



# ENERGY AUDIT REPORT FOR MS COLLEGE OF LAW



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## Acknowledgement

Elion Technologies and Consulting Pvt Ltd places on record it's thanks to MS College of Law for entrusting the task of conducting energy audit study.

We acknowledge with gratitude the whole hearted support and cooperation extended by all team members while carrying out the study.



## Site Information

<b>Name of College</b>	MS College of Law
<b>College Address</b>	At Devghar, vis Kudus, Taluka Wada, Dist : Palghar
<b>Execution Partner</b>	ELION Technologies & Consulting Pvt Ltd
<b>Communication Address</b>	307, 3rd Floor DDA Lal Market H-Block Vikas Puri, New Delhi, 110018
<b>Date of Audit</b>	22th October 2024
<b>Year of Audit</b>	2024 - 2025
<b>Main Energy Consuming Machines/Equipments considered for Energy Audit</b>	<ul style="list-style-type: none"><li>• Lighting &amp; Fans</li><li>• Air Conditioners</li><li>• Motors &amp; Pumps</li><li>• Desktops &amp; Printers</li></ul>



## Executive Summary

A Visionary Er. Mohd. Shoeb Habibullah Khan, founded the Habib Educational & Welfare Society (HEWS) in the year 1993 with the objective of providing quality education & endeavour to bring education for all section of society irrespective of religion, caste & creed.

The college has grown rapidly in a short span creating a niche for itself in the educational field of Mumbai by starting M.S. College of Arts, Science, Commerce & B.M.S., Hotel Management catering to the needs of more than 1500 students.

M.S. College of Law was founded by HEWS in the Year 2012 and is affiliated to University of Mumbai & recognized by Bar Council of India. The College with its rich history, vibrant academic community offers an extra-ordinary environment for studying law. Today we need young minds to study law to take up social cause because it helps to define society's value and provide means to solve problems without resorting to violence.

### **List of courses offered by the institute:**

Following are the list of courses offered by the institute:

- LL.B.
- LL.B.
- B.A. LL.B.

Electricity is supplied by Local Distribution Company and for backup power supply DG Set of 5KVA is available.

The energy audit included detailed data collection, analysis of data and identification of specific energy saving proposals.



## Chapter 01: Introduction

M/S MS College of Law evinced interest in availing the services of Elion Technologies and Consulting Pvt Ltd for conducting energy audit of their premises.

Elion Technologies and Consulting Pvt Ltd team conducted the Detailed Energy Audit on 22<sup>th</sup> October 2024.

This report is on the energy audit carried out M/S MS College of Law. The detailed energy audit comprised of the following activities:

- Data collection of power consuming equipment's.
- A brief session on energy management was conducted to seek more inputs from the personnel engaged in operation and maintenance of electro mechanical services.
- Analysis of collected data.
- Discussion with the officials on the identified proposals.
- Discussion and reporting of the findings of energy audit with the Engineers and management staff.

All the identified energy savings proposals have been discussed with the executives concerned before finalizing the projects.

The contents of the report are based solely on the data provided by MS College of Law officials during the energy audit.

The management should implement the suggestions made in the report after verifying requisite safety aspects.

### Methodology for Energy Audit:

The following is a list of general procedure and information undertaken during the energy audit:

- General information of the site.
- Baseline energy description.
- Past energy consumption bills which includes electricity bills.



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- On site data collection
  - Energy analysis of different sectors.
  - Recommendation of energy conservation measures.



## Chapter 02: Energy Consumption Details

List of equipment present in the campus:

Rating of Transformer (in KVA)	5KVA
Year of installation of the Transformer	2018 - 2019
Rating of DG Set (in KVA)	5KVA
Rating of Capacitor Bank (if present)	NA
Capacity of Solar Power Plant (if installed)	NA

The main areas of energy consumption as observed during the audit are as follows:

- Air Conditioners.
- Lighting & Fans.
- Motors & Pumps.
- Desktops & Printers.

The main sources of energy to meet the required consumptions are as follows:

- Electricity supply from Power Distribution Company.
- DG set of rating 5KVA.

**Recommendations:**

- Use of renewable energy in the form of solar plant can be considered by the campus.





## Chapter 03: Lighting System

The lighting inventory of the lights present in the campus were collected and following is the summary:

Type of lights (LED/CFL/Conventional Bulb/Tube Light)	Location	Rating	Quantity	Number of Hours being turned on
LED Tube lights	Ground floor	10-18W	46	08
LED Bulbs and Tube lights	1 <sup>ST</sup> Floor	10-18W	53	08
LED Bulbs and Tube lights	2 <sup>ND</sup> Floor	10-18W	87	08

### Observation:

- Most of the lights used in the campus are LEDs. Campus has replaced most of the conventional lights with energy efficient LED lights which is a good practice.



LED Lights

### Recommendation:

- Sticker to SWITCH OFF LIGHT and SAVE ENERGY to be displayed.
- Regular cleaning of light fixtures to be done to get maximum lux level.
- Use of occupancy sensors can be considered in the offices and cabins.





## Chapter 04: Air Conditioning

Split Air Conditioner is used in facility for air conditioning. Following is the list of ACs present in the campus:

Type of AC (Windows/Split/Package and Location)	Capacity in Ton	Whether any star rating available	Set Temperature	Running Hours	Whether AC performance is satisfactory (Yes/No)
Split Voltas ,Hitachi – Principal Office Room	1	2	26	10	Yes

### Observation:

- All air conditioners are found to be functioning properly and well maintained.
- Periodic servicing and cleaning of filters of air conditioners are carried out.



Air Conditioners

### Recommendation:

- All doors to be kept closed while using the air conditioners and regular annual service of AC's should be carried out.
- Set Temperature of Air Conditioner shall be maintained at 26°C. A reduction in 1°C set point temperature, the energy cost comes down by 5%. By carefully selecting the seasonal temperature in different areas as per requirement considerable saving on account of power consumption can be achieved.
- Whenever Air Conditioners are replaced in future, BEE 5 star rated air conditioners shall be considered which are energy efficient.



## Chapter 05: Pumps and Motors

Pump is generally used for pumping of ground water to the water tank. The details of the pumps are given below:

Name of Pump and make	Running Hours	Rated Capacity in KW
Kirloskar 3 Phase Monoblock	5	7.5

Name of Motor and make	Running Hours	Ampere
Kirloskar 3 Phase Monoblock	5	12

### Observation:

- Condition of the fire pumps found satisfactory and well maintained.

### Recommendation:

- Proper maintenance and upkeep of pumps and motors along with panels to be done.
- The management should also consider replacement of the old pumps with energy efficient 5 star rated pumps.



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## Conclusion

The energy audit performed at Late Khatija College of Education (B.Ed) showcased commendable efforts towards sustainability within the college. The replacement of conventional lights with energy-efficient LED alternatives marks a significant stride in reducing energy consumption.

Despite these advancements, there remains untapped potential for further enhancing energy efficiency. The audit report likely contains specific recommendations aimed at maximizing sustainability efforts. Implementing these suggestions could significantly bolster the college's energy-saving initiatives, continuing the positive trajectory towards a more environmentally conscious campus.

**End of Report**



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### **DISCLAIMER**

All information contained in this report is based on the data available and observations made during the audit. All recommendations made in this audit report should be duly evaluated by the management before implementation.

Elion Technologies and Consulting is not liable for any damages incurred by the organization through implementation of the energy saving proposals either to it or to any third party getting impacted by the implementation of this report.

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