saving Proposal

Energy Saving in Lighting by replacing existing 98 No's T12 (55W) Lamps to 18W LED Tube

#### **Existing Scenario**

98 numbers of T12(55 W) lamps were identified during the energy audit field survey in the facility. During discussion with officers it is observed that the average utility of these fittings are of 30%.

#### **Proposed System**

The existing T12 may be replaced to LED Tube of 18W in phased manner and the savings will be of 67% (inclusive of improved light output and reduced energy consumption)

Financial Analysis	
Annual working hours (hr)	2400
No of fittings	98
Total load (kW)	5.39
Annual Energy Consumption (kWh)	3881
Expected Annual Energy saving for replacing all fittings (kWh)	2600
Cost of Power (Rs)	7.00
Annual saving in Lakhs Rs (1st year)	0.18
Investment required for complete replacements [@Rs 300 per fittings](Lakhs Rs)	0.29
Simple Pay Back (in Months)	19.38



OTTOTRACTIONS- ENERGY	AUDIT
Energy Saving Proposal	
Energy Saving by replacing existing 350 No's in-eff Efficient Five star fans	
Existing Scenario	
There are 350 numbers of ceiling fans installed in the face operation. All are conventional type and most of them are	
Proposed System	
There is an energy saving opportunity in replace the exist labelled fans. The five star labelled fans give a savings u value (air delivery/watt).	
Financial Analysis	
Annual working hours (hrs)	2400
Total numbers of ordinary fans	350
Total load (kW)	24.50
Annual Energy Consumption (kWh)	23520
Expected Annual Energy saving, for total replacement(kWh)	6586
Cost of Power (Rs)	7.00
Annual saving in Lakhs Rs (1st year)	0.46
Investment required for a total replacement (Lakhs Rs)[@3000 Rs per Fan with 50W at full speed]	10.50
Simple Pay Back (in Months)	273.32

Energy Saving Proposal								
Installation of 70kWp Solar Power Plant								
Existing Scenario								
There is a good potential of solar power electricity generation. The is very high. There are some canopies available in the proposed si proper trimming of trees this may be avoided. If the SPVs are place help improving RTTV (Roof Thermal Transmit Value) of the building	te, but by having e in the roof top it will							
Proposed System								
It is proposed to have a Solar Power Plant of 10kW at the beginnin central government is pushing and giving good assistance to the in installed as an internal grid connected system which is much chea system. Now days the technology provides trouble free grid interact system. The installation will provide 25yrs trouble free generation v efficiency loss at the 25th year. <b>Financial Analysis</b>	nstallation. It can be per than off grid ctive and connected							
Proposed Solar installed Capacity (kW)	70							
Total average kWh per day expected (3.5kWh/day average)	262.50							
Total annual Generating Capacity (kWh)	95813							
Cost of energy generated annually Lakhs Rs	12.74							
Investment required (INR lakh)(Approx)	38.50							
Simple Pay Back (in Months)	36.26							
Life cycle in Yrs	25							
Total Saving in Life Cycle (Approx) RS lakh	318.58							

### **Technical Supplements**

								MES C	olleg	e, M	aram	pally	1													
			Lights					Fans				IT			AC			Others								
SI N o	Buildin g	Location	LED - T	LED -sq	LED - 20W	Т 8	T1 2	LED - 18 W	CF	P F	E F	W F	BLD C	PC	projector	Photostat	printer	1	1. 5	3	Coffee machine	Fridge	ГCD	Water Purifier	T V	UPS(20kVA)
1		Silver Jubilee Hall						27					14							5						
2		Classroomx8	16						32						4											
3		Classroomx3	6						6																	
4		Departmentx4						16	12					8												
5		Library	25					3	33		3			15		1		1							1	
6		Computer Lab		10					7					80	1		1		6							2
7		3D animation Lab		10					6					56					4							
8	,	2D animation	4		30				2					4												
9	oloci	Stop motion Lab	2						2																	
10	South block	Research Lab	4						6					4												
11	Sol	Examination hall	14						4																	
12		Audio Vision room	6																2							
13		Corridor	17																							
14		Integrated chemisty Lab	16						10		1															
15		Classroomx6	6				18		24																	
16		Classroomx3					6		6																	
17		Advaced electronic lab					1		10					8												
18		Department				8	7		2																	
19	E.K Abdul Khader Block	Classroomx15	30				30		60						1 5											
20	R A R	Canteen					12		2																	

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21		Microbiology Labx2	2			2			4		1											1				
22		Corridor				1 0																		2	1	
23		Biotechnology Labx3	27						27					9								3			3	
24		Classroomx16	1			3 2	16		4																	
25	Block	Reception						9				2														
26	in B	Classroomsx6	6				6		12																	
27	Admin	Electronics Lab	7			1	2						10													
28	4	Store	2						1												2					
29		Principal Room						14				2		1				2					1			
30		Exam control Room						6						1		1			1							
31		IQAC						9		1				2			2	1								
32		Conference Room						32							1				4							
33	Hostel	Hostel(6 rooms)	12						12																	
34	Ho:	Hostel(66 rooms)	66						66																	
		Total	269	20	30	5 3	98	116	35 0	1	5	4	24	18 8	2 1	2	3	4	17	5	2	4	1	2	5	2

### KERALA STATE ELECTRICITY BOARD LIMITED DEMAND CUM DISCONNECTION NOTICE

			(As po			CUM DISC					~ 2014)					
Section	[5584]-	Electric	al Section Va				Phone			523255	-	Custor	ner Care	1912		
Consumer#	11558			Znakula				<del>"</del>	0404 2	1						
Name & Mailing						Reg. Mob# 953xxxx420         Regular CC Bill         KSEBL GSTIN: 32           For redressing complaints/grievance approach the concerned CGRF										
SECRETARY						South: Chairperson,CGRF(South),KSEB Ltd, Vydythi Bhavanam,Kottarakkara-691506, Ph:0474-2060220										
MES COLLAGE						Central: Chairperson,CGRF(Central),KSEB Ltd, Power House Building Ernakulam-682018, Ph:0484-239428										
MARAMPILLY						North: Chairperso	on,CGRF	(North),KS	EB Ltd,G	Sandhi Ro	ad,Kozhił	kode-32, l	Ph:0495-236	7820		
						State Electricity O	mbudsma	<u>an,</u> Pallikka	avil Builc	ding,Mama	angalam,	Edappall	y, Kochi-682	024 Ph:0484-2346488		
Bill#		5584	220500349			Bill Area		M04/2		DTR			MES COLLE	EGE NO 1		
Billing Period	ł	5/2022	2[Monthly]			Tariff/Phase		LT-6A/T	Three	Pole#			KK-34/3			
Bill Date		03-05	-2022			Due Date		13-05-2	022	DC Dat	e		28-05-20	22		
Contract Den	nand	(Nil) ∨/	A [75% : 0KV, 13	30% : 0KV	]	Connected Lo	ad	81832 V	Watts	Securi	у Depo	sit	Rs.12827	72.00		
Meter#		SCM0	CUST000008	3145				Av	/erage	consur	nption(	Month	l  v)			
Meter Digits		6.2				Power Unit/	Zone					MULAT				
Meter Type/O	wner	NETI	/leter/Custome	er		KWH					5	851				
Last Bille		ate	Prev. Rdg.	Date	F	Prev. Meter Rdg	g. Statu			t. Rdg. I	Date	F	Prst. Mete	er Rdg. Status		
01-04·			01-04-202			Working	-			-05-202	5-2022			Working		
Power U	Init		Zone	Tradi	ng	Initial Reading	Final R	eading	g(FR)	OM	F		Units*			
KWH		С	umulative	Impor	t	4073	3.00		4250	0.00		20		3540		
KWH		С	umulative	Expoi	t	22	2.80		23	3.25		20		9		
<u>Remarks :</u>							Bill De	tails						[INR] Amount(R		
La	st Paid A	mount	- Rs.47846.0	0			a)	Fixed C	harges	Fixed	d Charge	[FC]		5330.00		
La	st Payme	ent Dat	e - 05-04-2022	2						Sub	Total			5330.00		
							b)	Energy	Charge	es Ener	gy Charg	ge[EC]		22951.50		
										Sub	Total			22951.50		
							c)	Other C	harges	Elect	ricity Dut	ty[ED]		2295.15		
										Sub	Total			2295.15		
										Sub	Total			0.00		
							e)	Round	Off					0.35		
							f)	Total Amt	t.(Bill#55	84220500	349)	(a+b+c+e	e)	30577.00		
							g)	Surcharg	je					0.00		
							h)	Reconne	ection Fe	e				0.00		
							i)	Interim B	Bills					0.00		
							j)	Arrears						0.00		
							k)	Less paid	d/adj.					-0.00		
								1		1						
							I)	Less Adv	/ance					-0.00		

 Demand for 5/2022 is Rupees Thirty Thousand Five Hundred and Seventy Seven Only

 E&OE
 Payment Options: Cash, Cheque, DD, MO. Online: www.kseb.in (Debit/Credit Cards, Net Banking). Other Platforms: BBPS, Friends, Akshaya, CSC, NACH

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### Solar OnGrid Consumer (Generator)

Consumer No.	1155846010859	Consumer Name	SECRETARY
SPIN	558400017	Plant Capacity	10 KW
Grid Connected On	11-03-2020		

### Bank Statement for 202205 (Generator)

Units Imported	3540 kWh	Units Exported	9 kWh	
Bank Opening	0.000	Billed Consumption	3531 kWh	
Bank Closing	0.000			

### Consumption Adjustment Report

Bill Month	Consumer #	Export	Zone Code	Cons.	Banked Energy	Solar Energy (Bank Energy X Factor)	Adjusted from bank	Billed Cons.	Banked Balance
202204	10859	7	A	5960	0	0	0	5953	0
202205	10859	9	A	3540	0	0	0	3531	0

Page 1

FACTOR : 0-Reading Not Accepted/Door Lock 0.95-Applying Wheeling Charges 1.05-Resetting Wheeling Charges

### KERALA STATE ELECTRICITY BOARD LIMITED DEMAND CUM DISCONNECTION NOTICE

Section	[5584]-Elect				22 & 123 of P				ly Code 2014)		mer Care	1912	
Consumer#	[5584]-Electrical Section Vazhakulam # 1155841015860				Phone# 0484-25								
Consumer# 1155841015860 Name & Mailing Address					Reg. Mob# 944xxxx776         Regular CC Bill           For redressing complaints/grievance approach the concerned         Concerned							32AAECK2277NB	
SECRETARY					South: Chairper		(South) K	SEBII	Vydythi Bhavanan	n Kottaral	(kara-691506 Ph.)	0474-2060220	
M E S COLLEGI		Y							d, Power House B				
		- '			· ·	,			andhi Road,Kozhi			111.0404-2334200	
									ing,Mamangalam,			h:0484-2346488	
Bill# 5584230300605					Bill Area			DTR			MES COLLEGE NO 1		
Billing Period 3/2023[Monthly]				Tariff/Phase			Pole#		KK-34/3				
Bill Date				Due Date				DC Date		27-03-2023			
					Connected Load				Security Deposit		Rs.60588.00		
Meter#	GOE020180004352974				Average consumption(Month			  v)					
Meter Digits	6.2				Power Unit	/Zone			•	MULAT	• /		
Meter Type/O	-	TOD/KSEB			KWH				4064				
	d Rdg. Date			F	Prev. Meter Rdg. Statu		IS	Prst	. Rdg. Date	F	Prst. Meter Rdg. Status		
02-02-2023		02-02-2023		Working			01-03-2023			Working			
Power U	nit	Zone	Trad	ing	Initial Readir	ig(IR)	Final F	Reading	(FR) ON	R) OMF		Units*	
KWH		Cumulative	Impo	ort	11127	4.00		115884	l.00	1		4610	
Remarks :						Bill De	tails				[	INR] Amount(R	
Last Paid Amount - Rs.33755.00 Last Payment Date - 07-02-2023						a)	a) Fixed Charg		Fixed Charge[FC]			1120.00	
							Ş		Sub Total	Sub Total		1120.00	
						b)	Energy	Charge	S Energy Char	ge[EC]		30656.50	
									Fuel Surchar	ge[FS]		414.90	
									Sub Total			31071.40	
						c)	Other (	Charges	Electricity Du	ıty[ED]		3065.65	
									Meter Rent[N	Meter Rent[MR]		15.00	
									Sub Total			3080.65	
						d)	GST		MR-CGST			1.35	
									MR-SGST			1.35	
									Sub Total			2.70	
						e)	Round	Off				0.25	
						f)	Total Am	t.(Bill#558	4230300605)	(a+b+c+c	d+e)	35275.00	
						g)	Surchar	ge				0.00	
						h)	Reconne	ection Fe	e			0.00	
						i)	Interim E	Bills				0.00	
						j)	Arrears					0.00	
						k)	Less pai	id/adj.				-0.00	
						I)	Less Ad	vance				-0.00	

E&OE Payment Options: Cash,Cheque,DD,MO. Online: www.kseb.in (Debit/Credit Cards,Net Banking). Other Platforms: BBPS,Friends,Akshaya,CSC,NACH