SHIKSHAN MANDAL BHAGUR'S,
AFFILIATED TO SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE,
Shri. Eknathrao sahadu shete Arts, Commerce & Science College, Deolali Camp, Nashik
Matoshree Yamunabai Karandikar Shaikshanik Sankul, Sv.No.306/1A/4B/2, Barnes School Road, Deolali Camp,
Tal & Dist Nashik-422401.

E-mail: smbcollege2019@gmail.com COLLEGE ID: PU/AN/ACS/181/201 Ph.No.0253-4032579

Criterion-VII: Institutional Values and Best Practices

«Key Indicator: 7.1 »: « Institutional Values and Best Practices »

«QnM»: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

1. Green Audit/ Environment Audit
2. Energy Audit
3. Clean and Green campus initiatives
4. Beyond the campus environmental promotion activities

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E-mail: smbcollege2019@gmail.com COLLEGE ID: PU/AN/ACS/181/2019 Ph.No.0253-40325?9

DECLARATION

This document serves to affirm that the information, reports, authentic copies of supporting documents, numerical data, and other materials submitted in the files have been verified by the Internal Quality Assurance Cell (IQAC) and are accurate according to the records.

This declaration is intended for the NAAC accreditation of the Higher Education Institution (HEI) for the first cycle period from 2019-20 to 2023-24.

Place: - Deolali Camp

Co-Ordinator
IQAC
Shri Eknathrao Sahadu Shete
Arts, Comm. & Sci.Senior College
Deolali Camp, Nashik

Shri Eknathrao Sahadu Shete Arts, Comm. & Sci. College Deolali Camp Nashik 422401

Principal
Shri Eknathrao Sahadu Shete
Art's Comm. & Sci. Senior College,
Deolali Camp, Nashik

Green Audit Report

(2023-24)

Shikshan Mandal Bhagur's

Shri Eknathrao Sahadu Shete
Arts, Commerce & Science Senior College

Deolali Camp Tal & Dist - Nashik, Deolali - 422401 Maharashtra

Green Audit Conducted by :

Kedar Khamitkar & Associates

Energy Auditor

(Empanelled Mahaurja, Govt. of Maharashtra Institution)

M: 9850244701 Email. : urjabachat@gmail.com

Co-Ordinator
IQAC
Shri Eknathrao Sahadu Shete
Arts, Comm. & Sci.Senior College
Deolali Camp, Nashik

Shri Eknathrao Sahadu Shete Arts, Comm. & Sci. College ★ Deolali Camp Nashik 422401

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Shri Eknathrao Sahadu Shete
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ACKNOWLEDGEMENT

We express our sincere gratitude to the Principal Dr. M. D. Kapse Sir and the management of Shri Eknathrao Sahadu Shete Arts, Commerce & Science Senior College for awarding us the assignment of Green Audit of their Campus.

KEDAR KHAMITKAR
Govt. Certified Energy Auditor
Reg No EA-8287
LATUR-Maharashtra

Kedar Khamitkar
Energy Auditor
Certified by Bureau of Energy Efficiency, Ministry of Power, Gov. of India
Empanelled Consultant MAHAURJA (Govt. of Maharashtra Institution

Date : 11.01.25

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।

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Arts Comm. & Sci. Senior College
Deolali Camp, Nashik

EXECUTIVE SUMMARY:

Objective	Observation	Recommendation
Green Cover - Plantation of Trees	Plantation of trees is started in the campus and the green cover is extended every year in the campus. At Present **25%** area campus is having the Green cover.	Good Initiative.
Use of Renewable Energy	Institute planning to install **5KW** Solar Power Plant.	Maximize use of Sunlight
Water Conservation	Recommended to Install Sign Boards. Awareness for Water Conservation.	It is recommended to install taps with reduced water flow
Rain Water harvesting	Rainwater harvesting system project is under process	
Avoid Misuse/ wastage of water	RO water providing safe drinking water.	Recommended for waste water treatment plant.
Bio Waste Management	**The Bio Waste – Food Waste generated in the campus is proposed to be feed stock for Bio Gas plant**	Recommended for Bio gas plant.
Non Bio Waste	Non Bio Waste – Plastic Bottles / Paper Waste Metals waste is being collected in the dust bins placed across the campus.	It is proposed to install plastic bottle crusher, which can be sold as a Feed stock for the Plastic industry.
E Waste	E Waste – All Electronic Junk is generated in the campus in the form of Used Computer key boards/ Mouse/ CPU's/ Damaged Printers etc.	An agreement is in place with local Company to pick up the E waste every six month
Carbon Foot Print	**Transportation :** Mostly Students commute in the City Bus from City / rural Areas	Good Awareness found in Staff and Students

Chapter No.1 Scope of Work & Green Audit Methodology

Shri Eknathrao Sahadu Shete Arts, Commerce & Science Senior College entrusted the work of conducting a detailed Green Audit of campus with the main objectives are as bellows:

Objectives of Green Audit:

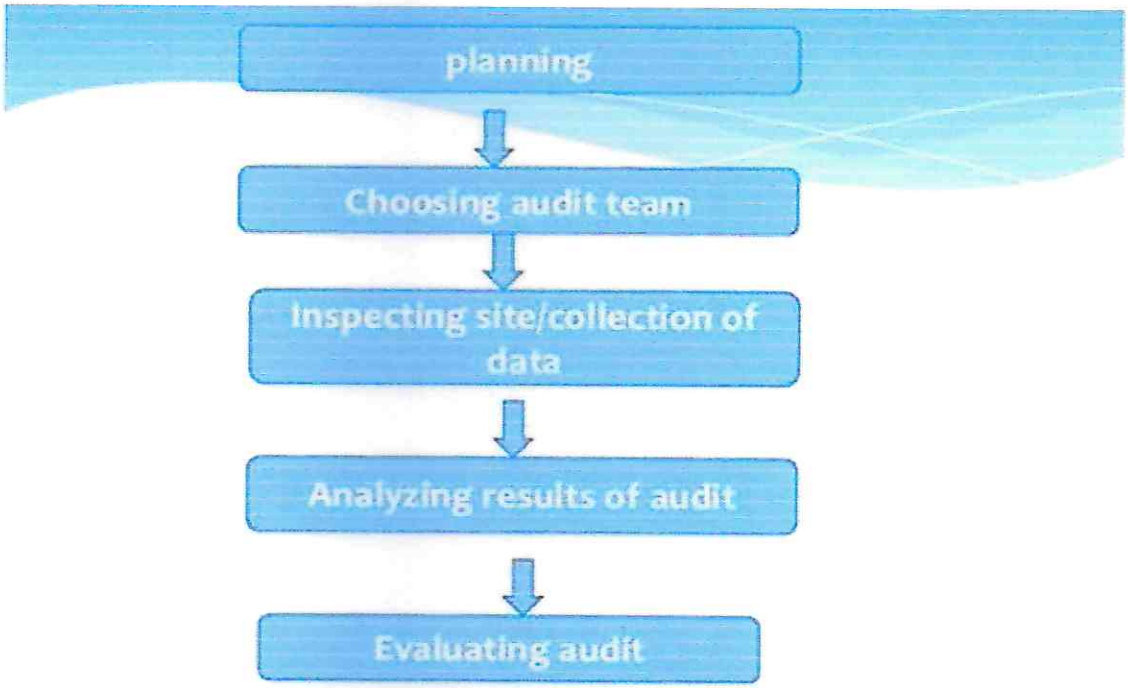
1. To examine the current practices, which can impact on environment such as of resource utilization, waste management etc.
2. To identify and analyze significant environmental issues.
3. Setup goal, vision, and mission for Green practices in campus.
4. Establish and implement Environment Management in various departments.
5. Continuous assessment for betterment in performance in green

Need of Green Audit:

Green auditing is the process of identifying and determining whether institutions practices are eco-friendly and sustainable. Green audit regulates all such practices and gives an efficient way of natural resource utilization. In the era of climate change and resource depletion it is necessary to verify the processes and convert it in to green and clean one. Green audit provides an approach for it. It also increases overall consciousness among the people working in institution towards an environment.

Methodology of Green Audit:

Shri Eknathrao Sahadu Shete Arts, Commerce & Science Senior College Campus has been conducted with specific methodology as follows:



Goals of Green Audit:

Conducted a green audit of Shri Eknathrao Sahadu Shete Arts, Commerce & Science Senior College Campus with specific goals as:

1. Identification and documentation of green practices followed by the Institute.
2. Identify strength and weakness in green practices.
3. Analyze and suggest solution for problems identified.
4. Assess facility of different types of waste management.
5. Increase environmental awareness throughout campus
6. Identify and assess environmental risk.
7. Motivates staff for optimized sustainable use of available resources.
8. The long-term goal of the environmental audit program is to collect baseline data of environmental parameters and resolve environmental Issue before they become problem.

Chapter No.2 Introduction about the Institute

Shri Eknathrao Sahadu Shete Arts, Commerce & Science Senior College is located at Deolali Dist. Nashik affiliated to Savitribai Phule Pune University (Maharashtra). College is governed by Shikshan Mandal Bhagur established in 2019.

Faculty	Course Level	Approved Courses	Duration	Started	Intake	Admissions	*	
Commerce and Management	Graduate	B.Com. (3 Years)	3 Years	2019-20	120	0 (2024-25)	2024-2025	Details
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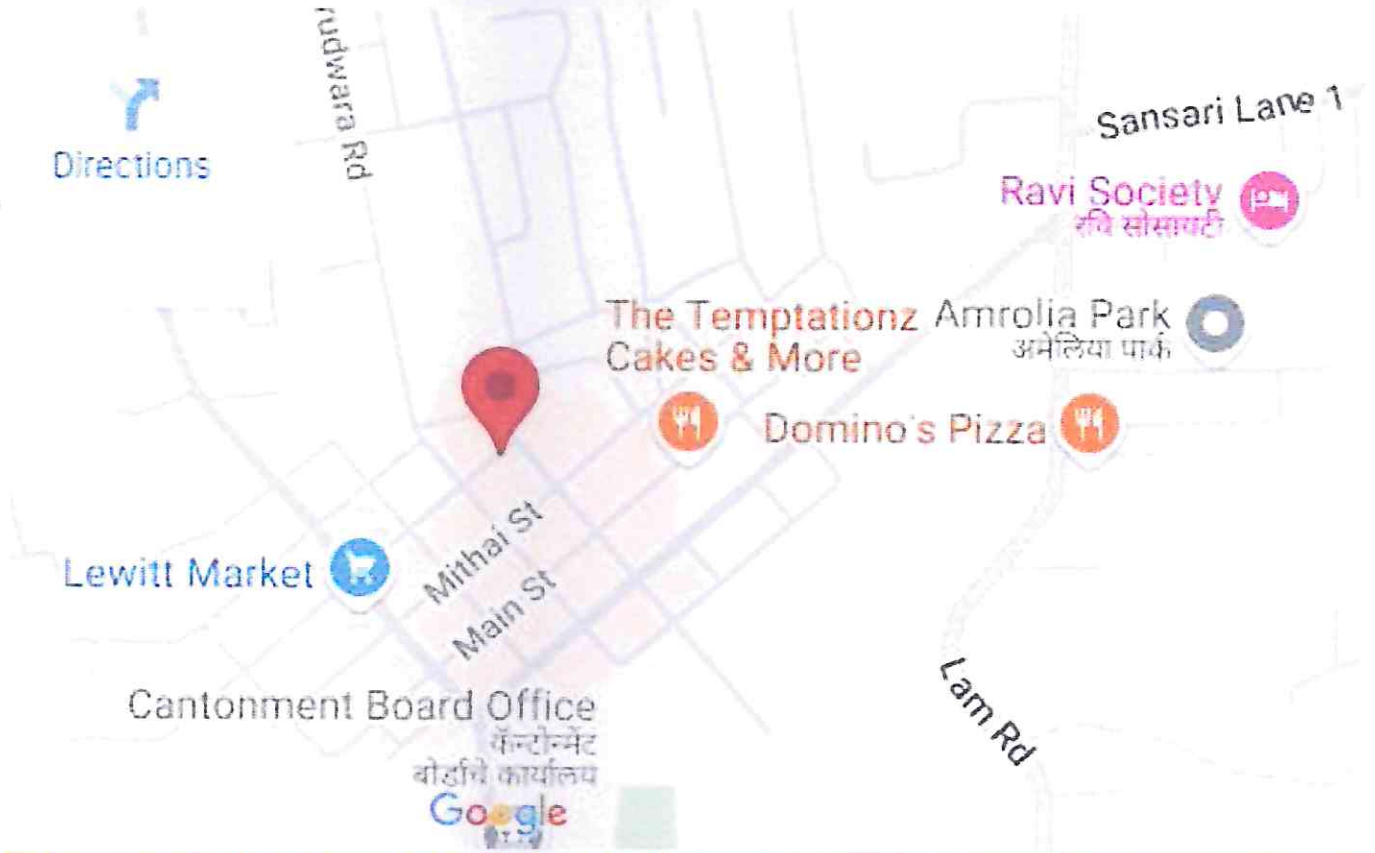


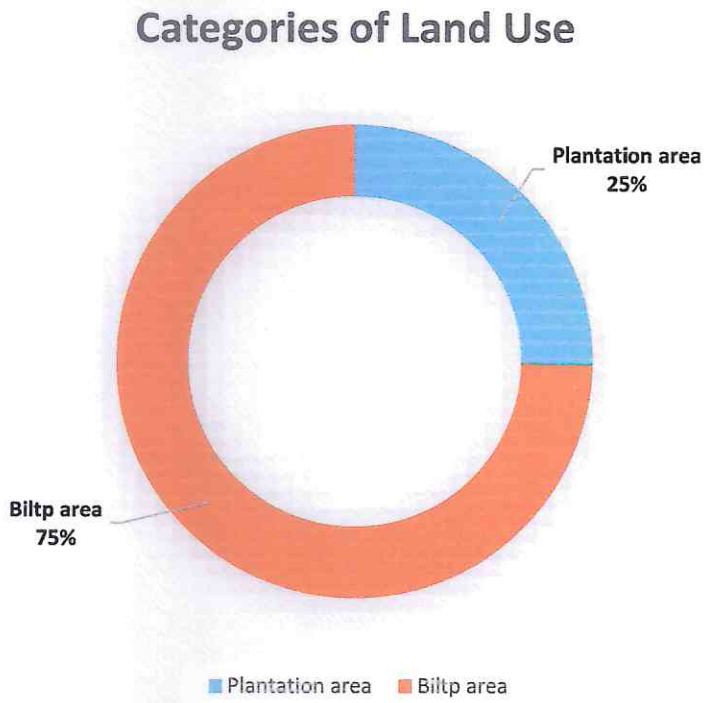
Address : At Post Deoli Camp T: Nashik Dist: Nashik Pincode: 422401

Chapter No.3 Categories of Land Use

Plantation of trees is started in the campus and the green cover is extended every year in the campus.

Built up Area	4000	SQM
Plantation Area	1350	SQM

Audit Framework and detailed findings of the Audit:



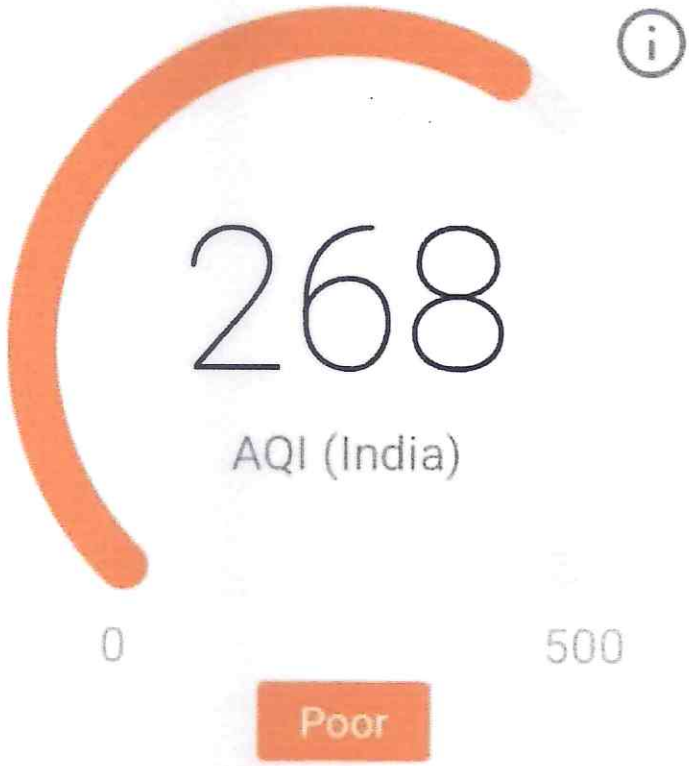
Green Landscaping with Trees and Plants – the campus is beautifully landscaped.

Observations :

At Present **25%** area campus is having the Green cover

AQI Air Quality Index :

Devlali Gaon



40% 19°C 12 km/h

POLLUTANTS

PM2.5 µg/m³		PM10 µg/m³	
Poor	110.3	Good	32.1

Chapter No. 4 Green Cover - Plantation of Trees

List of Plants in the Campus:

SR.	BOTANICAL NAME	FAMILY	COMMON NAME	TOTAL
1	Polyalthia longifolia	Annonaceae	Ashoka	6
2	Mangifera Indica	Anacardiaceae	Mango	12
3	Taraxacum officinale	Asteraceae	Daisy	2
4	Leucaena Leucocephala	Fabaceae	Tamarind	1
5	Pentaslanceolata	Rubiaceae	Starcluster	1
6	Hibicusrosasinensis	Malvaceae	Hibiscus	6
7	Carica Papaya	Caricaceae	Papaya	3
8	Artocarpus Heterophyllus	Moraceae	Fanas	16
9	EpipremnumAureum	Araceae	Money plant	2
10	Ocimum Sanctum	Lamiaceae	Tulsi	1
11	Pisidium Guajana	Myrtaceae	Peru	2
12	Coleus Scutellarioides	Lamiaceae	Painted Nettle	1
13	Chamaedorea	Arecaceae	Plam tree	1
14	Aloe Barbadensis miller	Asphodelaceae	Aloevera	2
15	Cycas Revoluta	Cycadaceae	Sago Palm	1
16	Musa	Musaceae	Banana	1
17	Nerium Oleander	Apocynaceae	Kaner	1
18	Dodonaea	Hyaloscyphaceae	Didonia	5
19	Cocos Nucifera	Arecaceae	Coconut	2
21	Saussurea obvallata	Asteraceae	Brahma Kamal	1
22	Ficus Religiosa	Moraceae	Peepal	1
23	Terminalia Superba	Combretaceae	Lemon	1
24	Murraya Koenigii	Rutaceae	Curry leaves	1
25	Tamarindus indica Linn	Fabaceae (Leguminosae)	Tamarind	2
26	Ficus racemosa	Moraceae	Cluster fig (Umbar)	2
27	Vachellia Nilotica	Fabaceae	Babul	8
28	Rosa	Rosaceae	Rose	1
29	Annona Squamosa	Annonaceae	Custard apple	2
30	Coriaria arborea	Coriariaceae	Tutu	1
31	Moringa oleifera	Moringaceae	Drumstick	1
32	Prunus dulcis	Rosaceae	Badam	3
33	Ficus Benghalenis	Moraceae	Banyan	2
34	Punica granatum	Punicaceae	Pomegranate	1
35	Jasminum	Oleaceae	Jasmine	1
36	Jasminum sambac	Oleaceae	Mogra	1
37	Prunus	Rosaceae	Cheery	1
38	Catharanthus roseus	Apocynaceae	Periwinkle	3
39	Ipomoea batatas	Covolvulaceae	Sweet potato	1
40	Carthamus tinctorius	Asteraceae	Safflower (Kardali)	3
			TOTAL	**105**

Observations: A total of **105** saplings have been planted in the campus

Chapter No. 5: Study of Waste Management

Environmental consciousness and sustainability friendly initiatives

1. Solid waste management

- The college is taking utmost care of cleanliness and hygiene. Daily waste is collected by the cleaning staff and segregated into degradable and non-degradable waste.

- The leaves, all non-toxic and biodegradable waste, are collected and used to make compost through the composting process, for which pit was made in the campus.
- Solid waste is generated in the form of plastic, glass, metal, newspapers, lab manuals, etc. is stored at one place and scrapped periodically for recycling.
- Non degradable waste (Dry and wet) is collected separately empty bottles, cartons are collected regularly at one place and handed over to the municipal vehicle for collection and proper disposal.
- College is using number of software's Tally for digitalization concept that made steps towards way to less paper use.

Observations: Institute has been done Good Management of the various types of degradable and non-degradable waste.

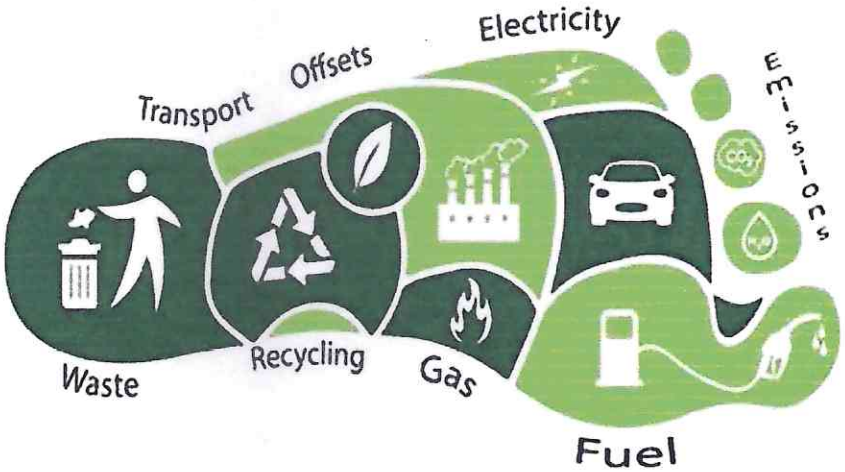
greeninitiative
For a carbon neutral planet

2. Sustainability Project : Compost Prepared in College Campus

The leaves, all non-toxic and biodegradable waste, are collected and used to make compost through the microbial composting process, for which pits was made in the campus. Vermicomposting is the process of turning organic debris into worm castings. The content of the earthworm castings, along with the natural tillage by the worms burrowing action, enhances the permeability of water in the soil. Worm castings can hold close to nine times their weight in water "Vermiconversion," or using earthworms to convert waste into soil additives.

Chapter No. 6 : Carbon Footprint

A Carbon Foot print is defined as the Total Greenhouse Gas emissions, emitted due to various activities. In this we compute the emissions of Carbon-Di-Oxide, by usage of the various forms of Energy used by the College for performing its day to day activities. The College Imports Electrical Energy during Night for various Electrical gadgets.



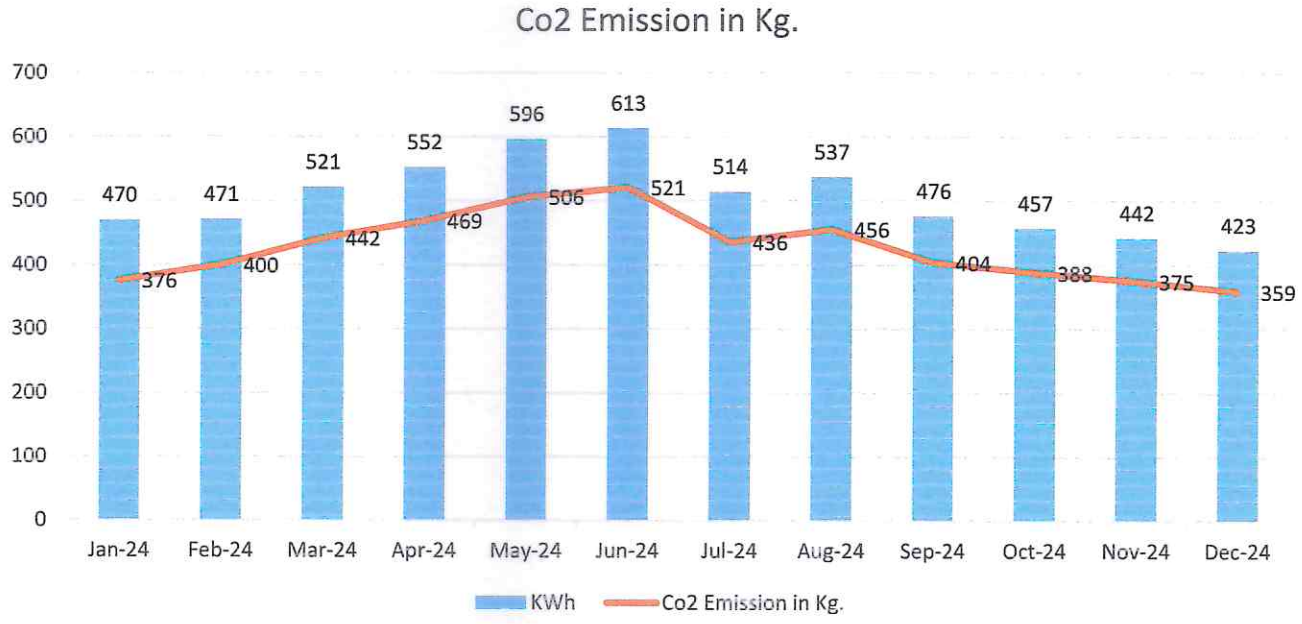
Basis for computation of CO2 Emissions:

The basis of Calculation for CO2 emissions due to Electrical Energy are as under

1 Unit (kWh) of Electrical Energy releases **0.8 Kg of CO2** into atmosphere

Based on the above Data we compute the CO2 emissions which are being released in to the atmosphere by the College due to its Day to Day operations

Month wise Electricity Import details:



Observations: The College Imports Electrical Energy during Night for various Electrical gadgets. Average Monthly Carbon Emission due to Electricity IMPORT = 5161 **Kg of CO2** into atmosphere.

Suggestions:

1. Install additional Solar Power plant of 5 KWp capacity
2. Install Occupancy Sensors to minimize losses in Lighting System

Chapter No. 7 : Best Practices & Activities

Institute has been declared their Environment Policy

Policy Document On Environment and Energy Usage

- To install LED bulbs in the complete campus to save energy
- To operate institute building in most efficient energy manner.
- Maximum use of Renewable Energy.
- Encourage a culture of Energy conservation on campus.
- To take additional measures to continuously improve our energy consumption.
- To develop and maintain Energy Management System based on ISO: 50001.
- To encourage use of advanced technology to minimize energy consumption.
- To engage in dialogue with the government agencies, and actively work with the local organizations in the areas of environment, energy efficiency and sustainable development.
- To strengthen our employees' and students' environmental knowledge and skills in order to improve our own environmental performance.
- To provide information and training opportunities on energy saving measures.
- To train our employees and students through our Enviro Club to make them 'Go Green Specialists' and partners to plant trees each year.

Co-Ordinator
IQAC
Shri Eknathrao Sahadu Shete
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Principal

Principal
Shri Eknathrao Sahadu Shete
Art's Comm. & Sci. Senior College,
Deolali Camp, Nashik

GREEN AUDIT CERTIFICATE

This certificate has been awarded to

Shri Eknathrao Sahadu Shete
Arts, Commerce & Science College,
Deolali Camp, Tq. & Dist. Nashik - 422401

in recognition of the organizations efforts for sustainable development.

GA Certificate No . : GA/01/2025/11/SESSACSCDC

Empanelled with
महाऊर्जा
महाराष्ट्र ऊर्जा विकास अभिकरण
(Govt. of Maharashtra Institution)
Reg no. MEDA/ECN/CR-14/2022-23/EA-07

Kedar C. Khamitkar * Regn. No EA-8287 * Certified Energy Auditor

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 *ISO 9001-2015 Certified*

Issued Date : 11/01/2025

ऊर्जा संवर्धन

Co-Ordinator
IQAC
Shri Eknathrao Sahadu Shete
Arts, Comm. & Sci.Senior College
Deolali Camp, Nashik

Shri Eknathrao Sahadu Shete Arts, Comm. & Sci. College ★ Deolali Camp Nashik 422401

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Shri Eknathrao Sahadu Shete
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Note: Certificate is based on organisation's performance on green audit recommendations and continual maintenance of EMS system & conduction of surveillance audit.

Energy Audit Report
(2023-24)

Shikshan Mandal Bhagur's

Shri Eknathrao Sahadu Shete
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M: 9850244701 Email. : urjabachat@gmail.com

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Shri Eknathrao Sahadu Shete
Arts, Comm. & Sci.Senior College
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Requirements for the NAAC

Energy Audit Team has been Conducted Detailed Energy Audit of Shri Eknathrao Sahadu Shete Arts, Commerce & Science Senior College Building Located at Deolali. During Energy Audit We have found Environmental Consciousness & Sustainability initiatives in their Campus.

1. Percentage of Annual Lighting power requirement met through LED Bulbs
   (Current Year Data) = 98 %
2. Energy Performance Index EPI = 1.51 **KWh/SQm**
   (Built-up Area = 4000 Sq. Meter Annual Electricity consumption =6072 KWh)

KEDAR KHAMITKAR ★ Govt. Certified Energy Auditor Reg No EA-8287 ★ LATUR Maharashtra

Kedar Khamitkar
Energy Auditor
(Certified by Bureau of Energy Efficiency, Ministry of Power, Gov. of India)
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INDEX

ENERGY AUDIT

A Better Way to Increase Energy Efficiency and Reduce Energy Bills

Co-Ordinator
IQAC
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Shri Eknathrao Sahadu Shete Arts,Comm.& Sci.College Deolali Camp Nashik 422401

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Executive Summary

The salient observations and recommendations are given below.

Sr.	Recommendations	Savings	Investment	Payback
1	**Improve Energy Efficiency in Fan System :** Replace Existing Inefficient Ceiling Fans with Efficient BLDC fans (Qty. 66 Nos.)	4400 KWh/Yr.	Rs. 0.99 Lakhs	2.2 Yrs.
2	**Use renewable Energy :** Install rooftop solar power plant of 5KW	4800 KWh/Yr.	Rs. 2.25/- Lakhs	4.6 Yrs.
3	**Install Occupancy Sensors for Lighting System**	1000 KWh/Yr.	Rs. 0.30 Lakhs	3.0 yrs.
4	**Conduct 'Save Energy Program'**	-	No Investment	Immediate

Components to Implement Smart Energy Management System Effectively

Energy monitoring and metering

Energy efficiency measures

Demand response systems

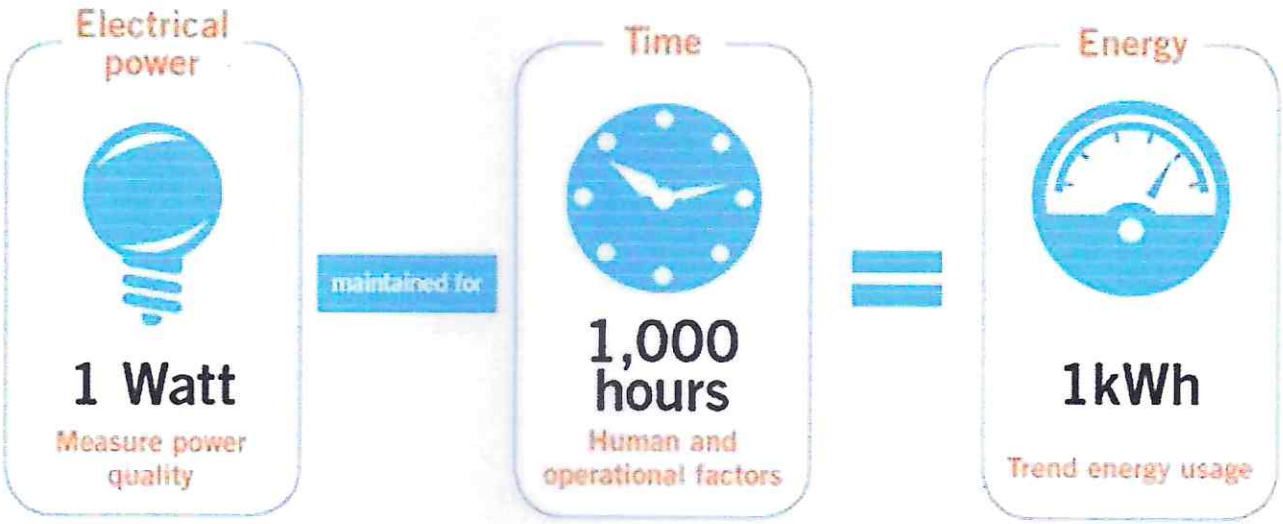
Energy storage solutions

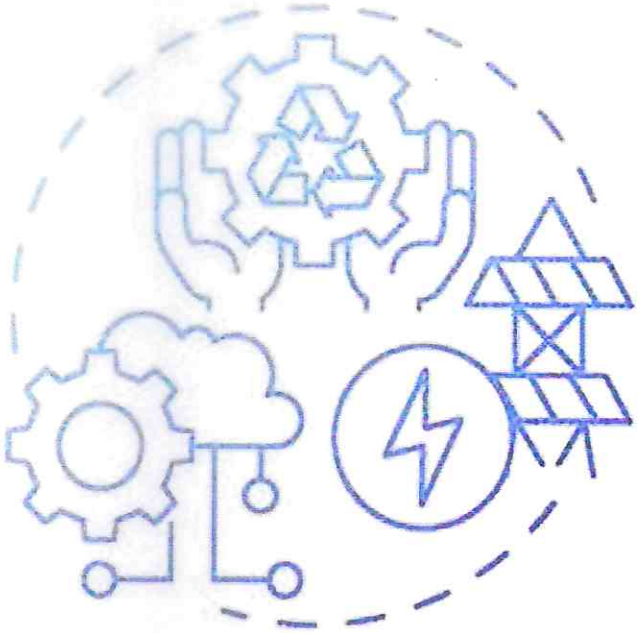
Preface

Prior to conducting an energy audit, the scope and level of economic evaluation should be pre-defined. Energy Audit is conducted to determine ways to reduce energy consumption to lower operating costs for facilities.

Data collection for energy audit of the Shri Eknathrao Sahadu Shete Arts, Commerce & Science Senior College was conceded by BEE CEA Team on 10th Jan 2025.

All data collected from each classroom, Laboratory, Library, and Office etc. 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.





ENERGY MANAGEMENT SYSTEMS

Acknowledgement

We express our sincere gratitude to the Principal Dr. M. D. Kapse Sir & authorities of Shri Eknathrao Sahadu Shete Arts, Commerce & Science Senior College for entrusting and offering the opportunity of energy performance assessment assignment.

We are thankful to Institute for their positive support in undertaking the task of system mapping and energy efficiency assessment of all electrical system, utilities and other equipment.

We are grateful to the College Staff for the cooperation received during field studies and providing necessary data such as Electricity bills, Electrical equipment's data for the study. The field studies would not have been completed on time without their interaction and guidance.

KEDAR KHAMITKAR
Govt. Certified Energy Auditor
Reg.No.EA-8287
LATUR, Maharashtra

Kedar Khamitkar
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Energy Performance Index (EPI)

Electrical Energy received to college campus from MSEDCL

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

Total Electricity Consumption = 6072 KWh /Year

Total Built-up Area 4000 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): 1.51 KWh/Sq. Meter

EPI KWH/Sq. Meter/Year	Star Label
80-70	1 Star
70-60	2 Star
60-50	3 Star
50-40	4 Star

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Chapter: 1 Introduction

Shri Eknathrao Sahadu SheteArts, Commerce & Science Senior College located at Deolali Dist. Nashik. It is governed by Shikshan mandal Bhagur. The College is established in 2019.

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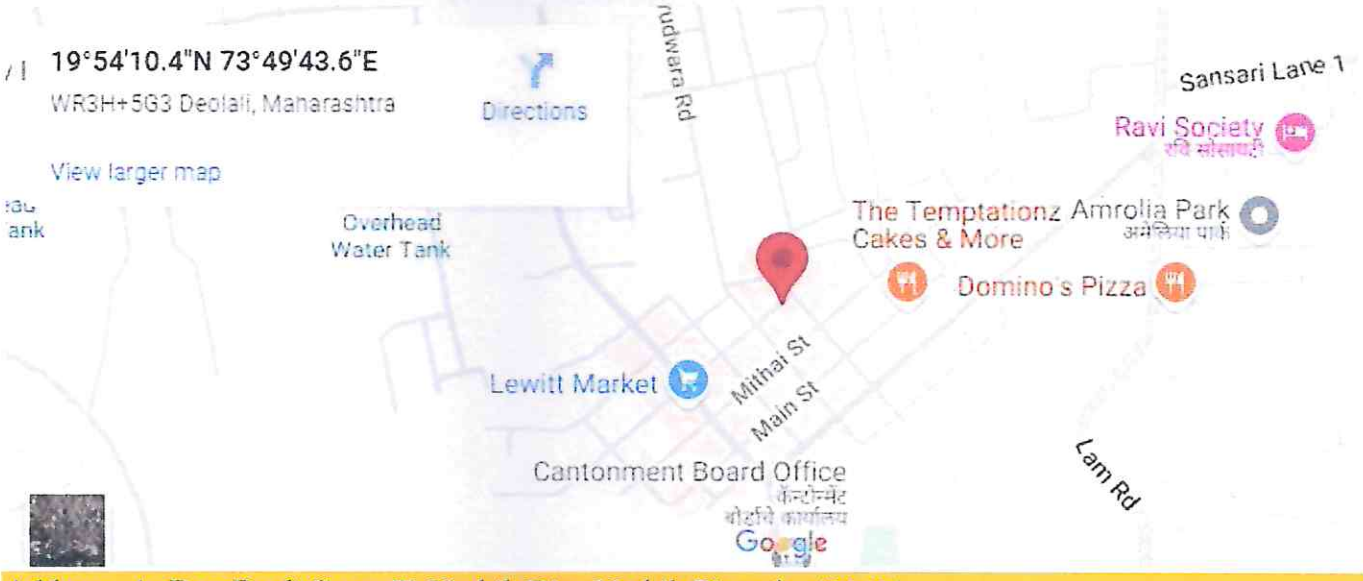
Humanities	Graduate	B.A. (3 Years)	3 Years	2019-20	120	0 (2024-25)	2024-2025	Details
Science and Technology	Graduate	B.Sc. (3 Years)	3 Years	2019-20	120	0 (2024-25)	2024-2025	Details



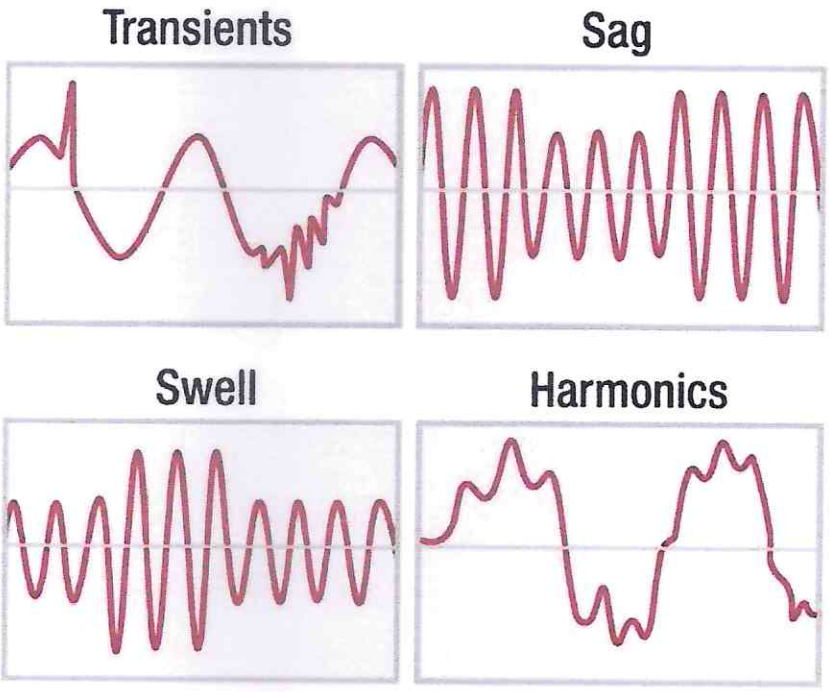
Address : At Post Deoli Camp T: Nashik Dist: Nashik Pincode: 422401

Chapter 2: Energy Audit Objectives

An energy audit will identify energy-saving opportunities. It will help you understand your energy usage and ways to use energy better. An energy audit can identify safety concerns with electrical systems, wiring, and ventilation, thus making your home or business safer.

Abstract

Three major research themes of existing building energy efficiency are obtained by analyzing the quantitative results of keywords and highly cited literature: (1) influencing factors and energy-saving obstacles of energy consumption, (2) energy-saving measures, and (3) energy-saving optimization and its evaluation method. Finally, based on the bibliometric results, this research qualitatively analyzes the highly cited literature and the latest research results to obtain the future development trends and possible directions of energy conservation in the existing buildings throughout their life cycle. This study provides innovative ideas for the energy-saving renovation of existing buildings: (1) Technology empowerment (using renewable energy, negative carbon technology, "artificial intelligence + Internet of Things + 5G" and cogeneration, etc.) and (2) Formulating regulations and policy incentives for different decision-makers (implementing demand response strategies such as time-of-use pricing to guide and restrict user behavior, considering carbon tax and carbon trading, etc.). On the premise of utilizing renewable energy and increasing the capacity resilience of the distribution grids, the existing buildings will be energy-efficient, economical, intelligent and comfortable in the future.



Chapter: 3 Energy Audit Methodology

Energy Audit Study is divided into following steps

1. Historical data analysis:

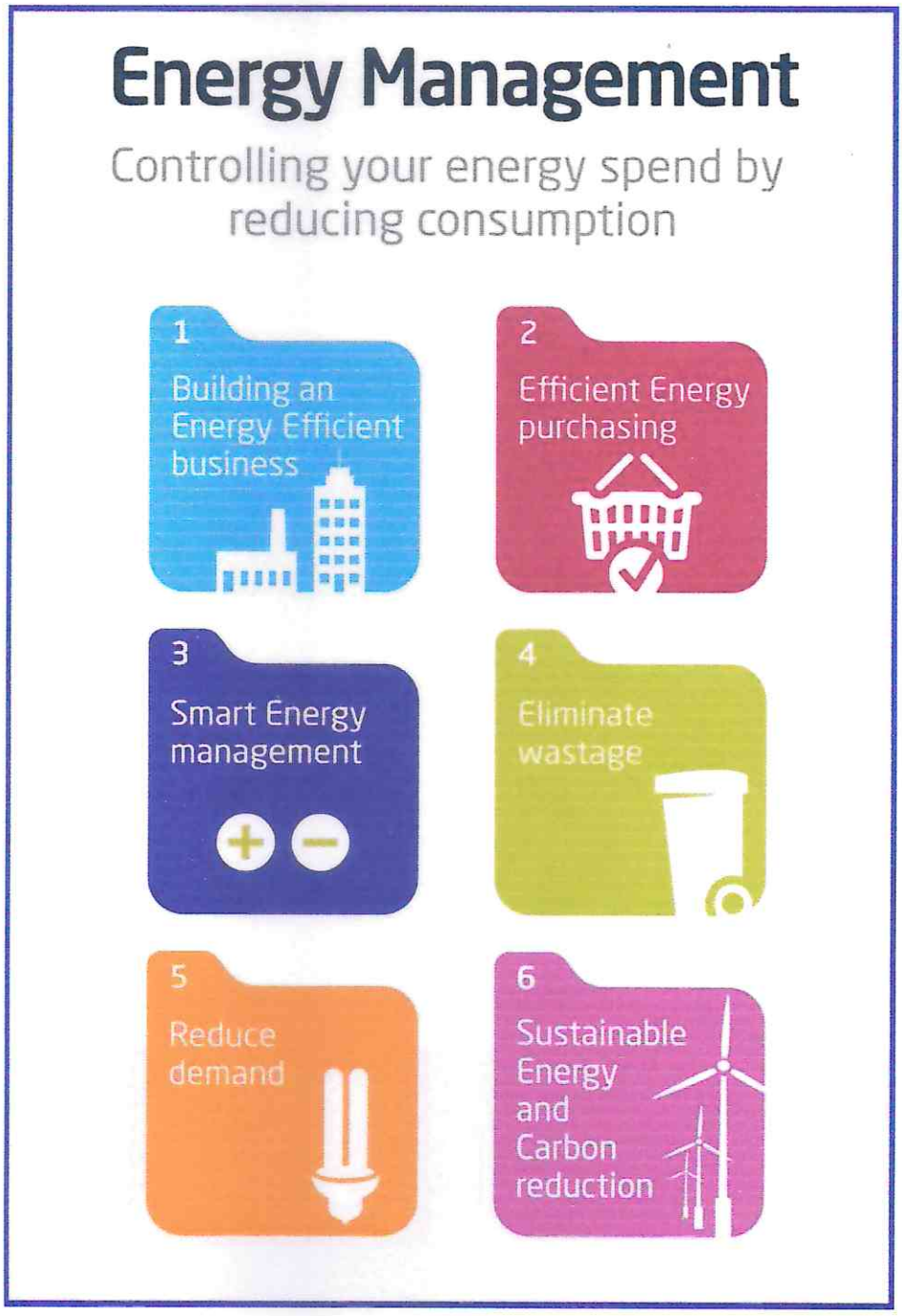
The historical data analysis involves establishment of energy consumption pattern to the established base line data on energy consumption and its variation with change in production volumes.

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.



Chapter: 4. Study of Electrical Systems

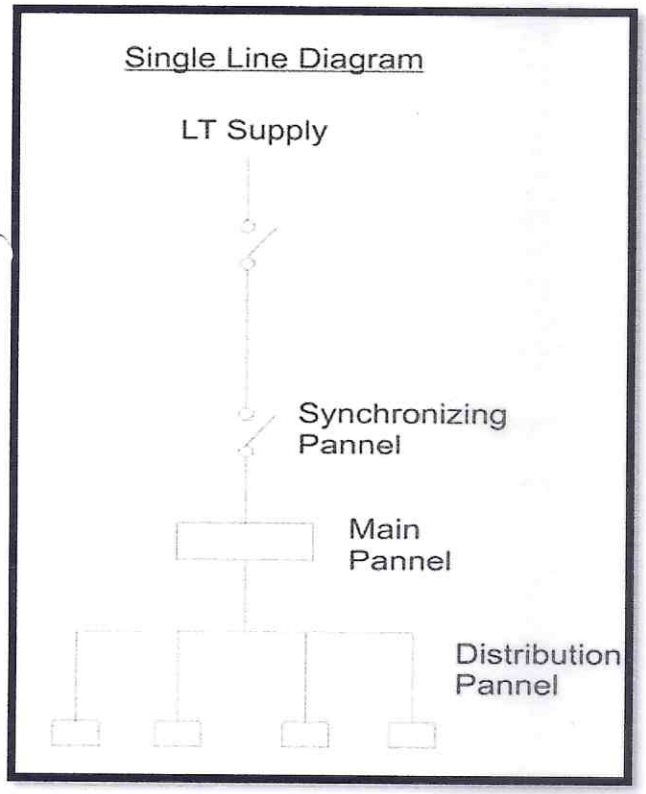
Electrical Energy Sources:

1. The electrical supply to the Institute comes from MSEDCL LT supply.
2. Battery Bank 10 KVA

MSEDCL Supply : MEDCO Energy Meter details

The electrical bills from MSEDCL Jan 24 to Dec 24 have been studied.

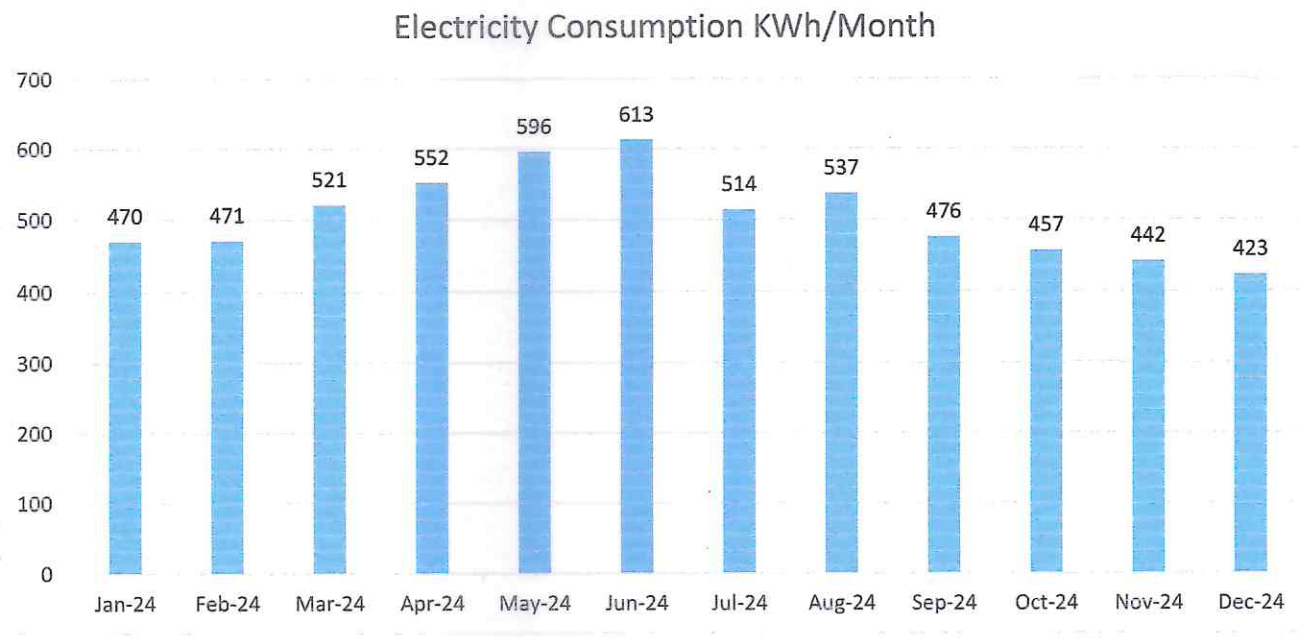
		Consumer No.	049030012088
Sr. No.	Details of Electricity Demand	Tariff	052/LT II Comm 3Ph < 20KW
1	Sanctioned Load	5	KW



Suggestions : The battery room should be clean, dry & cool, with proper lighting & ventilation

Electricity Consumption

Electrical energy imported from MAHAVITRAN

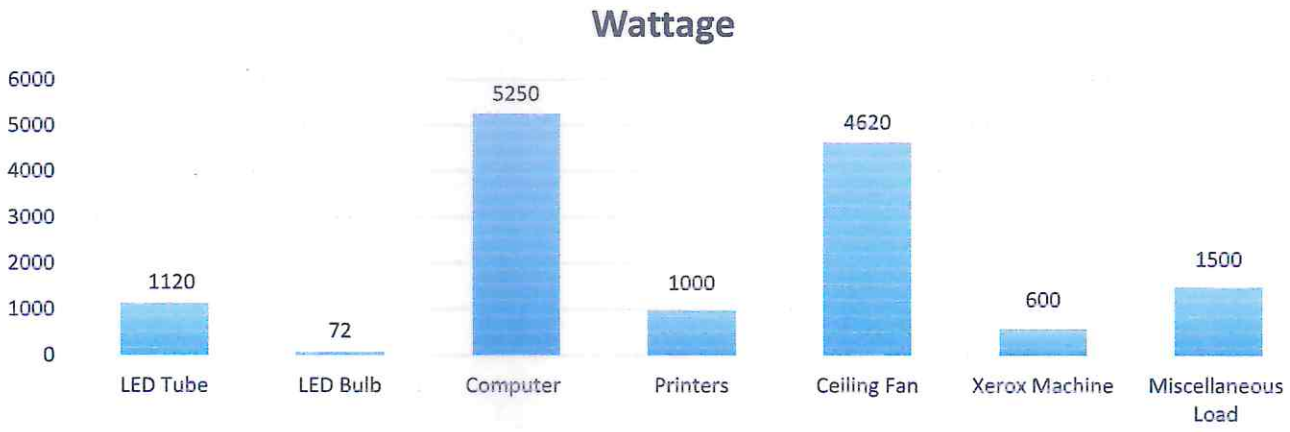


Observations: Annual Electricity consumption 6072 KWh/Year
Suggestions: Install rooftop solar power plant of 5 KWp

Connected Load Details Major Energy use and Areas:

In the College Campus Electrical energy is used for various applications like: Computers, Printers, Xerox machines, LCD Projector, Router System, Lighting, Fans, Flood light, Pumping Motor, & Other Laboratory Equipment's etc.

Sr.	Name of Appliances	Watt	Qty.	Wattage
1	LED Tube	20	56	1120
2	LED Bulb	18	4	72
3	Computer	150	35	5250
4	Printers	250	4	1000
5	Ceiling Fan	70	66	4620
6	Xerox Machine	600	1	600
7	Miscellaneous Load			1500
			Total	14162



Observations: Ceiling Fan 70W Contributes 4.62 KW

Suggestion's: Install Energy Efficient BLDC Fan (28W) to reduce load 2.7 KW

Chapter: 5. Performance Evaluation

5.1 Improve Energy Efficiency in Fan System:

Total number of fans used in the College Building = 66 No's

Consider @200 days Working 8 Hrs.

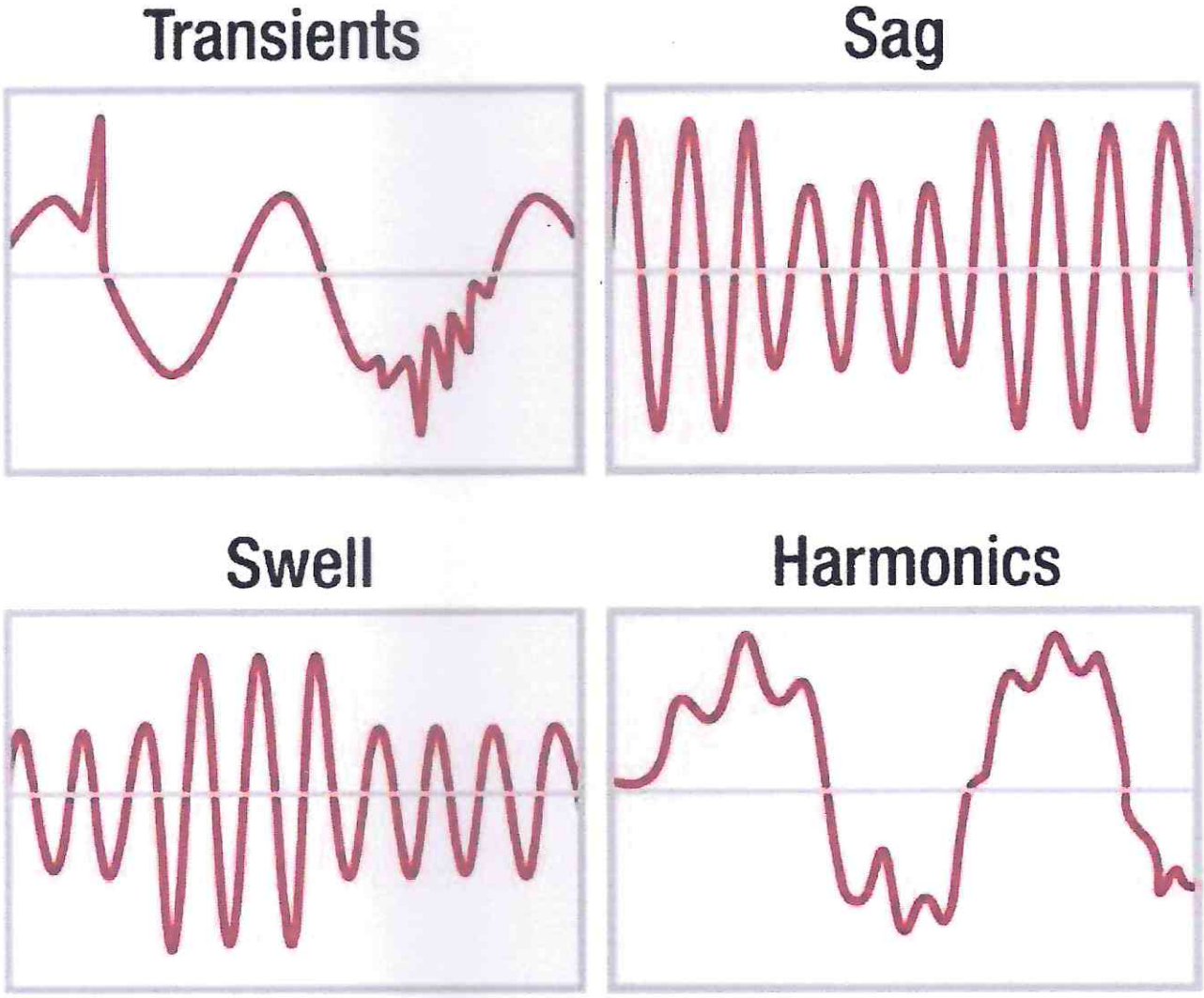
- Number of fans to be replace = 66 Nos.
- The Total Current Consumption =7390 kWh
- The Expected fan Consumption = 2950 kWh
- Expected Saving per year = 4440 kWh/year

Suggestions: Replace existing Inefficient Fan System (70W) with Five Star BLDC (28W)

5.2 Improve Power Quality Supply

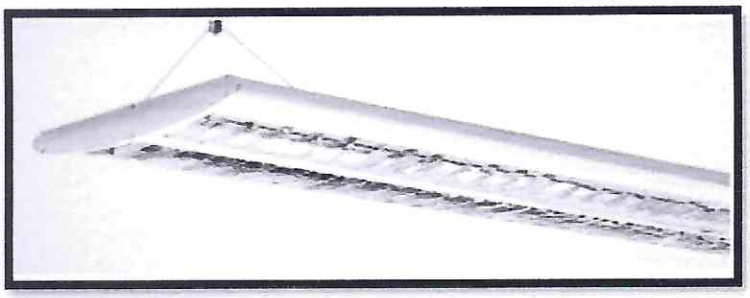
Power quality issues can affect the operation of critical loads and can have the negative impact on operation.

Power quality refers to the level of consistency, reliability, and stability of electrical power.



Suggestions: Install Voltage Servo Stabilizer of 10 KVa Capacity

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:- Improve effectiveness of Lighting System.

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

Activity	Illumination *(lux, lumen/m^2)*
Public areas with dark surroundings	20 - 50
Simple orientation for short visits	50 - 100
Working areas where visual tasks are only occasionally performed	100 - 150
Warehouses, Homes, Theaters, Archives	150
Easy Office Work, Classes	250
Normal Office Work, PC Work, Study Library, Groceries, Show Rooms, Laboratories	500
Supermarkets, Mechanical Workshops, Office Landscapes	750
Normal Drawing Work, Detailed Mechanical Workshops, Operation Theatres	1,000
Detailed Drawing Work, Very Detailed Mechanical Works	1500 - 2000
Performance of visual tasks of low contrast and very small size for prolonged periods of time	2000 - 5000
Performance of very prolonged and exacting visual tasks	5000 - 10000
Performance of very special visual tasks of extremely low contrast and small size	10000 - 20000

Suggestions: Install occupancy sensors to reduce Losses.

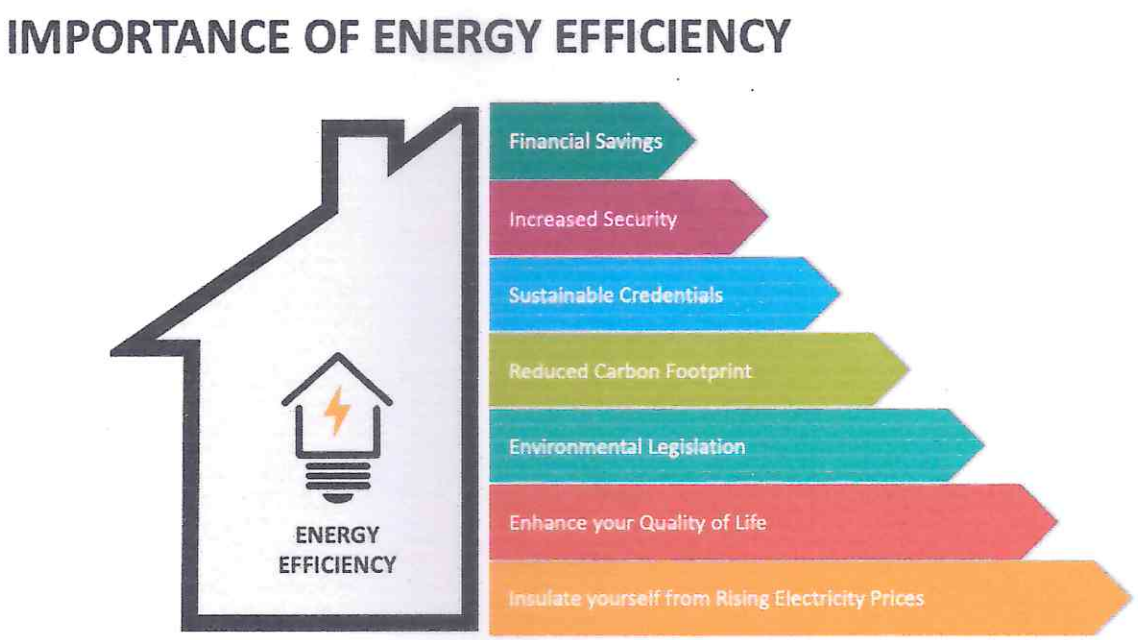
Chapter: 6 Guidelines for Identified Energy Saving Opportunities

- 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.

Chapter 7: Conclusion

A total Investment of Approx. Three lakhs & Fifty Four thousand rupees (Rs. 3.54/- Lakhs) amount is estimated for the energy efficiency improvement & renewable energy projects

Energy Savings expected around 10200 KWH/year.



Co-Ordinator
IQAC
Shri Eknathrao Sahadu Shete
Arts, Comm. & Sci.Senior College
Deolali Camp, Nashik

Whirling towards a sustainable future with our innovative products and technology that contribute to enhancing sustainability

Principal
Shri Eknathrao Sahadu Shete
Art's Comm. & Sci. Senior College,
Deolali Camp, Nashik

Shri Eknathrao Sahadu Shete Arts, Comm. & Sci. College Deolali Camp Nashik 422401

Energy Audit Certificate

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	:	**Shri Eknathrao Sahadu Shete Arts, Commerce & Science College,** Deolali Camp, Tq. & Dist. Nashik - 422401
Date of Energy Audit	:	10/01/2025
Name of Energy Auditor	:	**KEDAR KHAMITKAR** Certified by BEE (Bureau of Energy Efficiency) Ministry of Power, Govt. of India
EA Certificate No . EA/01/2025/10/SESSACSCDC	:	

Empaneled Energy Auditor & Planner
Reg no. MEDA/ECN/CR-14/2020-21/EA-17
महाराष्ट्र ऊर्जा विकास अभिकरण
(Govt. of Maharashtra Institution)

Kedar C. Khamitkar Regn. No. EA-8287 Certified Energy Auditor

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

ISO 9001-2015 Certified

Co-Ordinator
IQAC
Shri Eknathrao Sahadu Shete
Arts, Comm. & Sci. Senior College
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Principal
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