



EKNM GOVERNMENT COLLEGE ELERITHATTU
(Established in 1981, Affiliated to Kannur University)

Accredited by NAAC with 'B' Grade

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DOCUMENTARY EVIDENCE FOR

7.1.3. Quality audits on environment and energy regularly undertaken by the Institution.

The institutional environment and energy initiatives are confirmed through the following

ENERGY AUDIT



ABOUT THE COLLEGE

E. K. Nayanar Memorial Government College, Elerithattu was established in the year 1981. The college was formally upgraded and approved by UGC as an under graduate college in 1989, when BA Hindi was sanctioned. E K Nayanar, the legendary leader of the masses and freedom fighter against British colonialism stayed in Elerithattu as part of his struggles. In memory of his pioneering contributions in the formation of the college, the college was renamed after him in 2005. The College currently offers six undergraduate programmes in different disciplines namely Economics, Hindi, Functional English, Commerce with Cooperation, Physics, Political Science and a Post-Graduation in Applied Economics. The College as it stands today is the concretization of the collective aspirations of the local community and their intense enthusiasm. Affiliated to Kannur University, E K N M Government College fulfills the dire educational needs of the rural folk in the remote hilly area of Kasaragod district, Kerala. The people of the four surrounding Panchayaths viz. West Eleri, East Eleri, Kinanoor-Karindalam and Balal depend on the institution for their intellectual sustenance and ethical enhancement for decades. The relative geographical isolation of the place from the mainland is compensated to a large extent by the academic activities of the institution.

ENERGY AUDIT TEAM

Internal Energy Audit Team

Convener

Dr. Babu C (Assistant Professor, Department of Economics, E.K. Nayanar Memorial Government College, Elerithattu)

Members

Ms Tessymol George (Assistant Professor, Department of Economics, E.K. Nayanar Memorial Government College, Elerithattu)

Mr. Hareendranathan P (Guest Lecturer, Department of Physics, E.K. Nayanar Memorial Government College, Elerithattu)

Ms. Angel Anns Kurian (Guest Lecturer, Department of Mathematics, E.K. Nayanar Memorial Government College, Elerithattu)

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ACKNOWLEDGMENT

The team members of this audit sincerely thank all individuals who contributed to this project. Special thanks to the Principal Dr. Solji K Thomas and all the staff members who provided whole hearted support.

1. TARGET AREAS OF ENERGY AUDITING

E.K. Nayanar Memorial Government College Campus has a total area of 18.58 acres. The following table shows the built-up area excluding the quarters. The Campus is equipped with all necessary facilities for the students and staff.

Sl. No.	Name of Building	Area in Square Feet
1	Main Building	42126
2	Physics Block	4038
3	Library Cum Auditorium	11581
4	Canteen	2640
5	Ladies Hostel	28389
6	Amenity Centre (Girls)	399
7	Ladies Waiting Room	624

Total Area: **89797 square feet**

2. OBJECTIVES OF THE AUDIT

- For energy efficiency assessment
- To pinpoint trouble areas
- To assess safety and environmental impact
- For giving recommendations for improvement
- To enable preparation for renewable energy

3. METHODOLOGY ADOPTED

- Field visit:** The audit team conducted field visit to analyse the utilization of different energy sources at specific intervals and collected data on various indicators.
- Survey:** Conducted a survey by distributing and collecting questionnaire forms on various aspects of the target areas.
- Group discussions:** Conducted group discussions with NSS volunteers, faculty, office staff, and students in various clubs.

4. ENERGY AUDIT REPORT

Energy consumption pattern of the college for a month

Sl.no	Appliances /items	Number	Power in W/Unit	Total power	kW	kWh	Total consumption kWh/Month
1	LED Tube light	150	12	1800	1.8	3.6	79.2
2	Fluorescent tube light	40	40	1600	1.6	3.2	70.4
3	Fan	65	60	3900	3.9	7.8	171.6
4	LED Bulb	180	10	1800	1.8	3.6	79.2
5	AC	9	1954	17586	17.586	35.172	773.784
6	Computer	65	160	10400	10.4	20.8	457.6
7	Laptop	20	65	1300	1.3	3.9	85.8
8	Projector	7	280	1960	1.96	1.96	43.12
9	Speaker	34	15	510	0.51	0.255	5.61
10	Printer	20	50	1000	1	1	22
11	Photostat machine	4	650	2600	2.6	2.6	57.2
12	Refrigerator	1	150	150	0.15	0.45	9.9
13	Distillation Unit	2	1000	2000	2	1	22
14	Napkin Incinerator	2	2400	4800	4.8	2.4	52.8
15	Induction stove	3	1000	3000	3	3	66
16	Mixi	2	1000	2000	2	2	44
17	Grinder	1	1500	1500	1.5	1.5	33
							2073.2

Monthly Energy consumption Report

The details of the average monthly electricity consumption and the average monthly electricity bill amount for the College for the period from 01/02/2022 to 01/01/2023 are as given below:

Electricity Consumption:

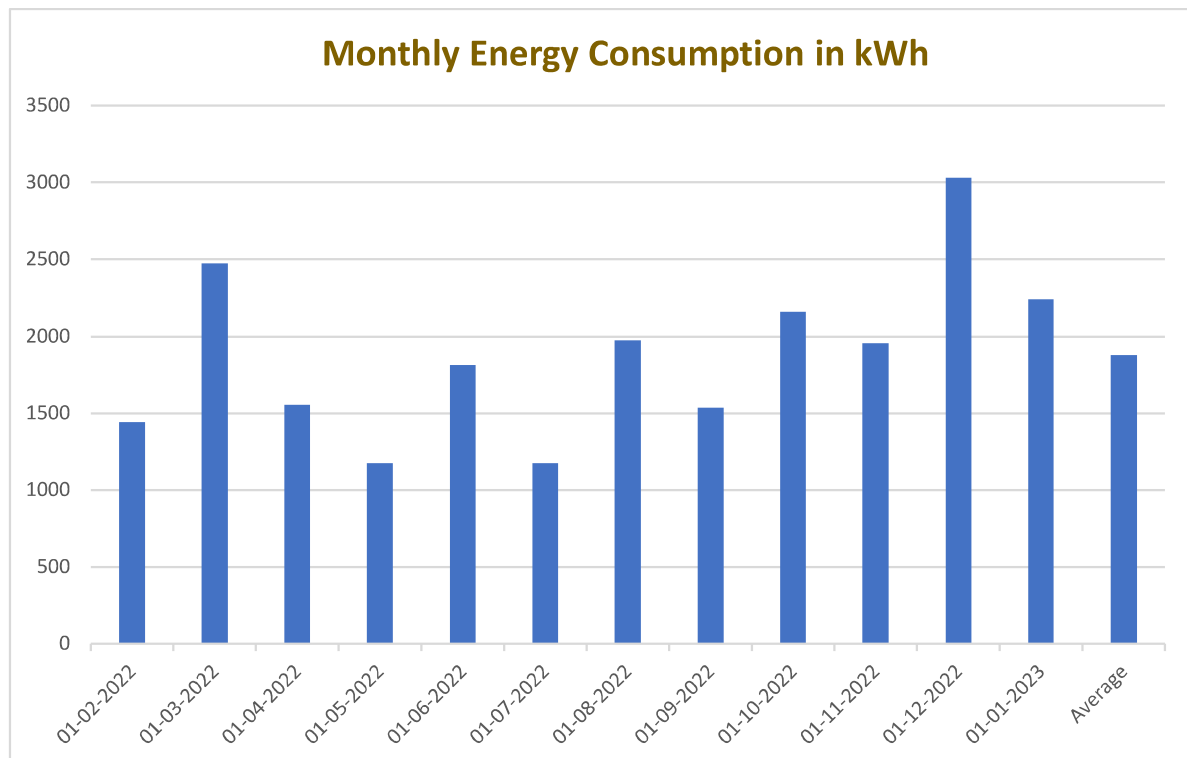
The college consumed an average of 1,878.2 units of electricity in a month during the period. This includes the electricity usage for various operations and activities.

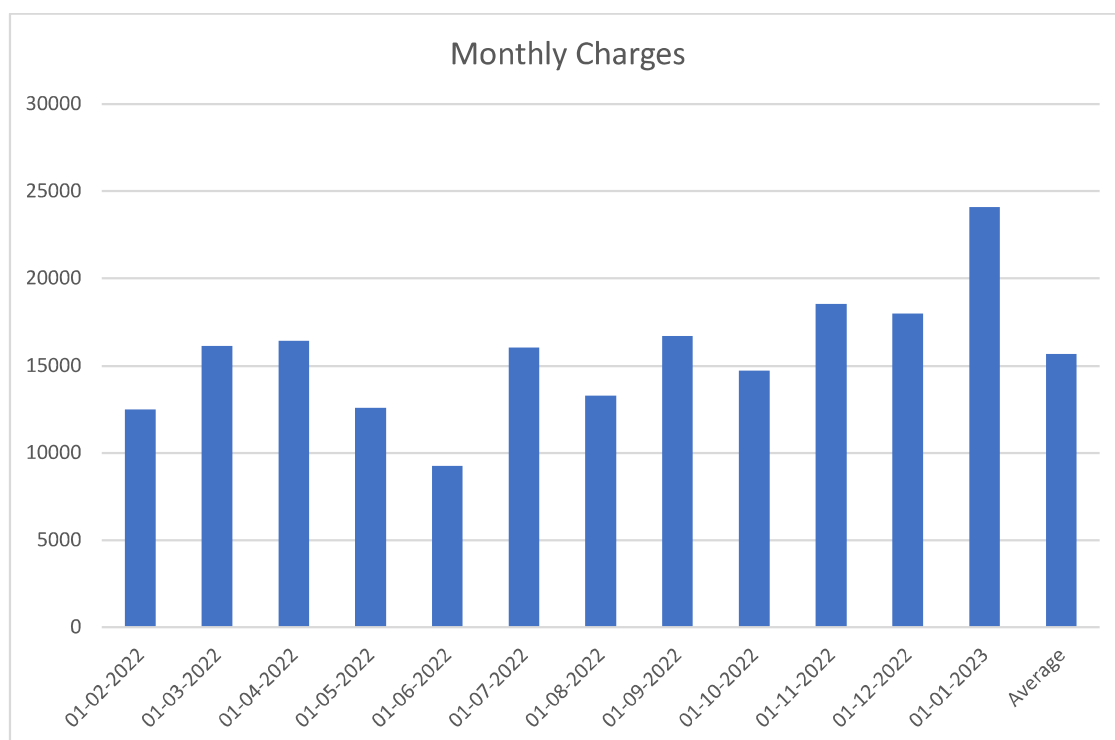
Monthly Electricity Bill:

The average monthly electricity bill amount for the college was 3821/-

Conclusion:

The electricity consumption and bill amount are important parameters that help in monitoring the energy usage and the cost incurred by the College. Potential areas for improvement and cost savings can be identified by regular monitoring and review of these parameters.





5. SUGGESTIONS AND RECOMMENDATIONS

- **Introduction of biogas plant**

It is a continuous source of environmentally friendly renewable energy. It is also ensuring the efficient mechanism of biodegradable waste management. It also ensures less emission of greenhouse gases such as methane.

- **Introduction of solar panels**

The College looks into the possibility of on-site micro-generation of renewable electricity. For that introduced solar panels for street lights inside the campus.

- **Reduce energy consumption, especially of energy derived from fossil fuels**

Give preference to the most energy-efficient and environmentally sound appliances available, this includes only using energy-saving light bulbs and five-star-rated appliances.

Encourage staff, students, and conference guests to save energy through visible reminders, incentives, and information to increase awareness. This particularly concerns turning off electrical appliances when not in use so that misuse of electricity is controlled by turning off the appliances when not required.

We ensure that all electronic and electrical equipment, such as computers, are switched off when not in use, and are generally configured in power-saving mode when such an option is available. If there is equipment running on standby mode, reduce the energy consumption on standby mode or minimize the running of equipment on standby mode.

6. SUMMARY OF FINDINGS

The audit findings indicate that, generally, departments and students are cognizant of the importance of energy management. Best practices, such as the use of solar panels, LED lights have been implemented in the Campus. However, a closer examination revealed that some of the college's practices are not in accordance with the college's Green Policy and relevant standards. Further review is needed to enhance efficiency, fairness, and consistency in certain processes.

Appendix I

Installation of Solar Street Light



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PRINCIPAL
E. K. N. M. GOVT. COLLEGE
ELERITHATTU
ELERITHATTU P. O.
KASARAGOD DT., PIN: 671 314