



Smt. Taisaheb Kadam Sevabhavi Foundation &amp; Research Center, Sonai's

# YASH INSTITUTE OF PHARMACY

**AURANGABAD (CHHATRAPATI SAMBHAJI NAGAR)**

 Accredited with Grade B++ by NAAC  
 An ISO 9001:2015 certified Organisation

Approved by Pharmacy Council of India, New Delhi.

Permanently affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad



DTE code : PH2153

## Supporting Documents for Metric 7.1.6

**7.1.6 The institution's initiatives to preserve and improve the environment and harness energy are confirmed through the following:**

- 1. Green audit**
- 2. Energy audit**
- 3.Environment audit**
- 4.Clean and green campus recognitions/awards**
- 5.Beyond the campus environmental promotional activities**

### INDEX

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# MoU

## MEMORANDUM OF UNDERSTANDING

### BETWEEN

Partner 1



Dr. S. S. Angadi  
Principal

Taisaheb Kadam Sevabhavi Foundation and Research Center Sonai  
Yash Institute Of Pharmacy, Aurangabad

Partner 2



**Kedar Khamitkar**

Energy Auditor Certified by BEE,  
Ministry of Power Govt. of India

Kedar Khamitkar & Associates, Latur (MS)  
Empanelled Energy Auditor - MEDA Govt. of Maharashtra  
ISO 9001-2015 Certified

On  
Date : 22/10/2022

ऊर्जा संवर्धन  
धन...  
इंधन....  
पर्यावरण... !  
संवर्धन ऊर्जेचे ... शाश्वत विकासाचे



## MEMORANDUM OF UNDERSTANDING

This MEMORANDUM OF UNDERSTANDING (MOU) has been made at



Smt. Taisaheb Kadam Sevabhavi Foundation and Research Centre Sonai  
**YASH INSTITUTE OF PHARMACY,  
AURANGABAD**

An ISO 9001: 2015 certified Organisation  
Approved by Pharmacy Council of India, New Delhi.  
Directorate of Technical Education, Government of Maharashtra  
Permanently affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad



CERT No : 99 100 22019  
ISO 9001 : 2015

on 22 October, 2022.

### **BETWEEN**

**Kedar Khamitkar & Associates, Latur**

(Certified Energy Auditor by BEE, Ministry of Power Government of India, and  
MEDA Empanelled Energy Auditor and Planner)

### **AND**

**Principal YASH INSTITUTE OF PHARMACY, Aurangabad**

### **AND WHEREAS**

“Kedar Khamitkar & Associates” Latur

(Certified Energy Auditor by BEE, Ministry of Power Government of India, and  
MEDA Empanelled Energy Auditor and Planner)

, and

“**YASH INSTITUTE OF PHARMACY, Aurangabad**” are herein after individually  
referred to as “Party” and collectively as “Parties”: will provide technical assistance and advice,  
as mutually agreeable and appropriate, regarding options to obtain :

- (1) an energy audit to diagnose savings potential ;
- (2) to conduct Energy Saving Program and
- (3) general implementing energy efficiency measures.
- (4) To organize workshop, seminar & training programs for society members.

In order to reduce the energy & fuel consumption i.e. jointly efforts in obtaining energy  
efficiency measures, the Parties agree to the following provisions and process

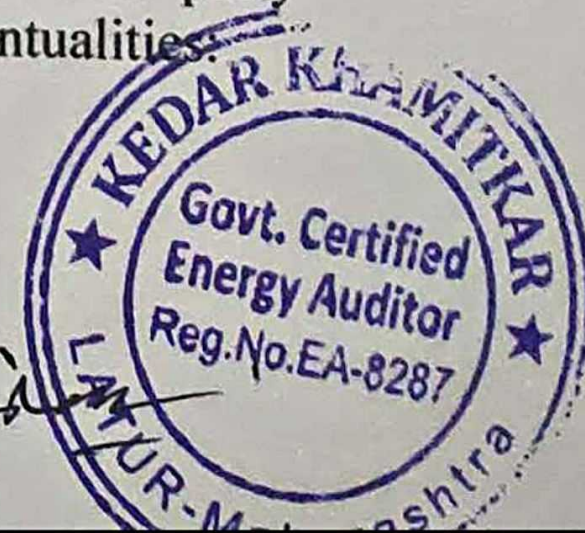
### **AND WHEREAS,**

The term of this MOU will remain valid from the month of 22th October 2022 till 21th October  
2027. The MOU will stay in effect until terminated by mutual agreement or by either party  
giving the other party six (6) months prior written notice in any of the following eventualities.

a) “Kedar Khamitkar & Associates” Latur

(Certified Energy Auditor by BEE, Ministry of Power Government of India, and

*Principal*  
Yash Institute of Pharmacy  
Aurangabad.



MEDA Empanelled Energy Auditor and Planner)

Determines there is no longer congruence of purpose, vision and mission between "Kedar Khamitkar & Associates" Latur

(Certified Energy Auditor by BEE, Ministry of Power Government of India, and MEDA Empanelled Energy Auditor and Planner)

& "Yash Institute of Pharmacy, Aurangabad"; or

b) "Yash Institute of Pharmacy, Aurangabad" determines there is no longer congruence of purpose, vision and mission "Yash Institute of Pharmacy, Aurangabad" & "Kedar Khamitkar & Associates Latur"

or

c) Either party where one party believes the other party has not complied with the MOU and negotiation fails to rectify the matter within a reasonable time.

**AND WHEREAS** in establishing this Memorandum of Understanding (MOU) the parties confirm that they are of similar spirit, have common goals and expect there will be mutual benefit from their separate yet supporting activities.

**AND WHEREAS** each party recognizes that this MOU may create in one party an expectation that results in an obligation for the other party but notes that the intent of each clause or section is to set out the starting point for future relationship building and the determination of clarity and congruence of purpose.

NOW, THEREFORE, NOTWITHSTANDING AND IN SUPERSESSION OF ALL THE PREVIOUS AGREEMENTS, ARRANGEMENTS, UNDERSTANDINGS, ASSURANCES, REPRESENTATIONS, ETC. MADE BY THE PARTIES TO EACH OTHER, THIS MEMORANDUM OF UNDERSTANDING RECORDS THE TERMS AND CONDITIONS WHICH HAVE BEEN AGREED TO BY BOTH THE PARTIES AS UNDER: -

### **1. FIELD OF COOPERATION**

Both the institutions shall evolve a mutually acceptable schedule to conduct / organize the meets to have the benefits of the stake holders.

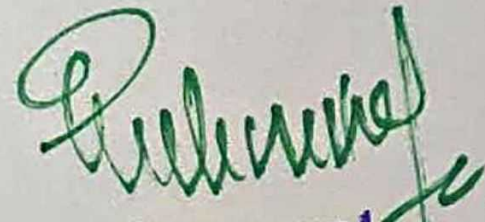
### **ROLES AND RESPONSIBILITIES OF PARTNERS**

"KKAL" as a Partner plays a key role in the entire process of the activity throughout the year. Their primary responsibilities are as follows:

#### **1. Conduction of Energy Management training Program & Awareness**

Conduct the workshops for students, teaching & non-teaching staff as hands on experience in the specialized field of energy management of the institution along with the experts in that domain. Should identify minimum 2 to 3 groups of students based on the mock test conducted and review the feasibility to provide industrial level training on site for about two or more weeks-based nature of work.

#### **2. Allocation of the projects to the students**

  
Principal  
Yash Institute of Pharmacy  
Aurangabad.



One to two industrial application-oriented projects shall be made available to the students. Depending on the personal level interview technical support shall be given for the development of projects. The appropriate guidance shall be provided for this. The selection of the project should enable the students to participate in various project-based competitions to prove their knowledge.

### 3. Experts talk & Lectures series.

In view of development of students conceptual understanding & practical approach to see the real-world application, the guidance in the form of motivational talk shall be provided from the institute. Guidance of appearing in the group discussion to express the thought, skills effectively.

### 4. Participation in curriculum enrichment

There shall be involvement by the experts to give the valuable feedback on designing the experimentation techniques to emphasize more practical knowledge to the students.

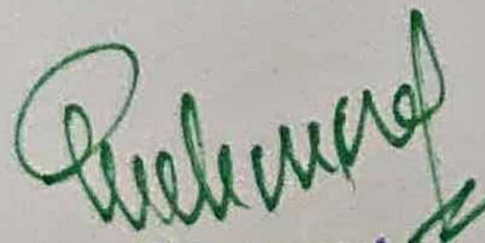
### 5. Active participation in the college activities like Conducting Energy Audit & Providing necessary solutions to save Energy.

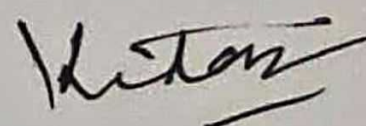
Conduction of Energy Audit, Regular visit at the Institution for providing savage of energy. Regular inspection of electrical laboratory equipment's, electrical generators to provide best environmental solutions.

### FINANCIAL IMPLICATIONS:

It will be mutually decided by both the parties from time to time .



  
Principal  
Yash Institute of Pharmacy  
Aurangabad.



## ROLES AND RESPONSIBILITIES OF

“Yash Institute of Pharmacy, Aurangabad” YIOPA

### **1. Counseling session to the Students/ Faculty.**

The institute will review the feasibility to provide training to the Students/Faculty.

### **2. Technical training**

YIOPA will assist in conducting training sessions, Students & faculties will be spared for the training at the institute premises. Conduct the training as hands on experience in the specialized field of the institution along with the experts in that domain.

### **3. Experts talk & Lectures series**

In view of development of students, teaching & non-teaching staff of the institute conceptual understanding & practical approach to see the real-world application, the guidance in the form of motivational talk shall be provided form the institute.

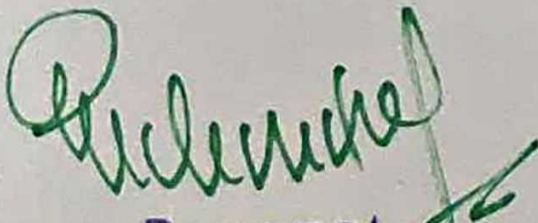
Guidance of appearing in the group discussion to express the thought, skills effectively.

### **4. Participation in curriculum enrichment**

There shall be involvement by the experts to give the valuable feedback on designing the experimentation techniques to emphasize more practical knowledge to the students.

### **5. Active participation in the college activities like performing energy audit & it's management**

The institution will regularly perform energy audits with the Authorised Auditors of Kedar Khamitkar & Associates. The necessary solutions for saving energy will be followed.

  
Principal  
Yash Institute of Pharmacy  
Aurangabad.



We, the undersigned have read and agree with this MOU. Further, we have reviewed the proposed project and approve it.

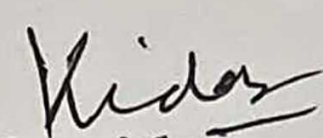
By

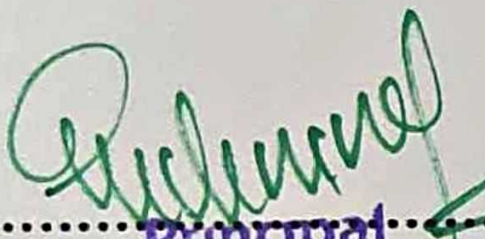
IN WITNESS THEREOF THE PARTIES HERE TO HAVE EXECUTED THIS AGREEMENT IN PRESENCE OF THE WITNESSES.

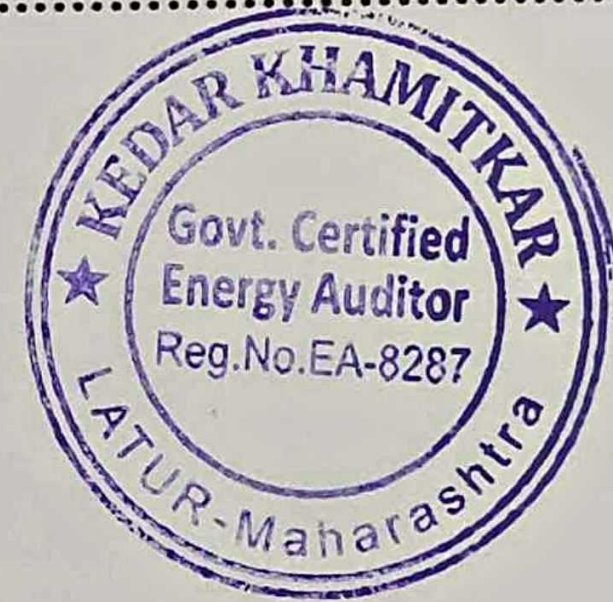
SIGNED SEALED AND DELIVERED

By

Through The Principal,


  
Kedar Khamitkar  
Govt. Certified Energy Auditor

  
.....  
Principal  
Yash Institute of Pharmacy  
Aurangabad.  
Principal for and on behalf  
Yash Institute of Pharmacy, Aurangabad



SIGNED SEALED AND RECEIVED

By

Witness (.....)

Date: 22/10/2022

# Energy Audit Report

(2023-24)



Smt. Taisaheb Kadam Sevadhavi Foundation and research Centre Sonai's

## Yash Institute of Pharmacy

CIDCO Waluj Mahanagar 2, Dharmapur Chh. Sambhajinagar, Maharashtra 431136



### Energy Audit Conducted by



**Kedar Khamitkar & Associates**

**Energy Auditor**

(Empanelled Mahaurja, Govt. of Maharashtra)

M: 9850244701 Email. : [urjabachat@gmail.com](mailto:urjabachat@gmail.com)



## Requirements for the NAAC

**CEA Team has been Conducted Detailed Energy Audit of Yash Institute of B Pharmacy Building Located at Chh. Sambhajinagar - Maharashtra**  
**During Energy Audit We have found Environmental Consciousness and Sustainability initiatives in their Campus.**

1. Percentage of Annual Lighting power requirement met through LED Bulbs  
(Current Year Data) = **25** %
2. **EPI** Energy Performance Index (EPI) of the Building is 4.16 KWh/Sq. Meter



**Kedar Khamitkar**

Energy Auditor

(Certified by Bureau of Energy Efficiency, Ministry of Power, Gov. of India)

**Empanelled Energy Auditor MAHAURJA , Govt. of Maharashtra**



## INDEX

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# ENERGY AUDITS



## Executive Summary

The objective of the audit was to study the energy consumption pattern of the facility, identify the areas where potential for energy/cost saving exists and prepare proposals for energy/cost saving along with investment and payback periods.

The salient observations and recommendations are given below.

Sr.	Recommendations	Savings	Investment	Payback
1	<p><b>Improve Energy Efficiency in Fan System :</b></p> <p>Replace Existing Inefficient Ceiling Fans with Efficient BLDC fans (Qty. 77 Nos.)</p>	5510 KWh/Yr.	Rs. 1.40 Lakhs	2.5 Yrs.
2	<p><b>Install Rooftop Solar Power Generation Plant</b> Capacity 15KWp</p>	14400 KWh/Yr.	Rs. 4.75 Lakhs	3.2 Yrs.
3	<p><b>Improve Lighting system:</b></p> <p>a) Install LED with reflectors b) Install Occupancy sensors with Timing controls</p>	1500 KWh/Yr.	Rs. 0.55 Lakhs	3.6 Yrs.
4	<p><b>Conduct 'Save Energy Program'</b></p>	-	No Investment	Immediate

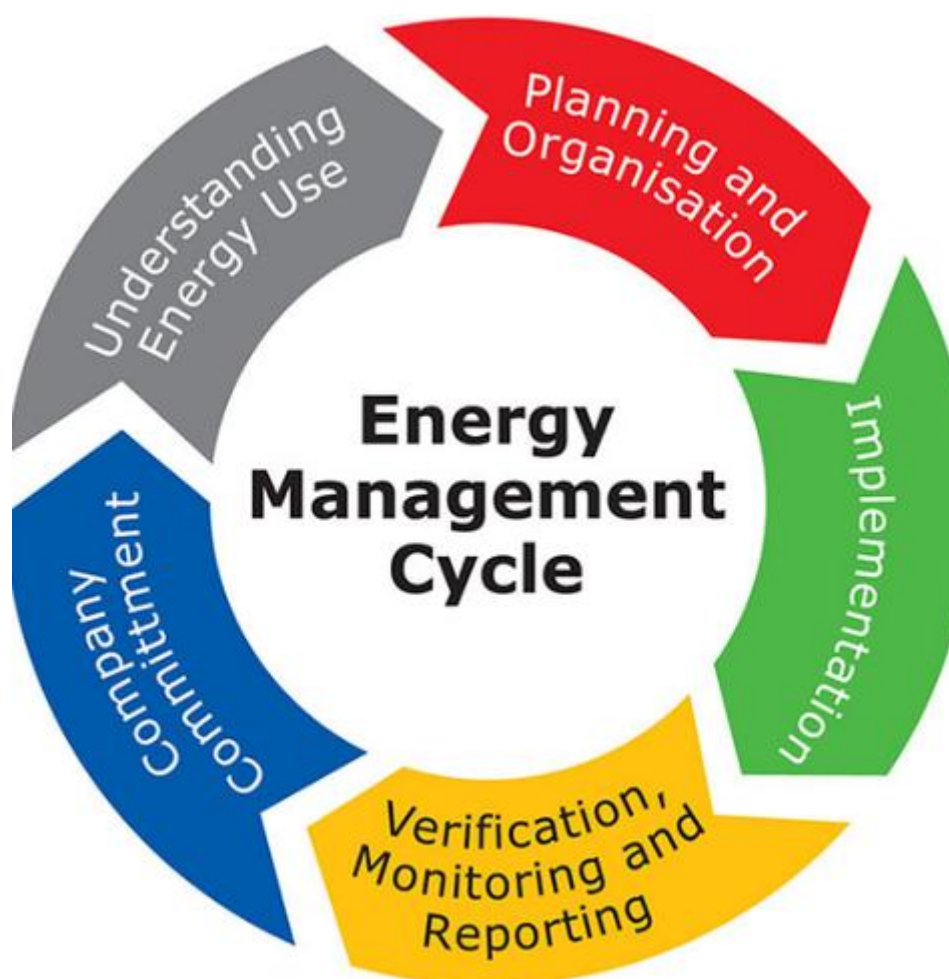


## Preface

An energy audit is a study of a plant or facility to determine how and where energy is used and to identify methods for energy savings. There is now a universal recognition of the fact that new technologies and much greater use of some that already exist provide the most hopeful prospects for the future.

Data collection for energy audit of Yash Institute of B. Pharmacy was conceded by BEE Certified Energy Audit Team. This audit was over sighted to inquire about convenience to progress the energy competence of the campus.

All data collected from each classroom, Laboratory, Library & every room. The work is completed by considering how many Tubes, Fan, A.Cs, Electronic instruments, etc. in each room. How much was participation of each component in total electricity consumption.



## Acknowledgement

We express our sincere gratitude to the Principal Dr. Sachidanand S. Angadi Sir & authorities of Yash Institute of B Pharmacy for entrusting and offering the opportunity of energy performance assessment assignment.

We are thankful to the Coordinator Ms. Suvarna H. Kale Madam & Staff for their positive support in undertaking the task of system mapping and energy efficiency assessment of all electrical system, utilities and other Lab rotary equipment.

The field studies would not have been completed on time without their interaction and guidance. We are grateful to their cooperation during field studies and providing necessary data for the study.



*Kedar*

**Kedar Khamitkar**

- Energy Auditor, Certified by Bureau of Energy Efficiency, Ministry of Power, Govt. of India
- Empanelled MAHAURJA , Govt. of Maharashtra

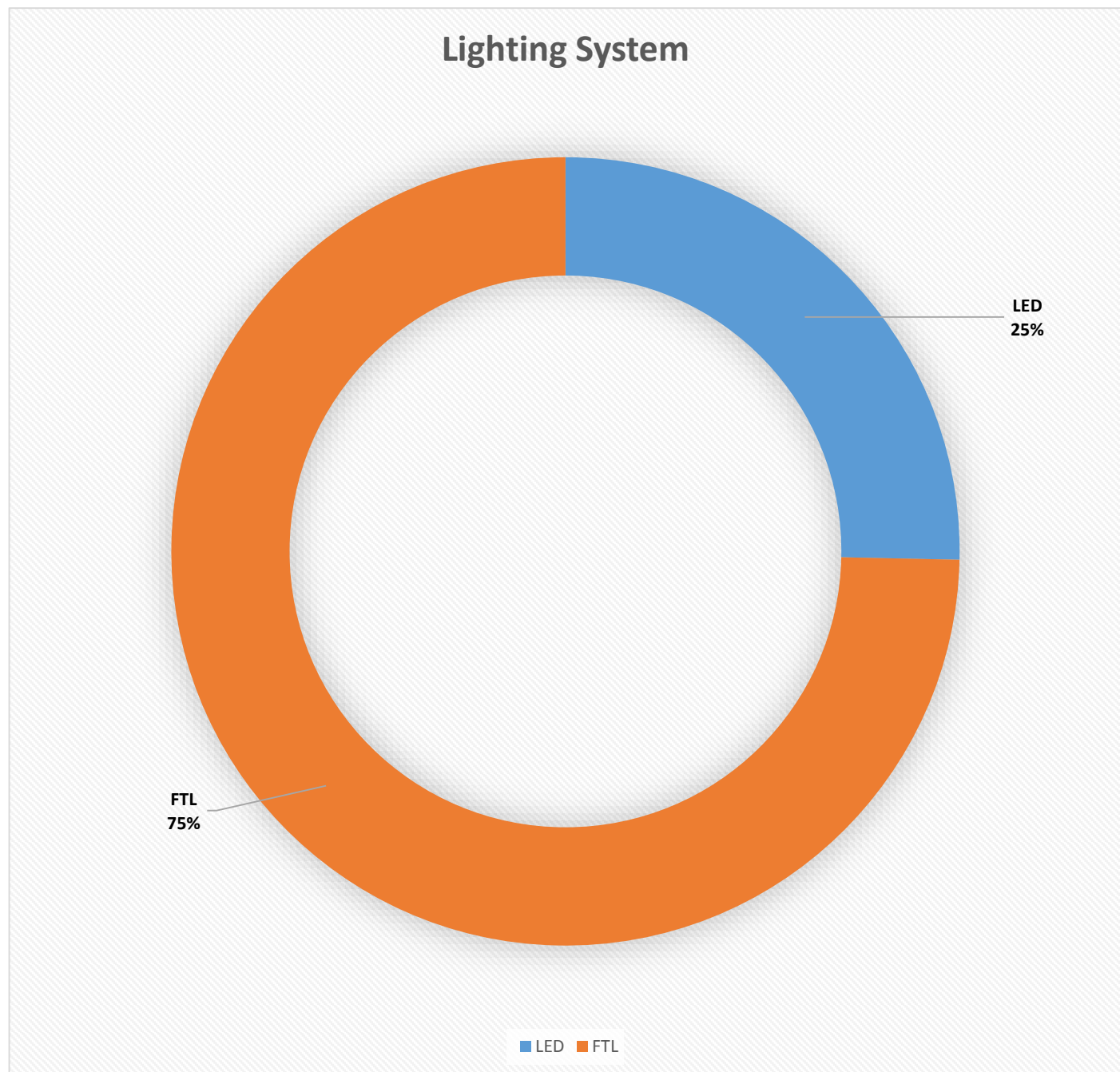
## प्रतिज्ञा

हम सत्यनिष्ठा से प्रतिज्ञा करते हैं कि अपने सभी कार्यों में पेट्रोलियम उत्पादों के संरक्षण हेतु सतत प्रयासरत रहेंगे, ताकि देश की प्रगति के लिए आवश्यक इन सीमित संसाधनों की आपूर्ति अधिक समय तक सम्भव हो सके। आदर्श नागरिक होने के नाते हम लोगों को पेट्रोलियम पदार्थों के व्यर्थ उपयोग से बचने तथा पर्यावरण संरक्षण हेतु स्वच्छ ईंधन का प्रयोग करने के लिए जागरूक करेंगे।

## Requirements for NAAC

### Percentage of Annual Power requirements met through LED at YIOP

Type	Total
LED Lights@20W 75 Connected Load	1500
CFL Bulb Connected Load	4420
<b>Total Lighting Load</b>	<b>5920</b>



**Observations:** Percentage of Annual Power requirements met through LED Bulb/Tube Current year data is 25%

**Suggestions:** Replace 75% Inefficient CFL lighting with Efficient LED Lighting

**Energy Performance Index (EPI)**

**Electrical Energy received to YIOP campus from MSEDCL Maharashtra State Electricity Distribution Company Limited.**

The Specific Energy Consumption (SEC) is the ratio of energy required per square meter.

Total Electricity Consumption 15045 KWh /Year

Total Built-up Area 3616 Sq. Meter

In this case the SEC is evaluated as electrical units consumed per square meter of area.

**Observations:**

**EPI calculated as under (for Electricity): 4.16 KWh/Sq. Meter**

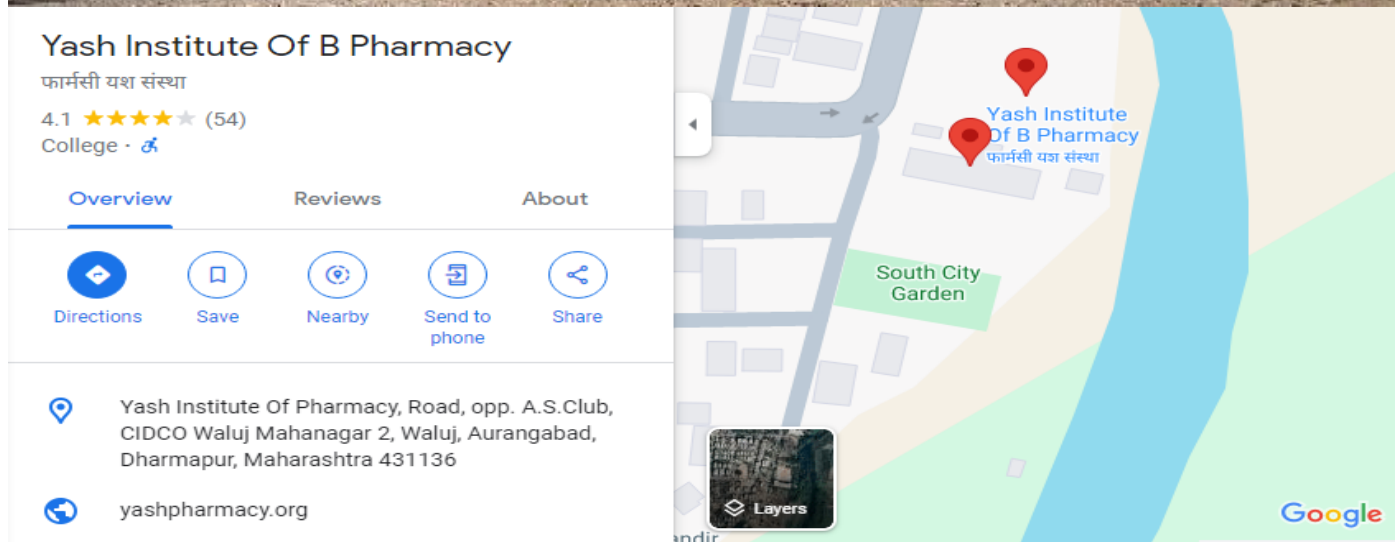
**As per BEE Star Rating Guidelines Existing MIT Buildings may be considered as 5 Star.**

EPI KWH/Sq. Meter/Year	Star Label
80-70	1 Star
70-60	2 Star
60-50	3 Star
50-40	4 Star
<b>Below 40</b>	<b>5 Star</b>



## Chapter: 1 Introduction

Yash Institute of Pharmacy (YIOP), Sambhajinagar is an integral unit of Smt. Taisaheb Kadam Sevabhavi Foundation and Research Center (A/P: Sonai, Tal: Nevasa, Dist: Ahmednagar, bearing registration no E-775, Charity Commissioner, Ahmednagar. YIOP was established in the year 2004 under the able guidance of academican, social reformist, and politician Hon. Shri Yashwantraoji Gadakh Patil (Ex. M.P., M.L.A.). Pharmacy education was typically started in Aurangabad as there were very few opportunities for students of Marathwada to pursue pharmacy education from one of the good institutes. College was established on a Permanent non-grant basis and as a non-minority Private Institution. YIOP conducts a B. Pharmacy course with an intake of 60 and is approved by the Pharmacy Council of India, New Delhi, Directorate of Technical Education (D.T.E), Government of Maharashtra, and is permanently affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. YIOP is recently certified with ISO 9001:2015 by TUV SUD South Asia Pvt. Ltd. The Institute is a single Institutional campus located in a clean, green, and well-maintained campus at South city, Waluj Road, CIDCO Mahanagar-II. YIOP has imparted efficient pharmacy education to the students since its inception with its infrastructural facilities meeting requirements specified by statutory bodies viz. Pharmacy Council of India (PCI) and Dr. Babasaheb Ambedkar Marathwada University, Chh. Sambhajinagar.



**Address :** Dharmapur Waluj Mahanagar 2, Chh. Sambhajinagar , Maharashtra 431136



## Chapter 2: Energy Audit Objectives

Yash Institute of Pharmacy (YIOP) Building entrusted the work of conducting a detailed Energy Audit of campus with the main objectives given below:

- To study the present pattern of energy consumption
- To identify potential areas for energy optimization
- To recommend energy conservation proposals with cost benefit analysis.

### Scope of Work, Methodology and Approach:

Scope of work and methodology were as per the proposal. While undertaking data Collection, field trials and their analysis, due care was always taken to avoid abnormal situations so as to generate normal/representative pattern of energy consumption at the facility.

### Approach to Energy Audit:

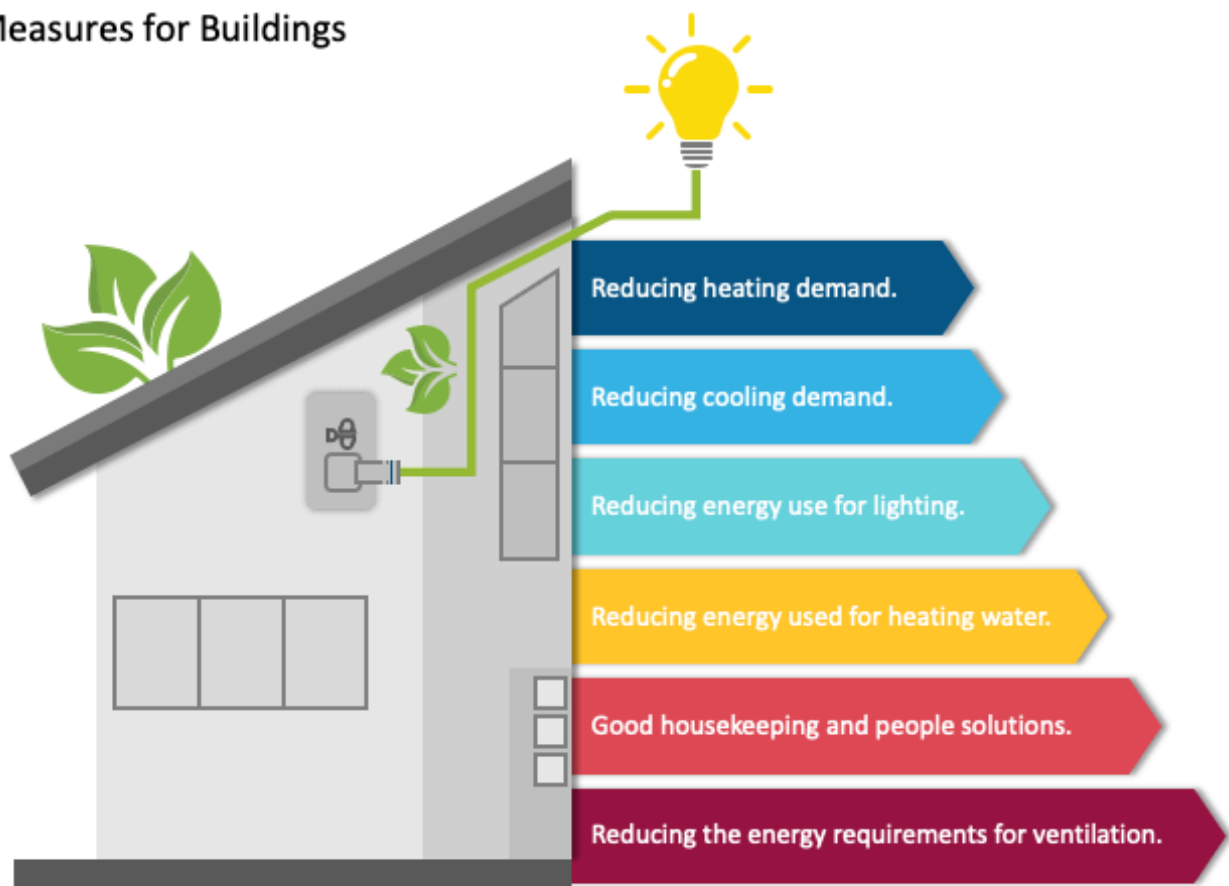
We focused our attention on energy management and optimization of energy efficiency of the systems, sub systems and equipment's. The key to such performance evaluation lies in the Sound knowledge of performance of equipment's and system as a whole.

### Energy Audit:

The objective of Energy Audit is to balance the total energy inputs with its use and to identify the energy conservation opportunities in the stream. Energy Audit also gives focused Attention to energy cost and cost involved in achieving higher performance with technical and financial analysis. The best alternative is selected on financial analysis basis.

## ENERGY EFFICIENCY IN BUILDINGS

### EE Measures for Buildings



## Chapter: 3 Energy Audit Methodology

Energy Audit Study is divided into following steps

### 1. Historical data analysis:

The historical data analysis involves establishment of energy consumption pattern to the established base line data on energy consumption and its variation with change in production volumes.

### 2. Actual measurement and data analysis:

This step involves actual site measurement and field trials using various portable Measurement instruments. It also involves input to output analysis to establish actual operating Equipment efficiency and finding out losses in the system.

### 3. Identification and evaluation of Energy Conservation Opportunities:

This step involves evaluation of energy conservation opportunities identified during the energy audit. It gives potential of energy saving and investment required to implement the Proposed modifications with payback period.

### 4. Energy Audit Instruments used

Power Quality Analyser; LUX Meter; Earth resistance Tester; Non Contact Thermometer etc.



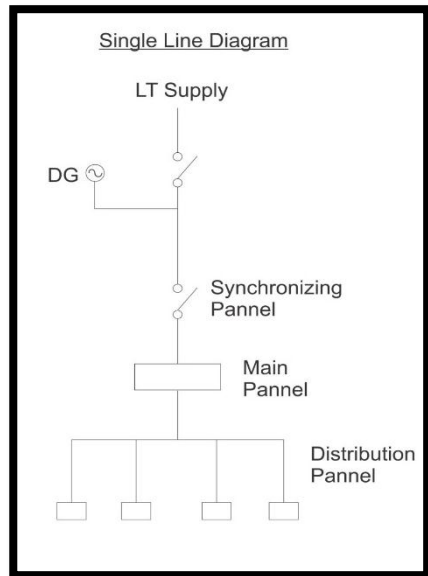
GPS Map Camera

Waladgaon, Maharashtra, India

## Chapter: 4. Study of Electrical Systems

### Electrical Energy Sources:

1. The electrical supply to the Institute comes from MSEDCL LT supply via Stabilizer



2. Diesel Generator



**Observations:** DG Set found without safety guard

**Suggestions:** The unit should be placed in a protective enclosure. The generator should be placed on a level surface, which is non-combustible and non-conducting, a little above ground level to prevent contact from rising water levels.

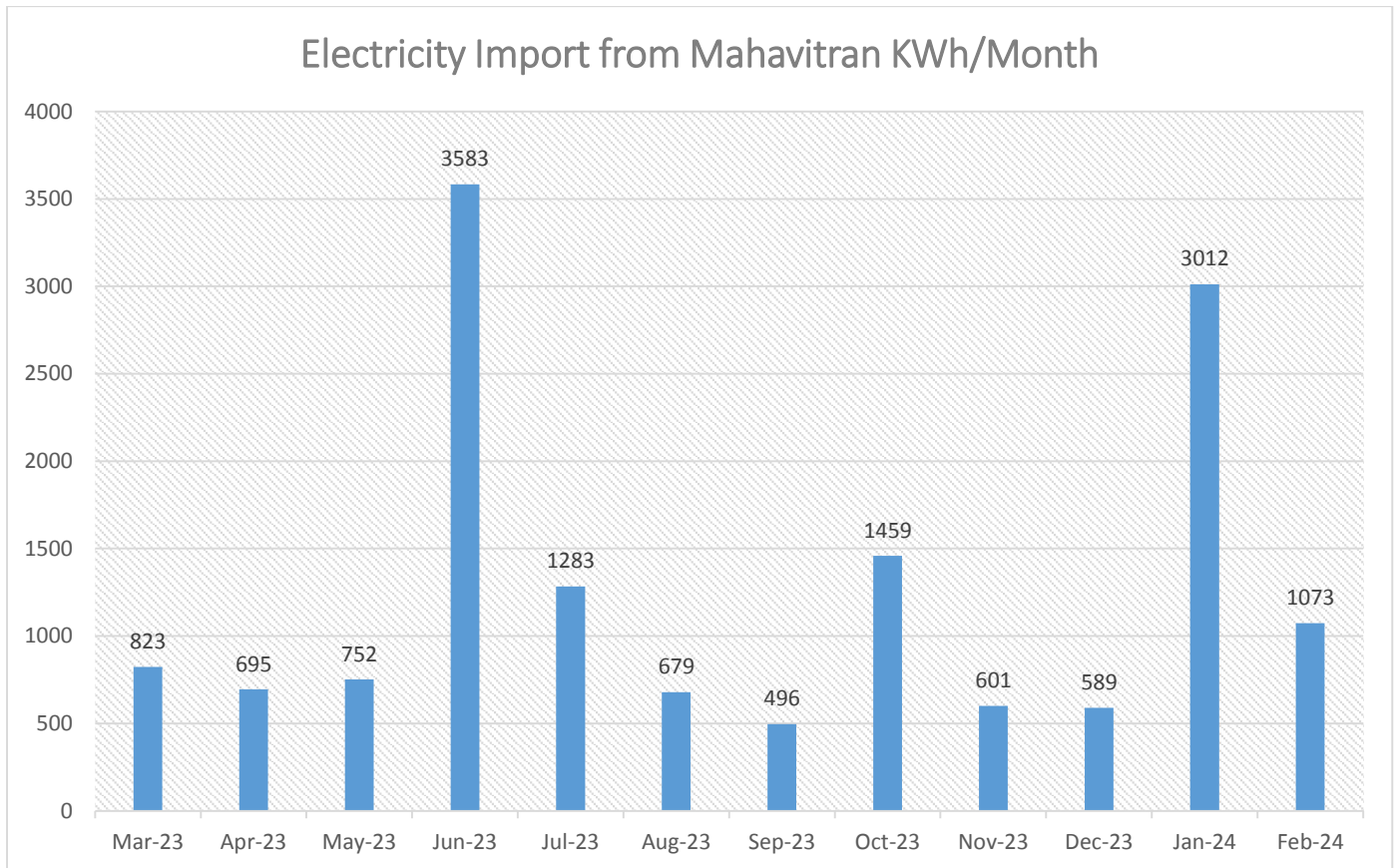


## MSEDCL Supply

MSEDCL electrical bills from March 23 to Feb 24 have been studied.

### Energy Meter Details:

		<b>Consumer No.</b>	490110326154
<b>Sr. No.</b>	<b>Details of Electricity Demand</b>	<b>Tariff</b>	52 LT-II A
1	Sanctioned Load	<b>2</b>	KW



### Observations :

Electricity Imported from Mahavitrans **15045** Units / Year

### Suggestions :

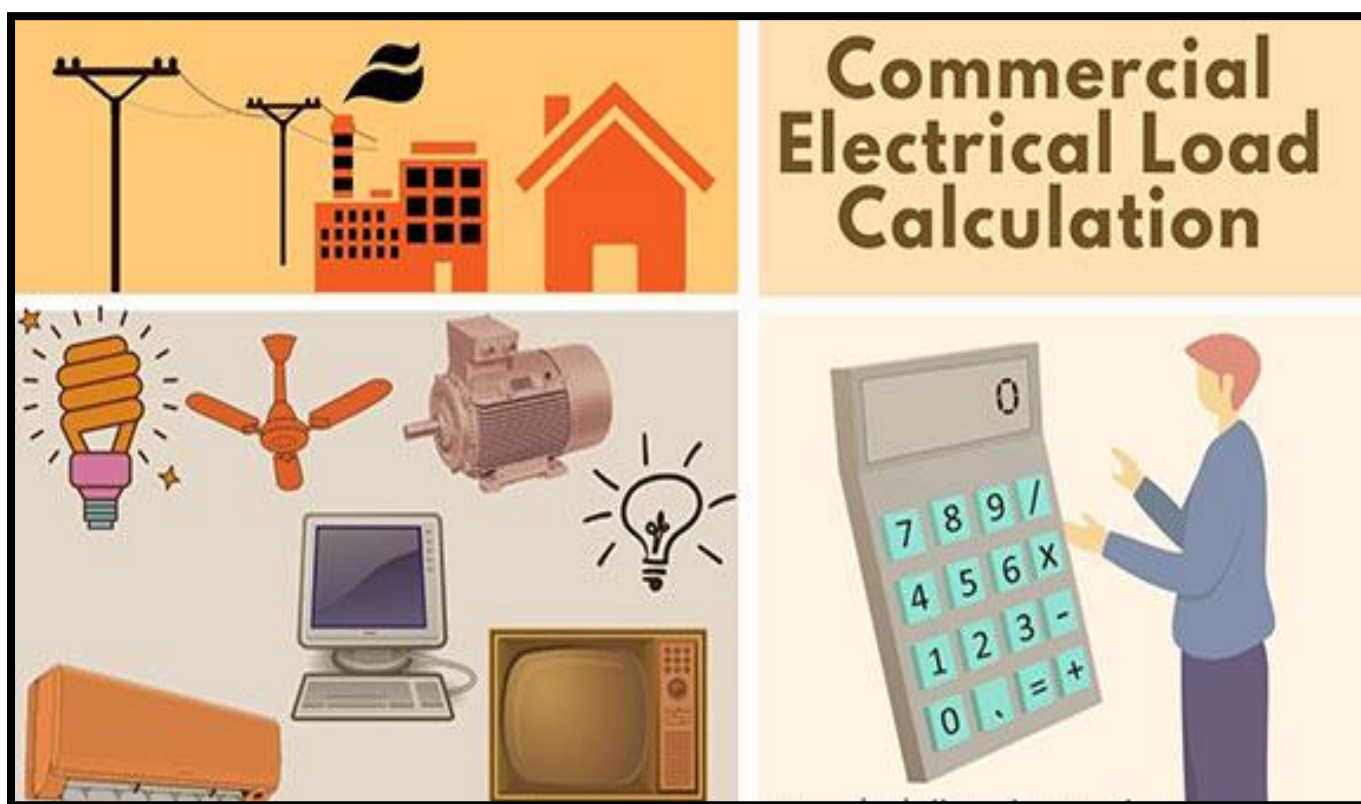
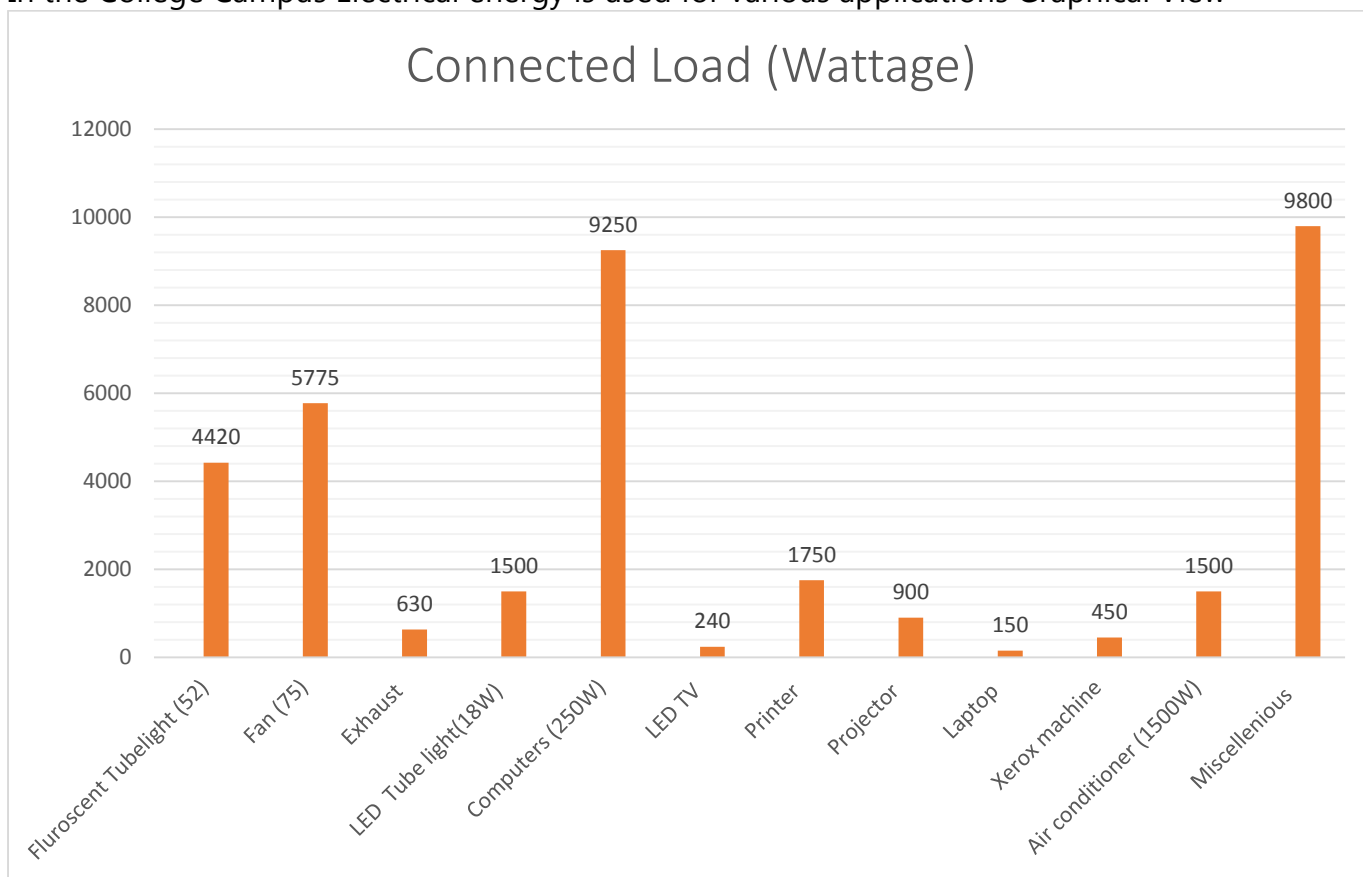
1. Install rooftop Solar Power plant of 15 KWp capacity
2. Install Occupancy Sensors to minimize electricity unknown losses.



## Connected Load Details

### Major Energy use and Areas:

In the College Campus Electrical energy is used for various applications Graphical View



## Chapter: 5 Performance Evaluation

### 5.1 Fan System:

Total number of fans used in the campus = **77** No's

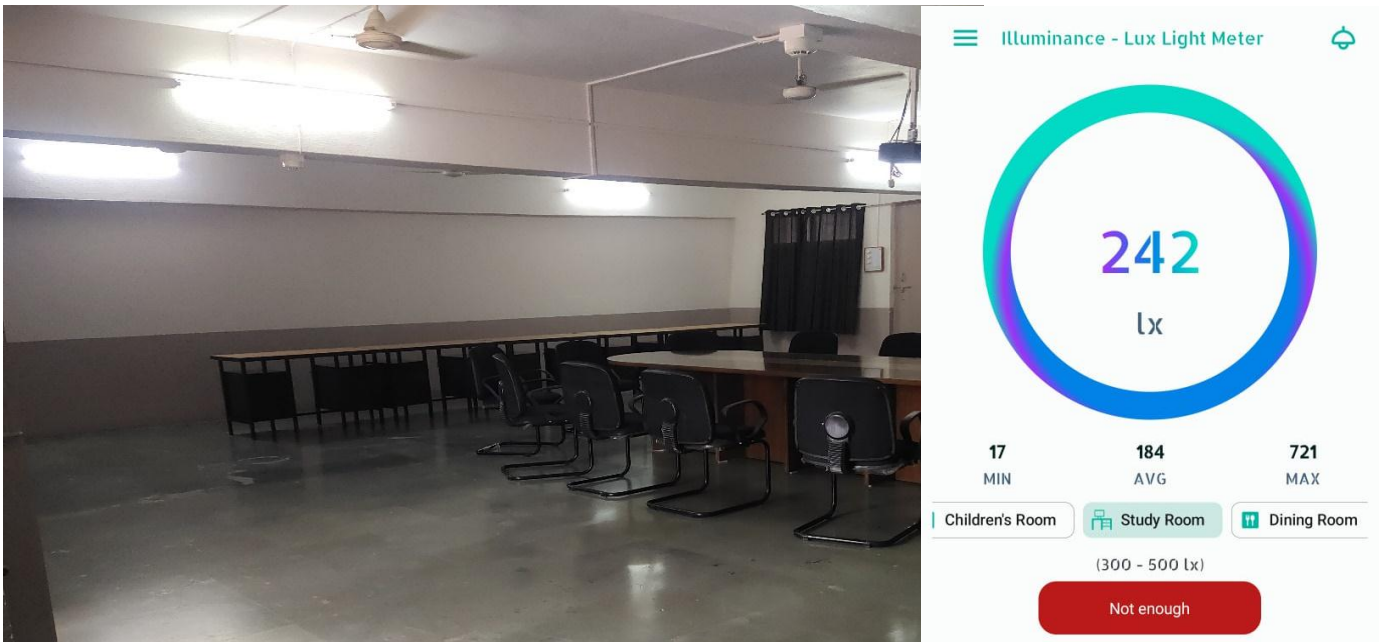
Consider @200 days Working 8 Hrs.

- Number of fans to be replace = **77** Nos.
- The Total Current Consumption = **14780** kWh
- The Expected fan Consumption = kWh
- Expected Saving per year = **5510** kWh/year

**Suggestions: Replace existing Inefficient Fan System (75W) with Five Star BLDC (28W)**



## 5.2 Lighting System:



**Observations:** In the campus Majority Existing Tube are installed without reflectors.

Measured Lux level found 242 which is not enough

**Suggestions: Improve effectiveness of Lighting System.**

**Increase Lighting Efficiency by using reflectors.**

Light globes generally disperse light in all directions from the source. If a ceiling mounted light does not direct the light back down to the working plane, more fittings will be required to achieve the required lux levels. So the effectiveness of the reflectors (or minimizing losses due to poor reflectors) is important. Reflectors should be both reflective as well as carefully designed to disperse light effectively on the working plane at the design height of the fitting (e.g., light should not be concentrated in one area, providing too much light, whilst falling short of required levels in another area).

**Proposed:-**

**Silver Reflectors.** This is the reflector that reflects the most light.

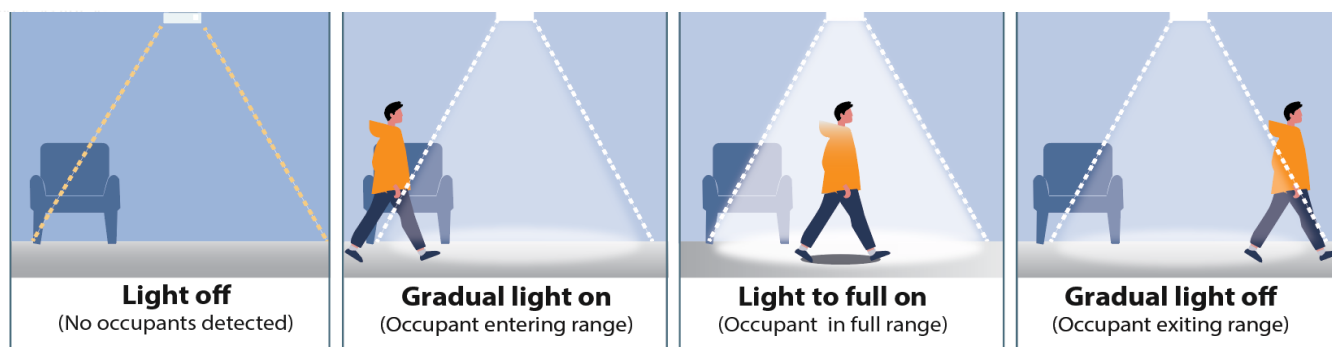
**White Reflectors.** More flexible between indoor and outdoor use.

1. Gold Reflectors
2. Black Reflectors
3. White Reflectors



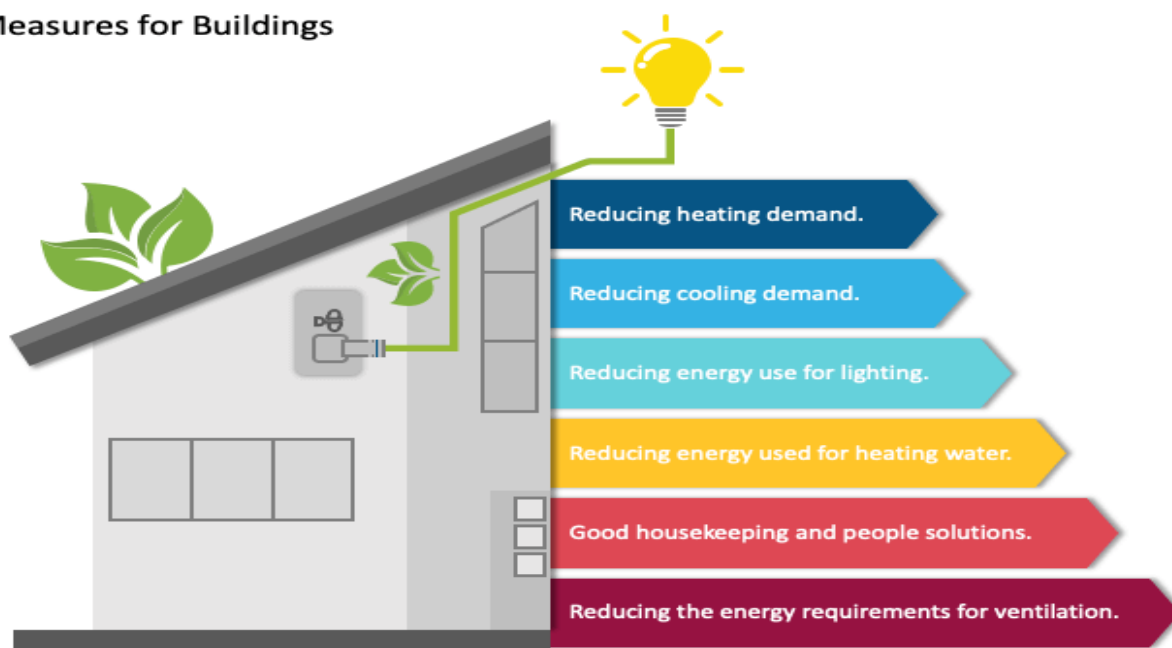
**Recommended LUX Level :-**

Area	Recommended Min. Illumination (in LUX)
1. Bathroom	100-150
2. Entrance – hall	200
3. Consultation room	100
4. Corridor , General	300
5. Ward	150-300
6. Delivery Room	400
7. Diagnostic x ray , Work Place	300
8. Doctors office	300
9. Enquiry Office	500
10. Nursing Station (Day)	300
11. Nursing Station (Night)	30-100
12. Kitchen	300
13. Laboratory , Pathology	300-500
14. Maternity Department	400
15. Operating Theatre	10000-50000
16.. Toilets	100-150
17. Store	100
18. Pharmacy	300
19. Scrub Area, Operating Rooms	300
20. Mortuary	200



**ENERGY EFFICIENCY IN BUILDINGS**

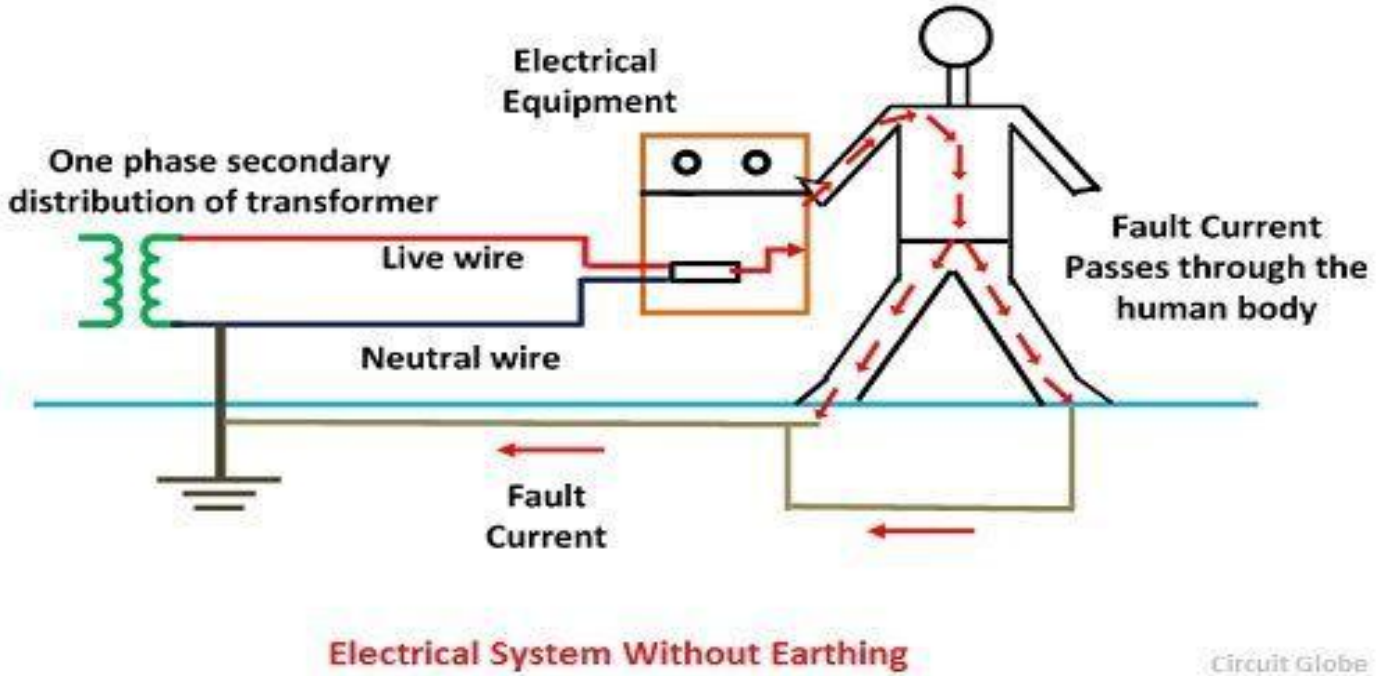
EE Measures for Buildings





## Chapter: 6 Electrical Safety: Earth Resistance Measurement

Ideally a ground should be of zero ohms resistance. There is not one standard ground resistance threshold that is recognized by all agencies. However, the NFPA and IEEE have recommended a ground resistance value of 5.0 ohms or less. The use of chemical elements around the electrode of earthing systems reduces the earth resistance which improves the efficiency of these systems.



### Earth Resistance Testing done by digital earth Socket Tester

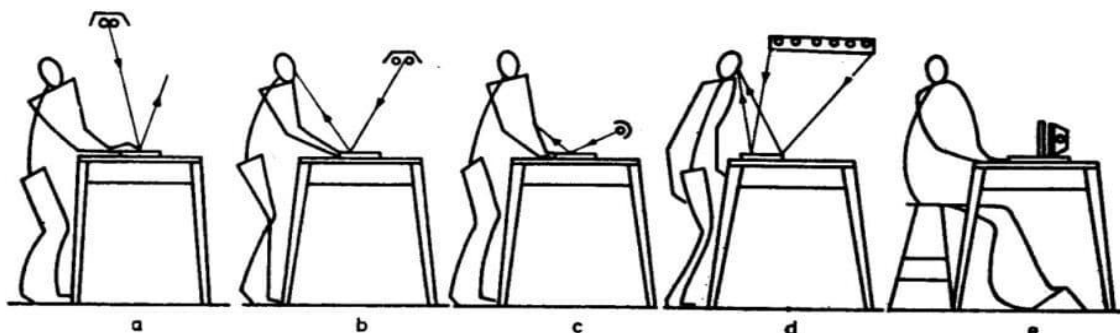


**Observations:** Some of the places checked & found ok correct

**Suggestions:** NFPA and IEEE have recommended a ground resistance value of 5.0 ohms or less.

## Chapter: 7 Guidelines for Identified Energy Saving Opportunities

- Use as much natural day light as possible by use of translucent roofing sheets.
- Use day lighting effectively by locating work stations requiring good illuminance near the windows.
- Minimize illuminance in non- task areas by reducing the wattage of lamps or number of fittings
- Avoid use of incandescent/tungsten filament lamps. The power consumed by these lamps is 80% more than the fluorescent lamps (discharge) for same lumen output.
- Use electronic ballasts in place of conventional ballast for fluorescent lamps.
- Task lighting saves energy, utilize it whenever possible.
- All surfaces absorb light to some degree and lower their reflectance. Light colored surfaces are more efficient and need to be regularly painted or washed in order to ensure economical use of light.
- Maintenance is very important factor. Evaluate present lighting maintenance program and revise it as necessary to provide the most efficient use of lighting system.
- Clean luminaries, ceilings, walls, lamps etc. on a regular basis.
- Controls are very effective for reducing lighting cost. Provide separate controls for large ratings.
- Install switching or dimmer controls to provide flexibility when spaces are used for multiple purpose and require different amounts of illumination for various activities.
- Switching arrangements should permit luminaries or rows of luminaires near natural light sources like windows or roof lights to be controlled separately.
- Separate lighting feeder and maintain the feeder at permissible voltages by using transformers. • Install occupancy sensors for indoor cabin light controls



- a*— Luminaire located to prevent reflected glare; reflected light does not coincide with angle of view.  
*b*— Reflected light coincides with angle of view.  
*c*— Low-angle lighting to emphasize surface irregularities.  
*d*— Large-area surface source and pattern are reflected toward the eye.  
*e*— Transillumination from diffuse source.

FIG. 2 EXAMPLES OF PLACEMENT OF SUPPLEMENTED LUMINAIRES



## Conduct Institutional Training / Awareness Program 14<sup>th</sup> December 'National Energy Conservation day'

The National Energy Conservation Day is organised on 14<sup>th</sup> December every year by the Bureau of Energy Efficiency (BEE) with an aim to showcase India's achievements in energy efficiency and conservation. BEE - Ministry of Power celebrate every year Energy Conservation Week from 14<sup>th</sup> December – 20<sup>th</sup> December.

### Create Awareness:

All Class Rooms and labs to have Display Messages regarding optimum use of electrical appliances in the room like, lights, fans, computers and projectors. Save electricity.

1. There has to be Institute level student community that keeps track of the energy consumption Parameters of the various departments, class rooms, halls, areas, meters, etc.
2. Energy auditing inside the campus has to be done on a regular basis and report should be made public to generate awareness.
3. Need to create energy efficiency/ renewable energy awareness among the college campus i.e. solar, wind, Biogas energy. College should take initiative to arrange seminars, lectures, paper presentation competition among students and staff for general awareness.

### Display the stickers of save electricity

Save nature everywhere in the campus. So that all stakeholders encouraged to save the electricity.

- Most of the time, all the tube lights in a class room are kept ON, even though, there is sufficient light level near the window opening. In such cases, the light row near the window may be kept OFF.
- All projectors to be kept OFF or in idle mode if there will be no presentation slides.
- All computers to have power saving settings to turn off monitors and hard discs, say after 10 minutes/30 minutes.
- The comfort/Default air conditioning temperature to be set between 24°C to 26°C.

### USE OF ELECTRICITY DURING PEAK HOUR AND OFF PEAK HOUR

The applicable electricity tariff is not also based on timing of the day but it may not be applicable in case of domestic LT/ HT type connection. This will also helpful in maintaining the demand graph. It is recommended to avoid use of electrical gadget for cleaning, watering etc. during the peak hours. This type of work should be operational during the off peak hour.



## Chapter 8: Conclusion

A total Investment of Approx. Six lakhs & Seventy thousand rupees (Rs. 6.70/- Lakhs) amount is estimated for the energy efficiency improvement & renewable energy projects

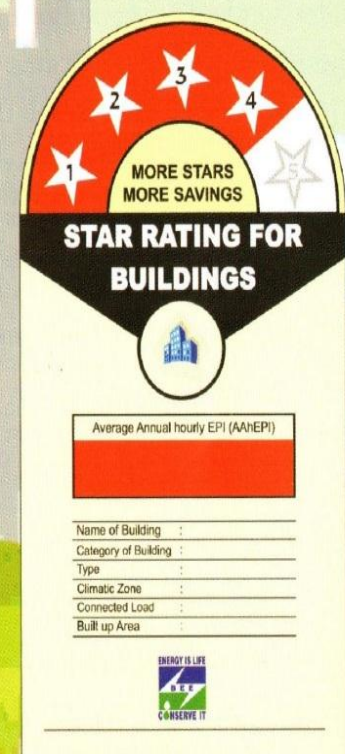
**Energy Savings expected around 21410 KWH/year.**

# Energy Efficiency in Buildings

Checking Energy Efficiency at the Designing Stage by following Energy Conservation Building Code (ECBC)

BEE, Ministry of Power, Govt. of India launched Energy Conservation Building Code (ECBC) in 2007. The main features of ECBC are:

- To provide minimum requirements for the energy efficient design and construction of buildings.
- It considers five climatic zones in India, sets minimum energy performance standards for large commercial buildings or building complexes that have a connected load of 500 kW or greater.
- The code is also applicable to all buildings with a conditioned floor area of 1,000 m<sup>2</sup> (10,000 ft<sup>2</sup>) or greater, and is recommended for all other buildings also.
- The provisions of this code apply to:
  - (a) Building envelopes, except for unconditioned storage spaces or warehouses
  - (b) Mechanical systems and equipment, including heating, ventilating, and air conditioning
  - (c) Service hot water heating
  - (d) Interior and exterior lighting
  - (e) Electrical power and motors.



# ❖ Energy Audit Certificate ❖

Year - 2023-24

**This is to certify that following utility has carried out  
College building Energy Audit  
in recognition of the organizations efforts for  
sustainable development.**

Name of the Institute	: <b>YASH INSTITUTE OF PHARMACY</b> Chhatrapati Sambhajinagar PIN - 431136
Date of Energy Audit	: 30.03.2024
Name of Energy Auditor	: <b>KEDAR KHAMITKAR</b> Certified by BEE (Bureau of Energy Efficiency) Ministry of Power, Govt. of India
EA Certificate No . EA/03/2024/30/YIOPCS	: 

Empaneled Energy Auditor & Planner

Reg no. MEDA/ECN/CR-14/2022-23/EA-07

महाराष्ट्र ऊर्जा विकास अभिकरण  
(Govt. of Maharashtra Institution)



*Kedar*  
**Kedar Khamitkar**  
Energy Auditor CEA-8287  
Certified by BEE,  
Ministry of Power, Govt. of India



**Kedar Khamitkar & Associates, Latur**  
Empanelled with Mahaurja, Govt of Maharashtra Institution



**ISO 9001-2015 Certified**



Note : Certificate is based on organisation compliance on energy audit  
recommendations and continual maintenance of the system & conduction of surveillance audit



Smt. Taisaheb Kadam Sevabhavi Foundation &amp; Research Center, Sonai's

# YASH INSTITUTE OF PHARMACY

**AURANGABAD (CHHATRAPATI SAMBHAJI NAGAR)**

 Accredited with Grade B++ by NAAC  
 An ISO 9001:2015 certified Organisation

Approved by Pharmacy Council of India, New Delhi.

Permanently affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad




DTE code : PH2153

## List of Beyond The Campus Environmental Promotional Activities

**Academic year 2023-2024**

Sr. No.	Name of Activity	Date of Activity	Organizing unit/ agency/ Collaborating agency
1.	Golwadi Village and school cleaning activities	20/03/2024	NSS Cell
2.	Karnapura Jatra Swachata Abhiyan	18/10/2023	NSS Cell




  
 Principal  
 Yash Institute of Pharmacy,  
 Aurangabad.

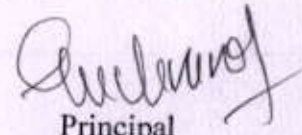
**NOTICE**  
**Date: 14/03/2023**  
**NSS**  
**Activity No.2023-24-88**

**Subject: Village and School Cleaning Activities**

This is to inform all NSS volunteers, students, and teaching staff that we will be organizing cleaning activities in the village and at Z.P. School. These activities aim to promote cleanliness and enhance the overall environment of our community. Participants will be assigned to various locations around the village to pick up litter, clear debris, and beautify public spaces. NSS volunteers will also focus on cleaning and maintaining the surroundings of Z.P. School to provide a healthier learning environment for students.

  
NSS Coordinator  
(Dr. Rohit Chavhan)



  
Principal  
**Principal**  
**Yash Institute of Pharmacy**  
**Chhatrapati Sambhajnagar**

**YASH INSTITUTE OF PHARMACY, AURANGABAD**  
**ACTIVITY REPORT**

CMF-ACT-F002/V01/W.e.f.: 01-January-2022

(Note: Original Signed copy to be retained in portfolio file. Submit one photocopy of the signed report to IQAC Cell. Upload PDF copy of signed report on ISO Dashboard)

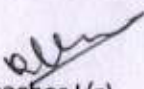
**1. Brief details of the activity:**

Activity Register Number (To be issued from IQAC Cell):	2023-24-88
Affected Metric No. (s):	3.4.3
Activity Title:	Village and School Cleaning activities.
Activity Date:	20/03/2024
Session:	Jan-June 2024
Academic Year:	2023-2024
Type of activity:	Extracurricular
Portfolio Cell/ Committee:	NSS
Teacher I/c:	Dr. Rohit Chavhan
Student I/c:	Sahil Pithore
Objective:	The objective of this activity is to contribute to the cleanliness and sanitation of the village and school premises, promoting environmental awareness and community participation.
Target audience:	200
No. of participants:	Student: 50                      Faculty: 04


(Attached copy of attendance sheet with this report)

**2. Brief description of the activity conducted:**

The Village and School Cleaning Activities were organized by the NSS committee of Yash Institute of Pharmacy with the aim of fostering a sense of responsibility towards environmental conservation and promoting cleanliness in the community. The activity encompassed cleaning and beautification efforts both within the village and on the premises of a local school. The event commenced with an orientation session where the objectives and significance of the cleaning activities were explained to the participants. Teams were formed comprising both students and faculty members, each assigned specific areas within the village and school for cleaning. The cleaning activities included removal of litter and debris, sweeping of roads and pathways, clearing of drainage channels, and beautification of public spaces through planting of trees and flowering plants. Participants were provided with necessary cleaning equipment such as

  
(Teacher I/c)



  
(IQAC I/c)

  
PRINCIPAL  
**Principal**  
Yash Institute of Pharmacy  
Chhatrapati Sambhajanagar



**YASH INSTITUTE OF PHARMACY, AURANGABAD  
ACTIVITY REPORT**

CMF-ACT-F002/V01/W.e.f.: 01-January-2022

brooms, gloves, and garbage bags to facilitate the tasks. In addition to physical cleaning, awareness sessions on waste management, recycling, and sustainable practices were conducted to educate participants about the importance of environmental conservation and waste reduction. The cleaning activities were carried out with enthusiasm and dedication, with participants working together in a spirit of cooperation and teamwork to achieve the desired objectives. The event concluded with a debriefing session where participants reflected on their experiences and discussed ways to sustain the momentum of cleanliness initiatives in the community.

**3. Impact of the activity (Outcomes for students and/or staff):**

The cleaning activities contributed to the improvement of hygiene and sanitation standards within the village and school premises, creating a cleaner and healthier environment for residents and students. Through the awareness sessions conducted during the activity, participants gained a better understanding of environmental issues and the importance of adopting sustainable practices to protect the environment. The participation of students and faculty members in the cleaning activities fostered a sense of community pride and ownership, encouraging greater involvement in community development initiatives. The activity provided participants with hands-on experience in community service and environmental stewardship, empowering them to take proactive measures towards creating positive change in their surroundings. The event laid the foundation for continued efforts towards maintaining cleanliness and promoting environmental sustainability in the village and school, with participants expressing their commitment to ongoing initiatives in the future.

**4. Representative Photographs (Geotagged Photographs):**



(NSS Volunteers Cleaning the Golwadi Village)

*[Signature]*  
(Teacher I/c)

*[Signature]*  
IQAC I/c

*[Signature]*  
PRINCIPAL

**Principal**  
**Yash Institute of Pharmacy**  
**Chhatrapati Sambhaji Nagar**



Smt. Taisaheb Kadam Sevabhavi Foundation & Research Center, Sonai's

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Mankind

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## Geotagged Photographs of Village and School Cleaning activities. 20/03/2024





Smt. Taisaheb Kadam Sevabhavi Foundation & Research Center, Sonai's

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(NSS Volunteers Cleaning the Golwadi Village)



*Principals*  
Principal  
Yash Institute of Pharmacy,  
Aurangabad.