



ENERGY AUDIT REPORT FOR IDEAL INSTITUTE OF PHARMACY



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Acknowledgement

Elion Technologies and Consulting Pvt Ltd places on record it's thanks to Ideal Institute of Pharmacy, Wada, 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

Name of College	Ideal Institute of Pharmacy
College Address	Village-Posheri Tal- Wada, Dist- Palghar
Execution Partner	ELION Technologies & Consulting Pvt Ltd
Communication Address	307, 3rd Floor DDA Lal Market H-Block Vikas Puri, New Delhi-110018
Date of Audit	20 th January 2024
Year of Audit	2023 - 2024
Site Team who participated in the Study	Ideal Institute of Pharmacy
Main Energy Consuming Machines/Equipment's considered for Energy Audit	<ul style="list-style-type: none">• Lighting & Fans• Air Conditioners• Motors & Pumps• Desktops & Printers



Executive Summary

IDEAL FOUNDATION is a nonprofit, community-based educational institute is a best private college located at Poshari, Palghar Maharashtra. It owes its genesis to the establishment of the ideal foundation Educational Society in Palghar in the year 2013. Ideal foundation is the best multi-disciplinary, student-centric, research-focused college in Maharashtra, India. The Foundation has worked to support the educational and social development of communities throughout Maharashtra. The Ideal Education Foundation aims to enhance the well-being of our communities via educational and leadership development, while also promoting civic engagement. The Foundation collaborates with private and public philanthropic, corporate and community organizations to build individual, family and community capacity among the recipients of its programmatic thrusts.

IDEAL INSTITUTE OF PHARMACY is now a one-of-a-kind center of excellence in Maharashtra for pharmaceutical education and research.

Education opens doors as usual, wherever you go in the world. From our State-recognized college to our innovative teaching approach and the leading minds who deliver it, we have what you need to reach your potential. The Ideal college of Pharmacy has been the preferred choice for most of the important minds in recent years. One in four students has studied in the Ideal institution, so if you're dreaming of achieving big things, you can be sure you're in the right place in the Maharashtra.

Degree from Ideal college of Pharmacy is respected throughout India, and the choice of subjects you can study is extensive. ...our standard is highly regarded, with experts on many academic topics and our college is in top most searched Pharmacy colleges in India.

Mission

To create intellectually stimulating environment, promote excellence in teaching, research and extension activities and facilitate academic freedom, diversity and harmony.

Vision

To be a world class college committed to create and disseminate knowledge for human development and welfare.

List of courses offered by the institute:

- M. Pharmacy
- B. Pharmacy
- D. Pharmacy



Electricity is supplied by Maharashtra State Electricity Distribution Co. Ltd. and for backup powers supply DG Set of 25KVA is available.

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



Chapter 01: Introduction

Ideal Institute of Pharmacy 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 Detail Energy audit on 20th January 2024.

This report is on the energy audit carried out in Ideal Institute of Pharmacy. 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 Ideal Institute of Pharmacy 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 include electricity bills.



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

The primary goal of the energy audit was to identify sources and areas of potential energy savings and cost saving throughout the Plant by measures of optimization, replacement, retrofitting, and on the other hand, to also provide recommendations on operational and maintenance practices improvements.



Chapter 02: Energy Consumption Details

List of equipment present in the campus:

Rating of Transformer (in KVA)	15KVA
Year of installation of the Transformer	-
Rating of DG Set (in KVA)	25KVA
Rating of Capacitor Bank (if present)	No
Capacity of Solar Power Plant (if installed)	10KW

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:

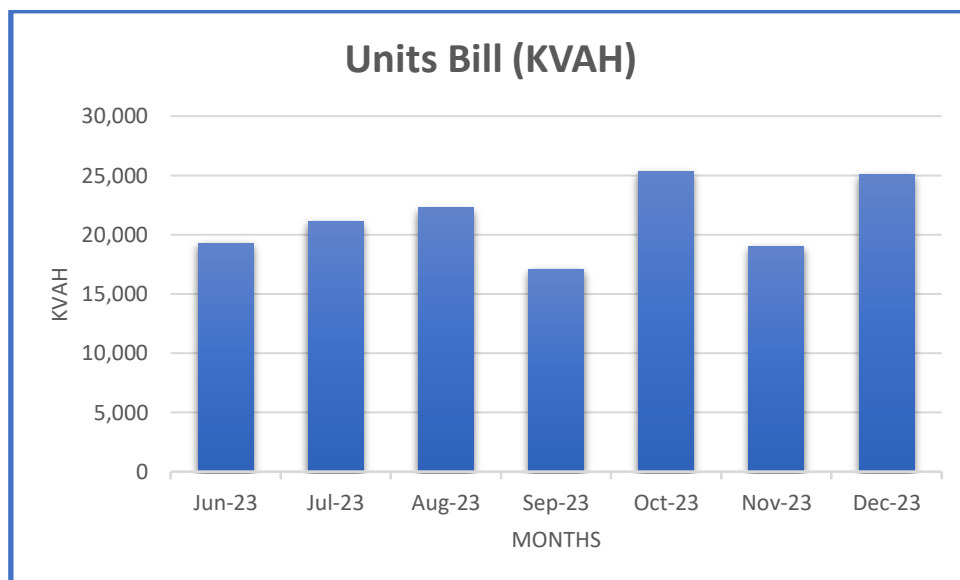
- Electricity supply from Maharashtra State Electricity Distribution Co. Ltd.
- DG set of rating 25KVA each.
- Solar plant of 10KW

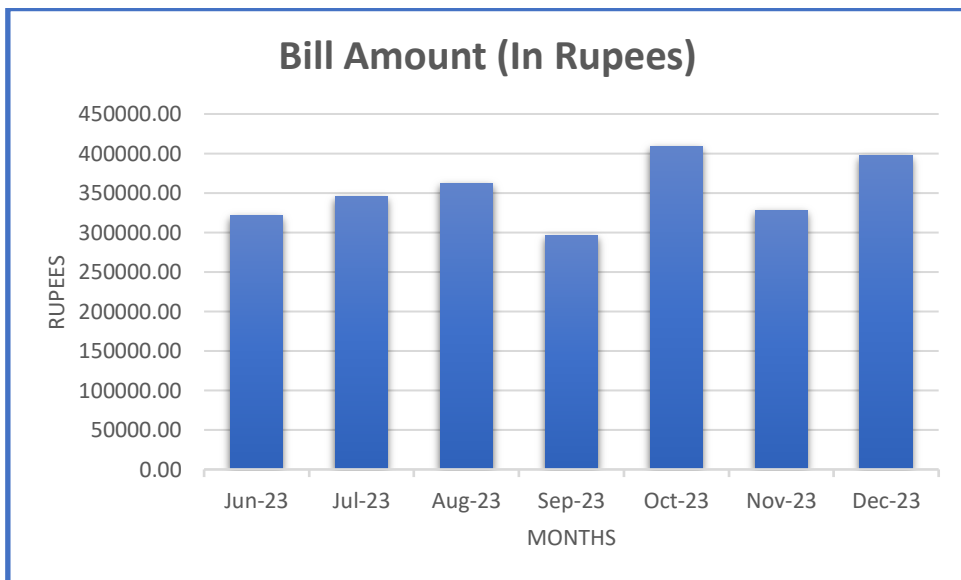
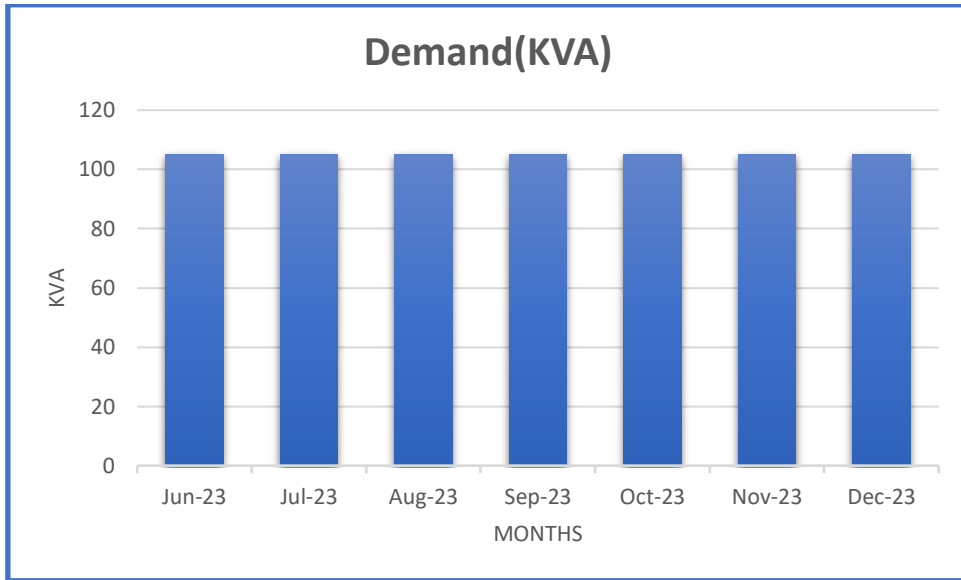


Consumption pattern for energy is given below:

Available electricity bills for the year were collected and following is the summary for energy meter.

Bill Month	Units Bill (KVAH)	Demand (KVA)	Bill Amount (In Rupees)
Jun-23	19,258	105	321025.00
Jul-23	21,098	105	345988.00
Aug-23	22,261	105	362554.00
Sep-23	17,063	105	296501.00
Oct-23	25,306	105	409265.00
Nov-23	19,027	105	328045.00
Dec-23	25,063	105	397900.00







Chapter 03: Lighting System

The lighting inventory of the colleges present in the university 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 Blubs	Class Room	10 W	124	7 hours
LED Tube Light	Corridor	36 W	245	10 hours
LED Blubs	Labs	20W	567	7 hours
LED Blubs	Office	10 W	48	7 hours
LED Tube Light	Common Area	36 W	189	10 hours
LED Blubs	Playground	10 W	56	10 hours
LED Tube Light	Main Gate	36 W	25	10 hours
LED Tube Light	Lobby	36 W	100	10 hours

Observation:

It was observed that energy efficient LED lights are installed in the campus. College management has replaced all the conventional lights with LED lights.

Recommendation:

- Occupancy sensors can be installed in cabins and spaces where continuous lighting is not required.
- Sticker to SWITCH OFF LIGHT and SAVE ENERGY to be displayed.
- Regular cleaning of light fixtures to be done to get maximum lux level.





Chapter 04: 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	6	5KW
Kirloskar	2	3KW

Name of Motor and make	Running Hours	Ampere
3 HP 5 KW	6	2.5

Observation:

All pumps and motors are functioning properly and well maintained.

Recommendation:

Proper maintenance and upkeep of pump and motor to be done.



Chapter 05: Air Conditioning

Split ACs are 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)
10 Window Ac	1,5	3	25	9	yes
27 Split Ac	2	5	24	8	yes

Observation:

- All air conditioners are found to be functioning properly and well maintained.
- Most of the air conditioners used are 3-star which is a good practice.

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.
- University management should consider installation of programmable microprocessor-based energy saver for air conditioners to achieve savings up to 30%.



Photographic Evidence



DG Set



AC Outdoor Units



Water Pump



LED Lights



Water Coolers



AC Indoor Unit



Conclusion

The energy audit conducted at Ideal Institute of Pharmacy has revealed that college is doing good work in having sustainable college. Energy efficient LED lights are installed in the entire campus. To further reduce energy consumption, college should implement the recommendation made in report.

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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