



JSPM, Latur

Swami Vivekanand Mahavidyalaya, Latur
P-74, MIDC, Kalamb Road, Latur-413512

DVV CLARIFICATION

7.1.2 The Institution has facilities and initiatives for

1. Alternate sources of energy and energy conservation measures
2. Management of the various types of degradable and nondegradable waste
3. Water conservation
4. Green campus initiatives
5. Disabled-friendly, barrier free environment

HEI Input : A. 4 or All of the abov

DVV Clarification	HEI Response
<p>HEI to provide evidences for 1) Water conservation through bunds and tanks Water distribution system, Rain water harvesting 2) Disabled-friendly, barrier free environment by constructing ramps, lifts, Railings, providing wheel chairs, signage board, washrooms as required by divyangjan for their use (geotagged photos with date and caption) 3) Management of the various types of degradable and non degradable waste through waste segregation, incinerator; And also HEI to provide Bills for the purchase of equipments for the facilities created under this metric.</p>	<p>In response to the DVV partner's clarification, the following documents have been provided.</p> <ol style="list-style-type: none"> 1. Geo-tagged photos of Water conservation through Rain water harvesting 2. Geo-tagged photos and videos of facilities with captions. 3. Purchase bills for equipment used in these facilities 4. Images of ramps, rails, lifts, wheelchairs, signage boards, toilets, software, and more <div style="text-align: right;">  <small>PRINCIPAL Swami Vivekanand Mahavidyalaya LATUR</small> </div>



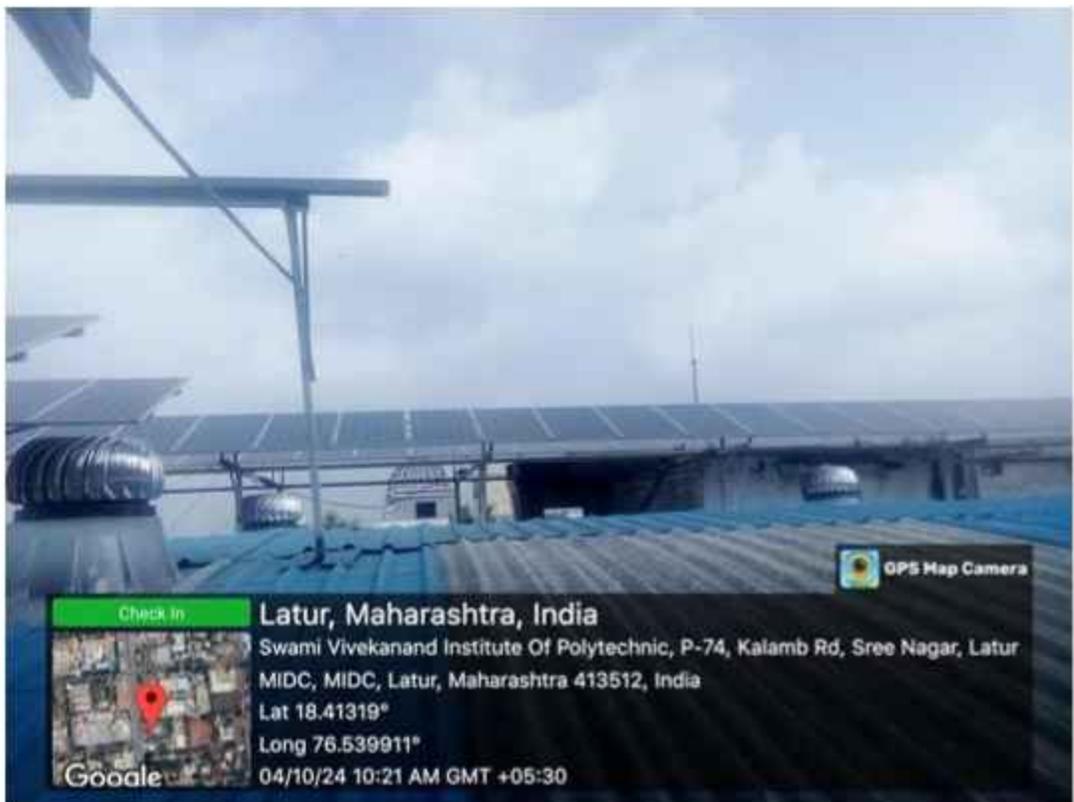
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Alternate sources of energy and energy conservation measures

Use of Solar Energy




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Energy Audit Certificate

❖ Energy Audit Certificate ❖

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	: Swami Vivekanand Mahavidyalaya JSPM Campus, P-74, MIDC, Kallamb Road, Latur
Date of Energy Audit	: 15/12/2024
Name of Energy Auditor	: KEDAR KHAMITKAR Certified by BEE (Bureau of Energy Efficiency) Ministry of Power, Govt. of India
EA Certificate No. EA/15-2024-12/SVML	: 

Empanelled Energy Auditor & Planner
Reg. No. MH/S&D/CEA/16/2022/255A-07

योग्य खास जागृता अधिका
Govt. of Maharashtra Institutions



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Kedar Khamitkar
Energy Auditor CEA-6287
Certified by BEE,
Ministry of Power, Govt. of India



Kedar Khamitkar & Associates, Latur
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ISO 9001-2015 Certified



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

S. J.
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Management of the various types of degradable and nondegradable waste

1. The waste is collected through Dustbins placed in the Campus with segregation into degradable and nondegradable waste.
2. The Waste Collected is handover to the Muncipal cooperation Collection center
3. The campus is demarcated as plastic free zone as plastic usage is banned in the

Use of Dustbins





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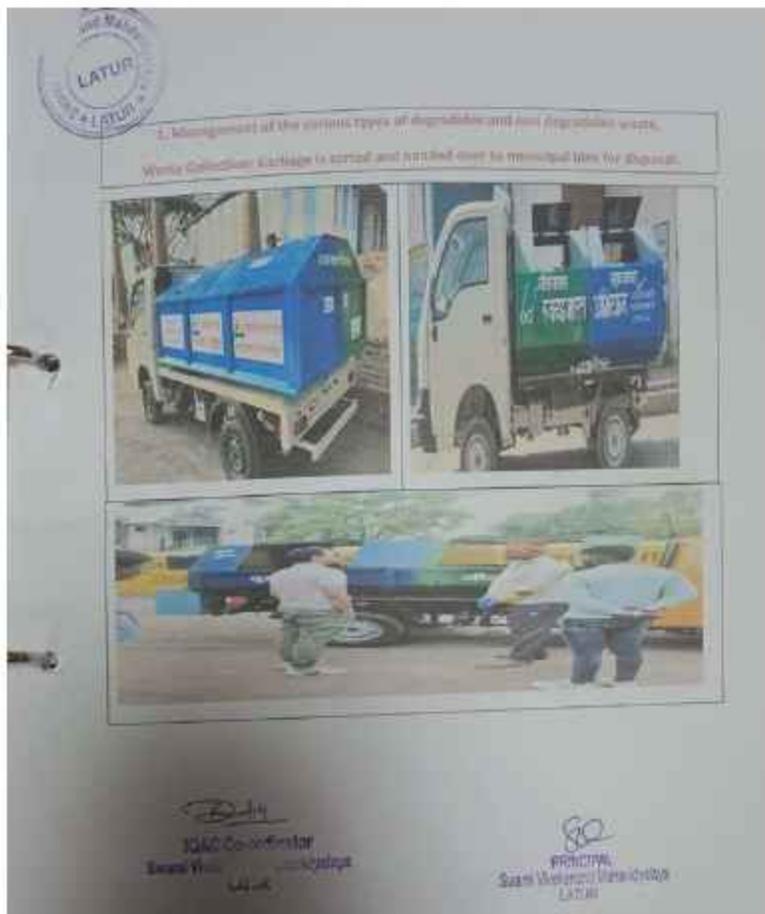


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Waste collected is handover through Municipal Coopertion
Collection Vehicles




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Water Conservation

Rain water Harvesting



id
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Rain water Harvesting




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Slogans as Use water Carefully

Water Conservation Measures




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[Signature]

IQAC Co-ordinator
Swami Vivekanand Mahavidyalaya
LATUR

[Signature]

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Swami Vivekanand Mahavidyalaya
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Green campus initiatives

Tree Plantation and Conservation in the Campus





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Swami Vivekanand Mahavidyalaya, Latur
P-74, MIDC, Kalamb Road, Latur-413512



JSPM, Latur

Swami vivekanand mahavidyalaya, latur
P-74, mide, kalamb road, latur-413512



Date: 15/11/23

Notice

All The Teaching Staff Members Are Informed To Attend The Meeting At Principal Cabin Today At 12:00 PM

Agenda - Environment - Tree plantation

Sr. No	Name of Staff	Sign of staff
1	Dr. adale kiran	M Kiran
2	chavan sulakshana	S. chavan
3	mrs Agarwal. Rachna.	R. Agarwal
4	mrs. kadari Sobiya	S. Kadari
5	ware Divya	W. Divya
6	Nikam Anjali	A. Nikam


IQAC Co-ordinator
Swami Vivekanand Mahavidyalaya
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Brief Activity Report - 20²³-20²⁴

Name of Programme/ Activity - Environment - Tree plantation

In Collaboration With - -

Organizing Cell/Unit - college conducted

Programme in charge - prof. Nitkan Anjali

Chief Guest/Resource Person - college conducted.

Duration / Date - 1 - Day (15/10/23)

Objective of Programme/Activity -

1. ~~Keep provide proper equity and other forest products~~
2. ~~Tree absorb carbon dioxide~~
3. ~~Tree help provide space cooling the air~~

Nos. of Students Participated - 07 No. of Teachers Participated - 06

No. of External Participants -

Outcome of the Programme/ Activity - Increased water table
Recharge

Programme in charge

IOAC Co-ordinator
 Swami Vivekanand Mahavidyalaya
 Latur

I/c Principal
 Swami Vivekanand Mahavidyalaya
 Latur

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Tree Plantation in the Entire Campus



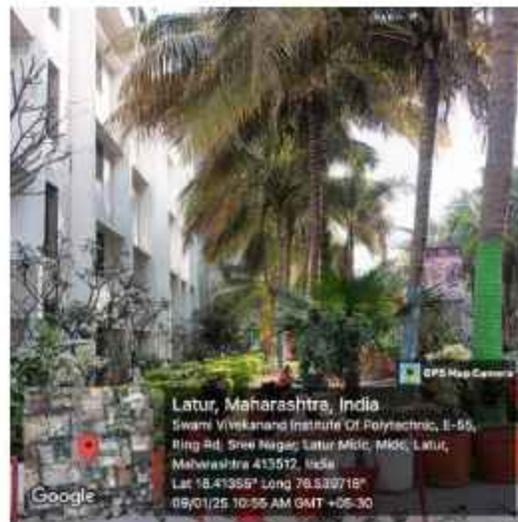
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5. Disabled-friendly, barrier free environment

Use of Ramp




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Introduction

A clean and hygienic atmosphere encourages effective learning and provides healthy environment for learning. With the intention of addressing the environmental issues, numerous efforts are being enforced throughout the world. Environmental Management Systems (EMS) has gained widespread recognition in the industrial sector. The environmental sustainability is building its way in the current world and educational institutions should make their contribution towards it.

Only few environmental standards are there related to Indian educational system. So, each institute is evolving with locally-applicable techniques for sustainable environment and environmental monitoring. This monitoring system aids the institution to set environmental examples for the community and also to instruct young learners and creates awareness among staff and students about suitable use of resources. The monitoring system adapts periodical green, environmental and energy audit, plantation drives and survey of campus environment.

Concept of a Green campus

Green Campus Policy

A Green Campus is a place where environmentally friendly practices and education combine to promote sustainable and eco-friendly practices in the campus. The green campus concept offers an institution the opportunity to take the lead in redefining its environmental culture and developing new paradigms by creating sustainable solutions to environmental, social and economic needs of the mankind.

Institution believes that, the concept of a green campus promotes environmental sustainability where all the processes and operational functions of the campus are closely interweaved, providing educational and practical value to the institution and the surrounding environment as there is an urgent need to address these fundamental problems.

Institute Environmental Aims and Objectives:

Swami Vivekananda Institute is striving to develop its institution on a self – sustainable basis in the areas of power, water and cleanliness

The faculty, staff and students have to contribute collectively to develop an eco – friendly sustainable campus and disseminate the concept of eco – friendly culture to the nearby community and wherever possible.

Awareness creations about environmental issues among students and employees including climate change. Measure and reduce environmental emissions/ footprints

OBJECTIVES OF KITS GREEN POLICY

- To encourage students/Faculties to keep environment clean.
- To educate students/Faculties to create awareness amongst public.
To make students/Faculties understand the importance of environment and its problem areas
- To sensitize the students/Faculties to minimize the use of polluting product.
- To continue the usage of renewable sources of energy such as solar power.

Institution should make its own contributions towards a sustainable future. Being a responsible institution, the college has initiated Green Campus' initiative measures which include

- Re-use of one side printed papers, E-circulars through WhatsApp or social platforms, which encourages less paper utilization,
- Green land-scaping, gardening and maintenance, through dedicated gardening committee
- Restricted entry of auto-mobiles into the campus etc.
- Biogas generation (Gober gas), using cattle dung from in-campus da dairy farm as and when required.
- Periodical awareness programs on environment and sustainability
- Improving energy efficiency and conserving resources by using solar plant and LED bulbs and sensor equipment.





Solid Waste Recycle & Reductions:

Our college believes in reducing or minimizing the waste. The following initiatives are practiced: Recycling is an important way to collect waste materials and turn them into useful products that can be sold in market place. Five major types of materials that can be recycled and sold to vendors after onsite segregation.

- a. Paper products (includes newspapers, magazines, office paper & card boards),
- b. Glass,
- c. Aluminum,
- d. Steel and
- e. some types of plastics.

E-Waste: e-waste Management is put in practice for proper disposal of end of life, and non- functioning electronic computing equipment's after reducing, reusing and refurbishing to the maximum.

Other eco-friendly future practices advised to be followed in campus are,

- Keep a stack of paper that has been printed on one side and use it for day to day rough paper work.
- Use more readout material in soft form. Reduce the hard readout material. Use more of e-mail for officially communicating the information needed, online reading etc.
- Minimize the use of fertilizers and pesticides in college grounds, opting to the use of compost produced on site wherever possible.
- Ensure that all cleaning products used by college staff have a negligible harmful impact on the environment.
- Use two types of bins separately for biodegradable and non-biodegradable wastes in the college campus as well as in hostels.
- Reusing the class room furniture by altering them, thereby reducing the metal waste.

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2023-24

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EA Certificate No . EA/15-2024-12/SVML	: 

Empaneled Energy Auditor & Planner
Reg no. MEDA/EON/CR-14/2022-23/EA-07

महाराष्ट्र ऊर्जा विकास अभिकरण
(Govt. of Maharashtra Institution)



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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

GREEN AUDIT CERTIFICATE

2023-24

This certificate has been awarded to
Swami Vivekanand Mahavidyalaya
JSPM Campus, P-74, MIDC, Kallamb Road, Latur
*in recognition of the organizations efforts for
sustainable development.*

Empanelled with

महाऊर्जा

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ISO 9001-2015 Certified

Date of Audit : 16/12/2024



ऊर्जा सं...
सुख...
सुखित...
संवर्धन 

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Energy Audit Report

(2023-24)



Jaykaranti Shikshan Prasarak Mandal's
Swami Vivekanand Mahavidyalaya
P-74 MIDC, Kalamb Road, Latur (Maharashtra)



Energy Audit Conducted by



Kedar Khamitkar & Associates

Energy Auditor

(Empanelled Mahaurja, Govt. of Maharashtra Institution)

M: 9850244701 Email. : urjabachat@gmail.com

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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.

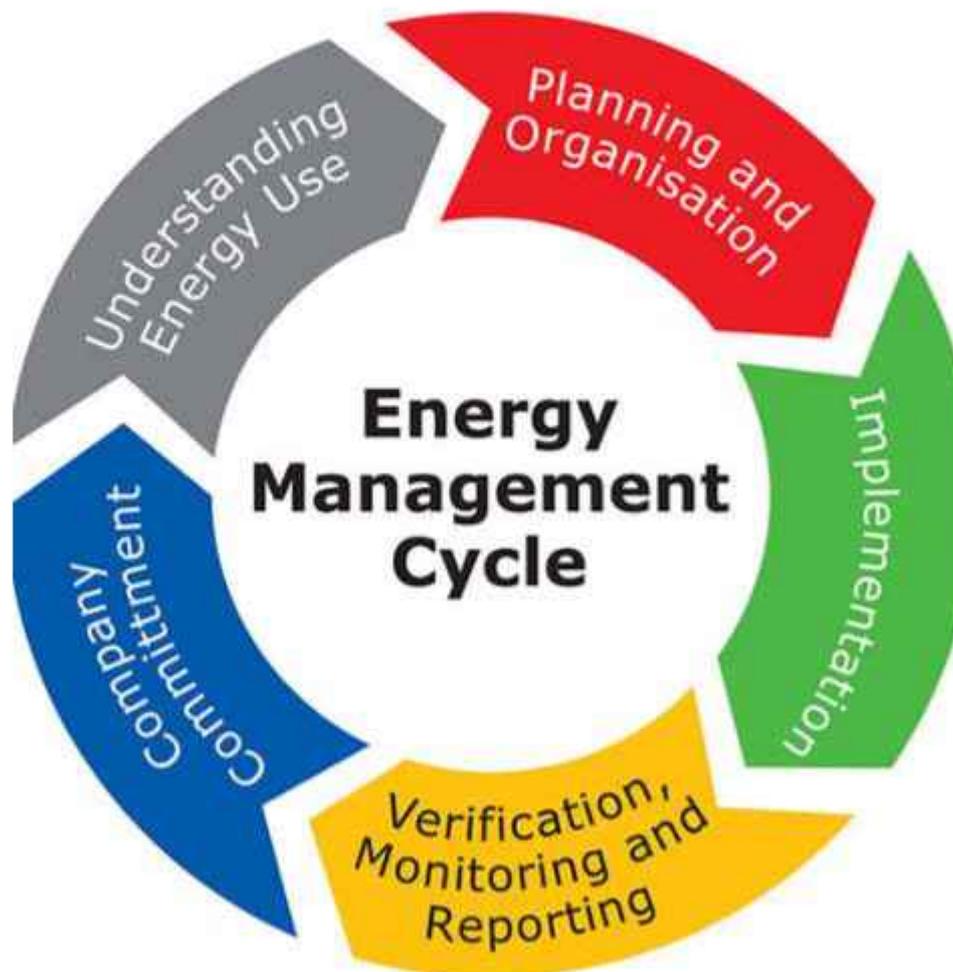
Sr.	Recommendations	Savings	Investment	Payback
1	Improve Energy Efficiency in Fan System : Replace Existing Inefficient Ceiling Fans with Efficient BLDC fans (Qty. 27 Nos.)	1800 KWh/Yr.	Rs. 0.48 Lakhs	2.6 Yrs.
2	Install Additional Rooftop Solar Power plant Capacity 50KWp	48000 KWh/Yr.	Rs. 22.50 Lakhs	4.6 Yrs.
3	Improve Power Quality Supply Install 50KVA Air Cooled Three Phase Servo Voltage Stabilizer	5000 KWh/Yr.	Rs. 0.75 Lakhs	1.5 Yrs.
4	Conduct 'Save Energy Program'	-	No Investment	Immediate



Preface

An energy audit is a study of a 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 swami Vivekanand Mahavidyalaya, Latur was conceded by EA Team on 15th Dec 2024. 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. The work is completed by considering how many Tubes, Fan, Computers, Electronic instruments, etc. How much was participation of each component in total electricity consumption.



Acknowledgement

We express our sincere gratitude to the Principal Dr. S. D. Bondage Sir for entrusting and offering the opportunity of energy performance assessment assignment. We are thankful to College Staff members for their positive support in undertaking the task of system mapping and energy efficiency assessment of all electrical system, utilities and other workshop 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.



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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 the NAAC

Energy Audit Team has been Conducted Detailed Energy Audit of swami Vivekanand Mahavidyalaya Building Located at Latur – Maharashtra. During Energy Audit We have found Environmental Consciousness and Sustainability initiatives in their Campus.

1. Percentage of Power requirement met through renewable Energy Sources

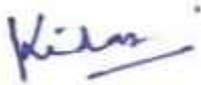
(Current Year Data) = 39 %

2. Energy Performance Index = 49.24 KWh/Sq. Meter

-Built-up Area 2305 Sq. Meter

- Electricity Consumption = Import from Mahavitrans + D.G. Generation

= 113280 + 232 = 113512 KWh/year



Kedar Khamitkar

Energy Auditor

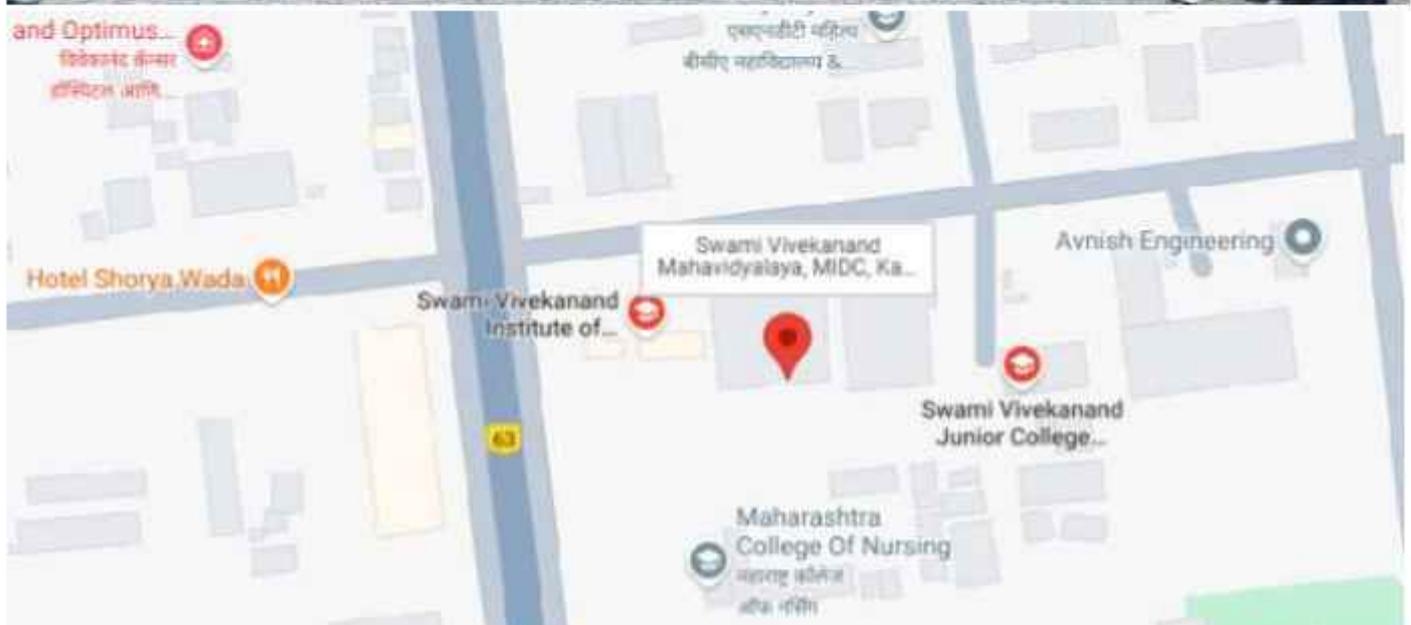
(Certified by Bureau of Energy Efficiency, Ministry of Power, Gov. of India)

Empanelled Energy Auditor MAHAURJA, Govt. of Maharashtra Institution



Chapter: 1 Introduction

Swami Vivekanand Mahavidyalaya, M.I.D.C., Latur aspires to become a strong center for educational excellence capable of responding to emerging educational challenges and needs in a fast changing society. With its core values of fairness, honesty and integrity. Jaykaranti Shikshan Prasarak Mandal Latur will always strive hard to build character, sharpen the intellect and encourage critical thinking among students through modern education retaining traditional values and the trust encourage to the rural and urban student for knowledge, science and technology. Swami Vivekananda College started in 2020-21 with B.A., B.Com. and B.Sc. College is started the courses of Yashwantrao Chavan Maharashtra Open University these are B.A., B.Com. B.A. in M.C., and B. Lib. The Distance Education from Swami Ramanand Teerth University is established in M.A. and M.Com. from 2024-25 The new degree courses are stated about computer subject. B.Sc. (C.S.), B. A. Computer Animation and Web Designing, B. Sc. Information Technology., B. Sc. Software Engineering. A dedicated group of student of NSS are actively participating in social work.



Address : JSPM Campus, P-74, MIDC, Kalamb Road, Maharashtra 413531

Chapter 2: Energy Audit Objectives

Swami Vivekanand Mahavidyalaya, Latur 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.



Chapter: 4. Study of Electrical Systems

Electrical Energy Sources:

1. The electrical supply to the JSPM Group of Institutes comes from MSEDCL LT supply.
2. Solar Power Plant (Capacity 75 KWp)
3. Diesel Generator 30KVA + 30KVA (Two Unit)



Observations: Electrical Safety measures need to review!

The audit also found that *some electrical equipment was not properly maintained* and that staff training on electrical safety was inadequate. Rubber Mats not found.

1. -Install Safety Distribution Panel board.
2. -Install Sign Boards. Prohibition, Warning, Mandatory and Emergency.
3. Install Safety Guard to D.G. Set
4. MSEDCL has been installed one common Energy meter in Campus which distributes common electrical energy to other colleges / Department in the same campus.

Suggestions: Install sub meters to all departments / buildings

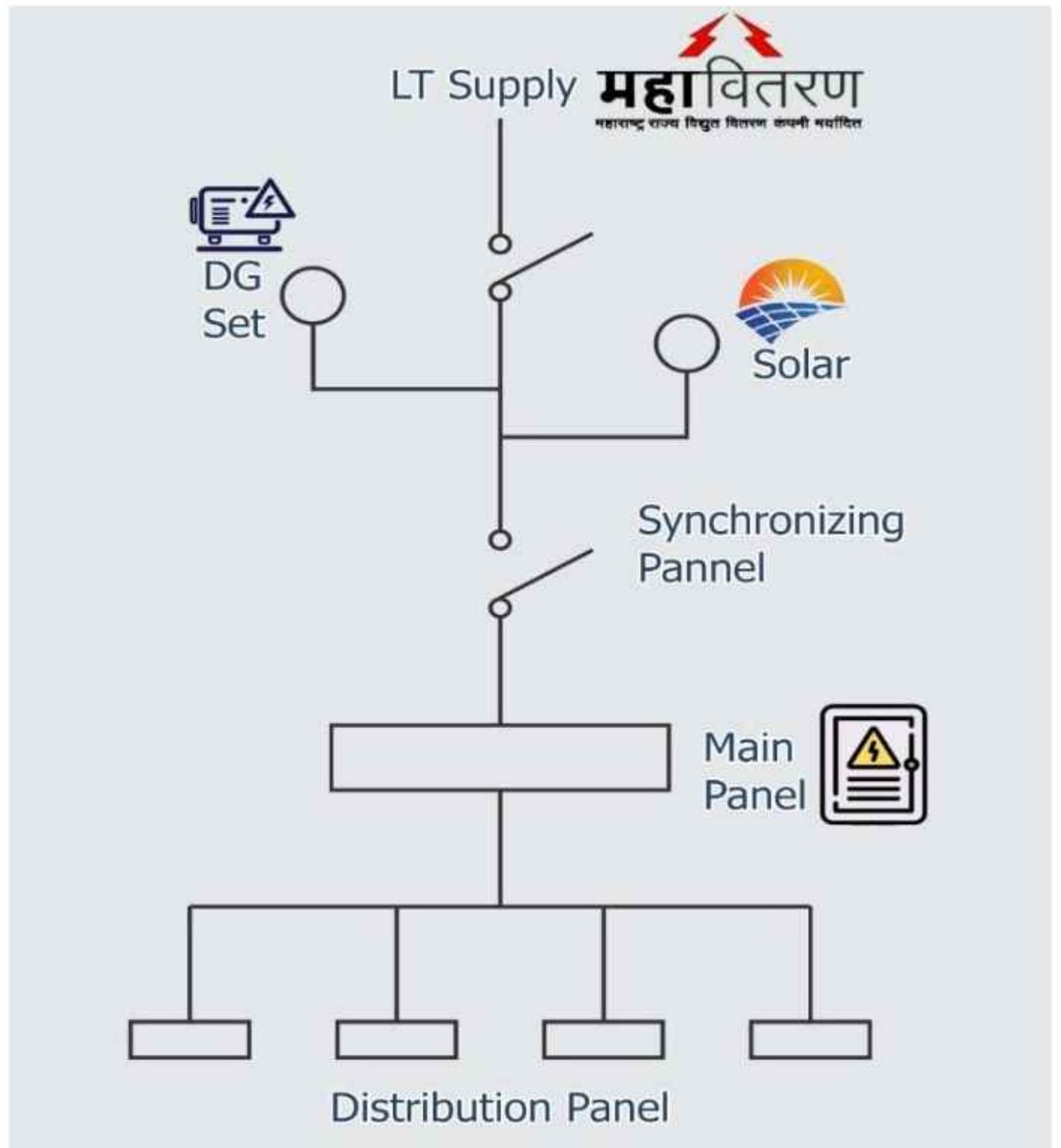
Sub Meter can measure energy used for different departments, building equipment, or any other electrical load.

MSEDCL Supply

The electrical bills Oct 23 to Nov 24 have been studied.

MSEDCL LT Supply Meter -

	Consumer No.	610551944339
Details of Electricity Demand	Tariff	88 LT-VII B I
Sanctioned Load	25	KW



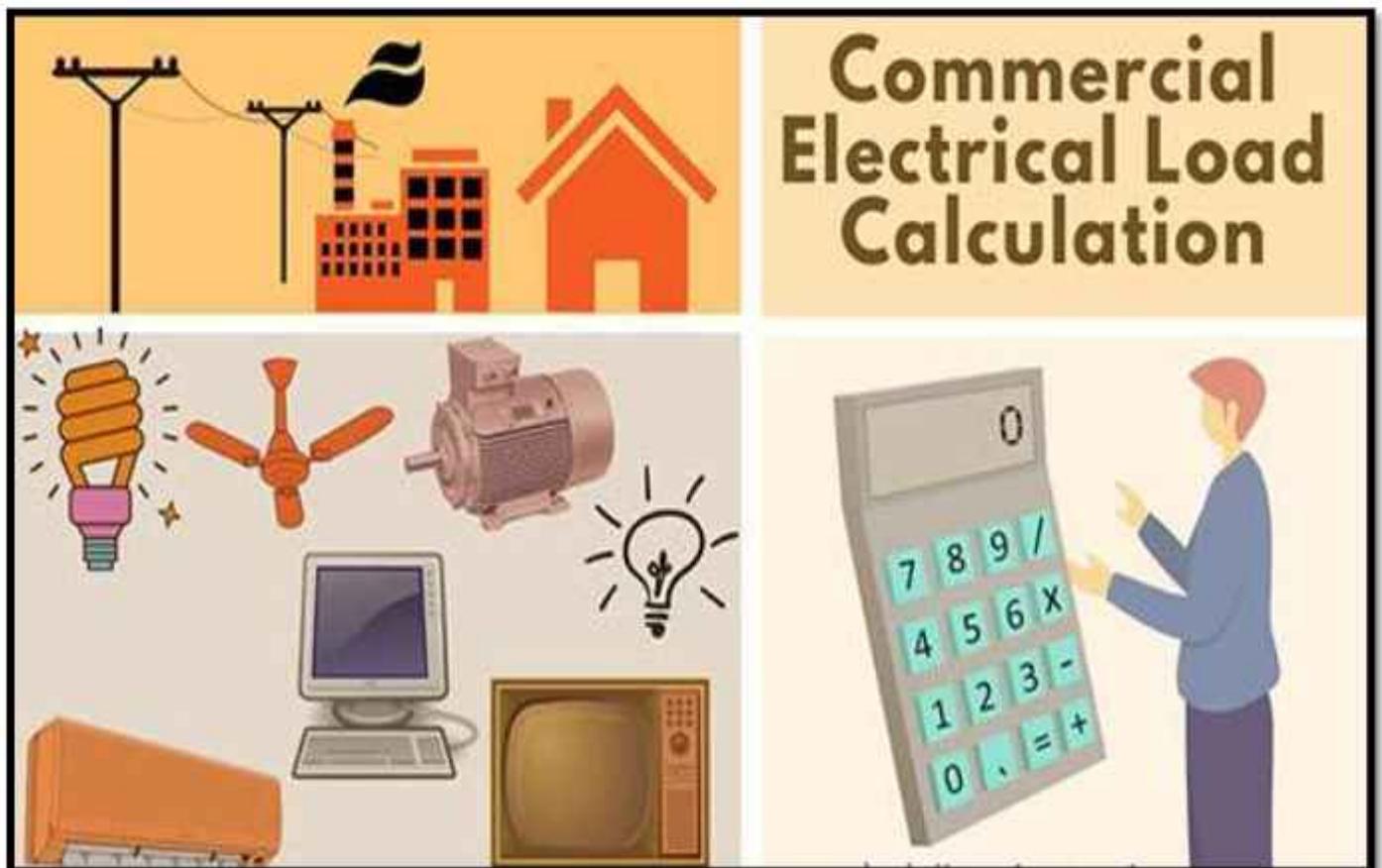
Connected Load Details

Major Energy use and Areas: In the College Campus Electrical energy is used for various applications like: Computers, Printers, Lighting, Fans, Flood light, & Other Equipment etc.

Sr.	Appliance	Qty.	Watt	Total
1	LED Bulb	38	20	760
2	Ceiling Fan	27	70	1890
3	Computer	108	175	18900
4	Printer	02	250	500
5	Water Pump	1	3730	3730
6	Streetlight LED	5	100	500
7	Miscellaneous Load		1500	1500
			Total KW	27.78

Observations : Ceiling Fan (70 Watt) Contributes 1890 Watt

Suggestions : Improve Energy Efficiency in Fan System:
 Replace Existing Inefficient Ceiling fan of 70watt with five star 28 Watt BLDC Fan.



Annual Electricity Consumption Historical Electricity Bill:

Bill Month	KWh	KVA	Bill Amount
Oct-24	10,357	33	1,87,076.36
Sep-24	8,612	31	1,54,983.21
Aug-24	9,441	29	1,62,908.85
Jul-24	8,659	26	1,47,397.14
Jun-24	7,678	29	1,39,231.26
May-24	6,069	18	96,849.84
Apr-24	10,487	29	1,77,015.52
Mar-24	11,313	33	1,90,087.44
Feb-24	10,960	29	1,70,211.39
Jan-24	10,968	25	1,65,317.93
Dec-23	10,870	23	1,61,085.47
Nov-23	7,866	29	1,31,755.01
	113,280		96,849.84

General Observations based on Electricity Bill:

Annual Electricity Imported from Mahavitrans 113280 KWh/Year

Suggestions :

1. Install Additional Solar power plant of 50 KWp capacity for the reduction in electric bill.
2. Use Maximum Natural daylight – Initiate Save Energy Program



Chapter: 5 Performance Evaluation

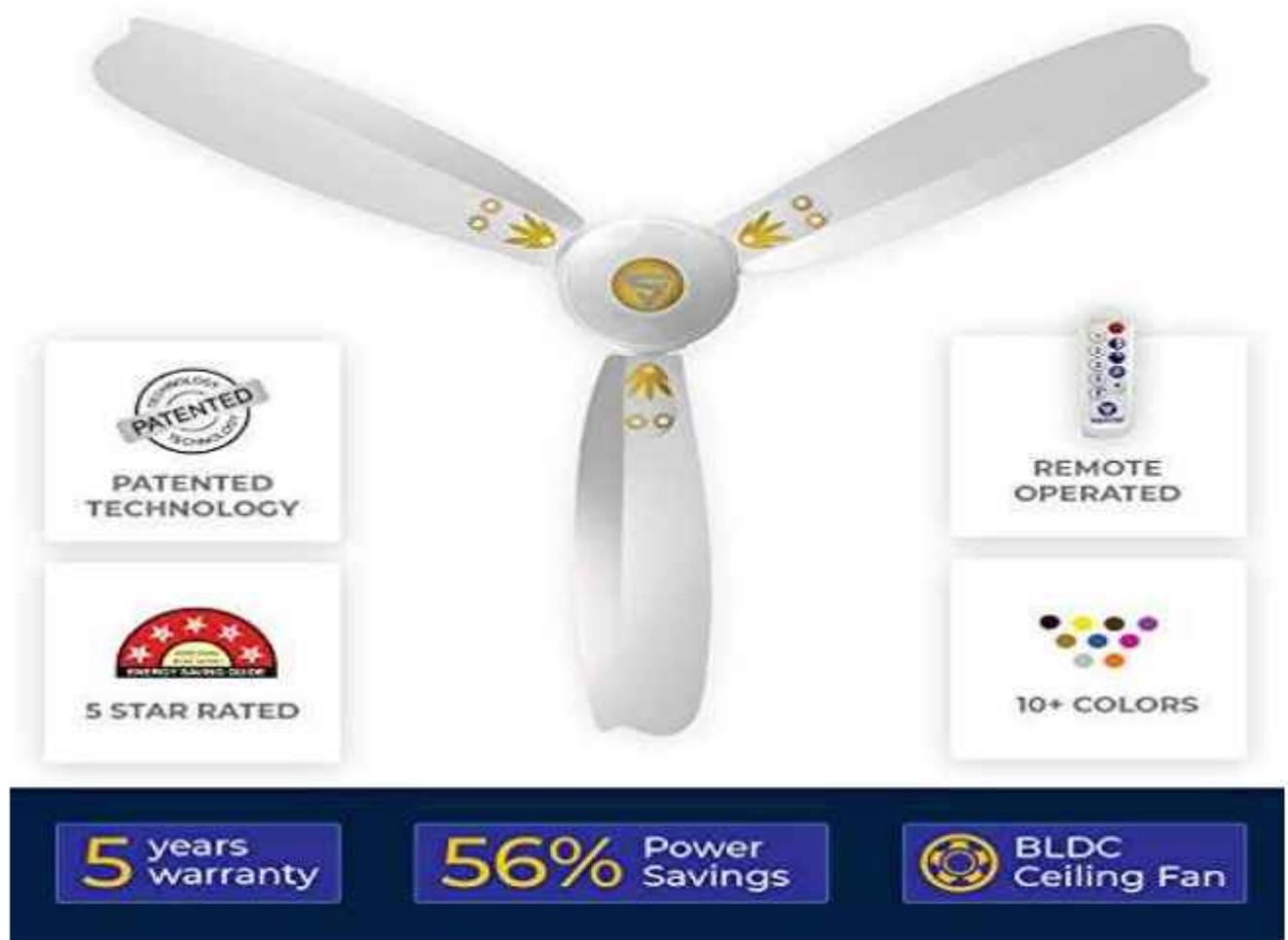
5.1 Fan System:

Total number of fans used in the campus = **27** No's

Consider @200 days Working 8 Hrs.

- Number of fans to be replace = **27** No's.
- The Total Current Consumption = 3025 KWh
- The Expected fan Consumption = 1200 KWh
- Expected Saving per year = 1825 KWh/year

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



5.2 Improve Power Quality (PQA)

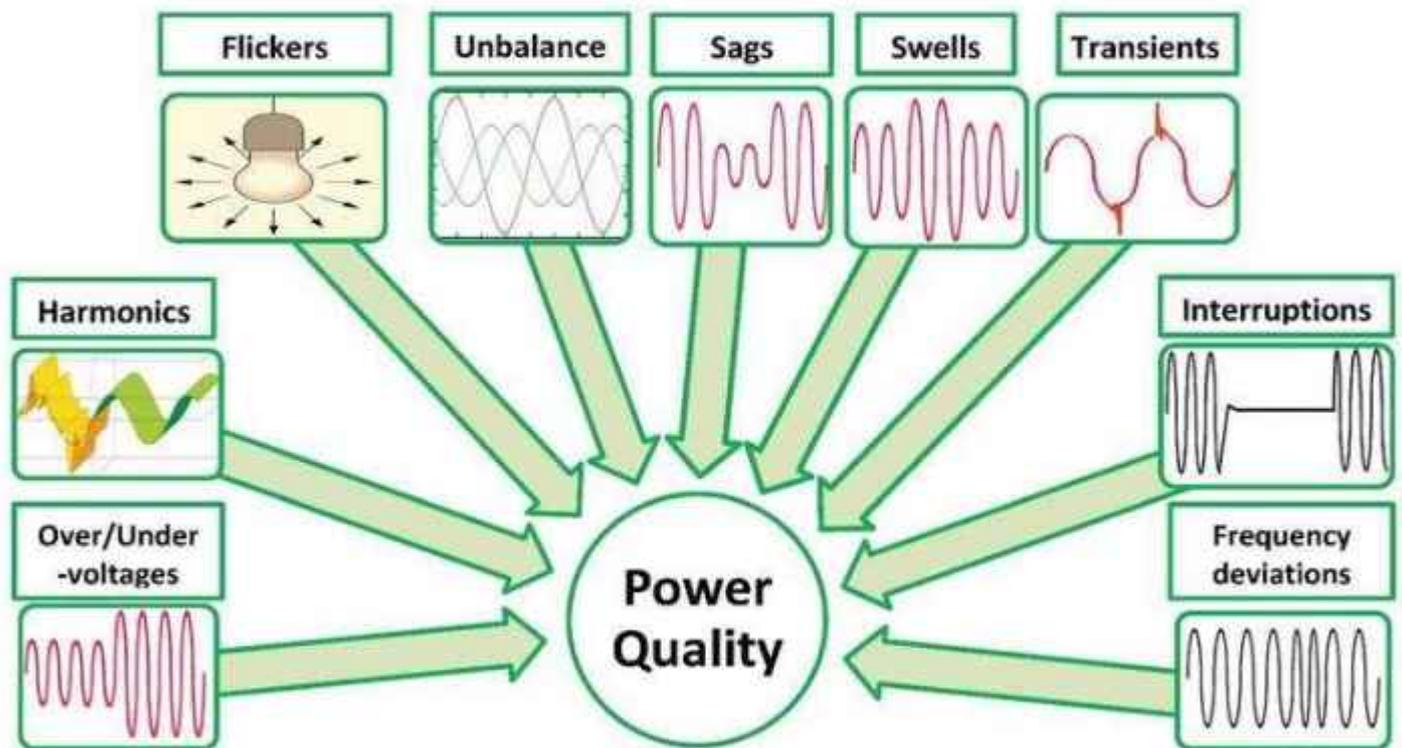
Power quality issues can affect the operation of critical loads and can have the negative impact on operation. This power quality analyser can monitor the cost of energy wasted due to poor power quality. The wider range of measurement function and measurement method in this analyser is the ideal tool and for the calculation of errors.

Factors that affect power quality:

Voltage fluctuations. Voltage fluctuations, such as sags, swells, or interruptions, can cause significant power quality issues. ... Harmonics. ... Power factor. ... Frequency variations.

Voltage level:

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



Suggestions:

Install Three Phase 50 kVA Oil Cooled Servo Stabilizer.



5.3 Lighting System: Lux level at different Locations found low

The total output of visible light from a light source is measured in lumens. Typically, the more lumens a light fixture provides, the brighter it is. One lux is equal to one lumen per square meter (lux = lumens/m²)



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

Majority Measured Lux Level found LOW:

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 in Commercial Buildings

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



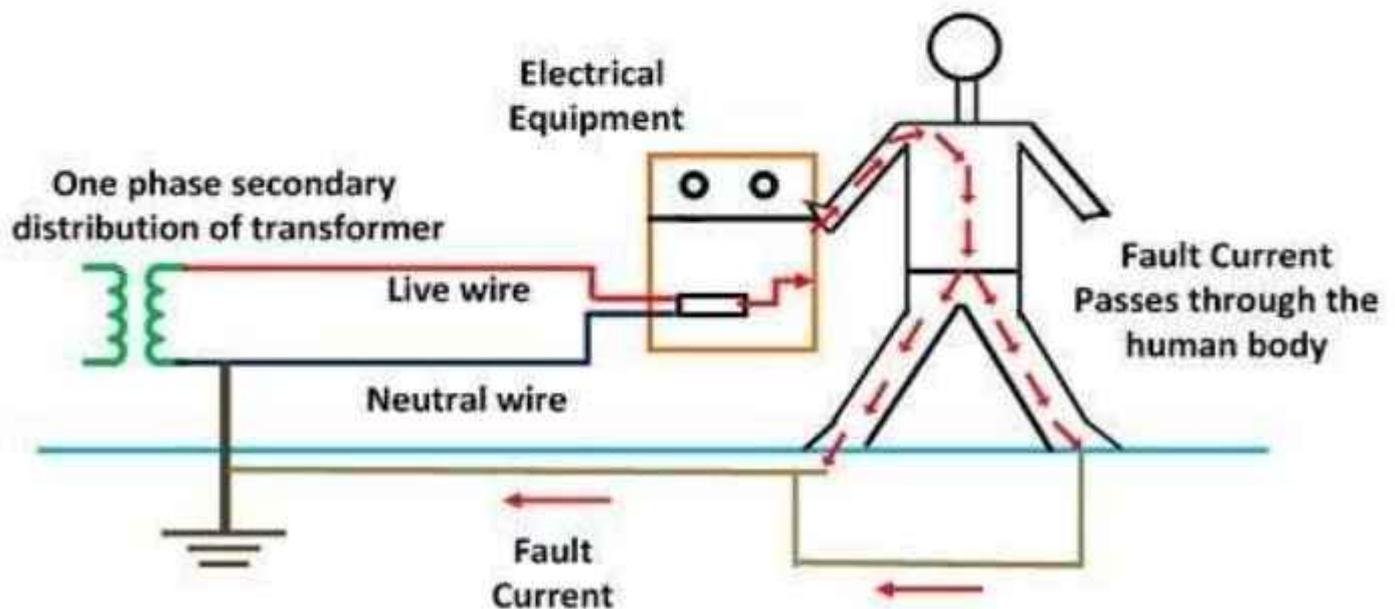
Suggestions: Install occupancy sensors to reduce Losses,

Chapter: 6 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

Electrical Safety: Earth Resistance

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.



Electrical System Without Earthing

Circuit Globe

Conduct Institutional Training / Awareness Program 14th December 'National Energy Conservation day'

The National Energy Conservation Day is organised on 14th 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 14th December – 20th 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 7: Conclusion

A total Investment of Approx. Twenty Three Lakhs & Seventy Three Thousand rupees (Rs. /- 23.73 Lakhs) amount is estimated for the energy efficiency improvement & renewable energy projects.

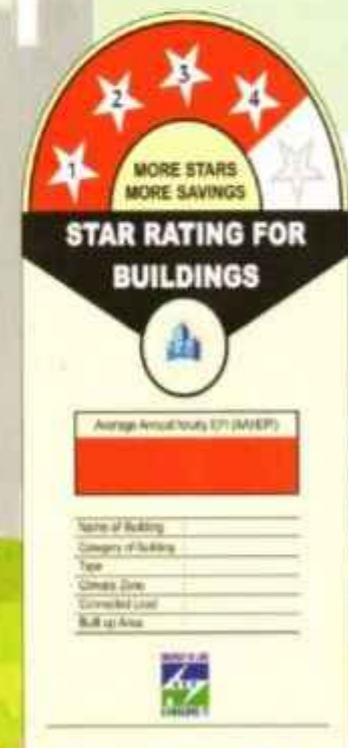
Energy Savings expected around 54800 KWh/year.

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 m² (10,000 ft²) 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.



Green Audit report

(2023-24)



Jaykaranti Shikshan Prasarak Mandal's

Swami Vivekanand Mahavidyalaya

Address: P-74 MIDC, Kalamb Road, Latur (Maharashtra)



Latur, Maharashtra, India

X-34, Latur MIDC, MIDC, Latur, Maharashtra 413512, India

Lat 18.41354°

Long 76.539246°

30/09/24 10:58 AM GMT +05:30

GPS Map Camera

Google

Green Audit report Submitted by:



Kedar Khamitkar & Associates

Energy Auditor

(Empanelled Mahaurja, Govt. of Maharashtra Institution)

M: 9850244701 Email : urjabachat@gmail.com

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ACKNOWLEDGEMENT

We express our sincere gratitude to the Principal Dr. S. D. Bondage Sir and the management of M/s. Swami Vivekanand Mahavidyalaya, Latur for awarding us the assignment of Green Audit of their Campus.



Green Audit Team:

Kedar Khamitkar

Energy Auditor

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

Kishore Khamitkar

B.E. (Chemical) ; DIS ; DNY

Holistic Health Researcher



Date : 16.12.24

Benefits of green IT



Reduces waste and emissions, contributing to a healthier planet



Encourages use of energy-efficient technology that can save money



Enables compliance with laws and regulations



Improves brand perception with customers and partners



Helps recruit and retain employees



Spurs innovative solutions to environmental problems

EXECUTIVE SUMMARY:

Objective	Observation	Recommendation
Categories of Land use	Plantation of trees is started in the campus, at Present 59% area campus is having the Green cover.	Good Initiative
Use of Renewable Energy	Installed Solar Power plant of 75 KWp	Good Initiative
Rain Water harvesting	Found Soak Pits: A soak pit for rainwater provided which helps in collecting and disposing of water.	Recommended to Install Sign Boards. Awareness for Water Conservation.
Water Management	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	Good Initiative.
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 recycled. An agreement is in place with local Company to pick up the E waste every six month	Good initiative



Chapter No.I **Scope of Work & Green Audit Methodology**

Goals of Green Audit:

Conducted a green audit of M/s. Swami Vivekanand Mahavidyalaya, Latur Campus with specific goals as:

- Geographical Location
- Floral and Faunal Diversity
- Meteorological parameter
- Pollution Eradication
- Energy Consumptions
- Waste Disposal System
- Ambient Environmental Condition
- Evaluate Environmental Footprints
- Efficient and Effective usage of Scarce Resources (Fossil fuel)

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:

M/s. Swami Vivekanand Mahavidyalaya, Latur Campus has been conducted with specific methodology as follows:



Chapter No.2 **Introduction about the Institute**

Swami Vivekananda College started in 2020-21 with B.A., B.Com. and B.Sc. College is started the courses of Yashwantrao Chavan Maharashtra Open University these are B.A., B.Com. B.A. in M.C., and B. Lib. The Distance Education from Swami Ramanand Teerth University is established in M.A. and M.Com. from 2024-25 The new degree courses are stated about computer subject. B.Sc. (C.S.), B. A. Computer Animation and Web Designing, B. Sc. Information Technology, B. Sc. Software Engineering. A dedicated group of student of NSS are actively participating in social work.



ARIAL VIEW OF COLLEGE CAMPUS (SOURCE GOOGLE EARTH)



Address: JSPM Campus, P-74, MIDC, Kalamb Road, Maharashtra 413531

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.

Audit Framework and detailed findings of the Audit:

Built up Area	2305	SQM
Plantation Area	3352	SQM



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

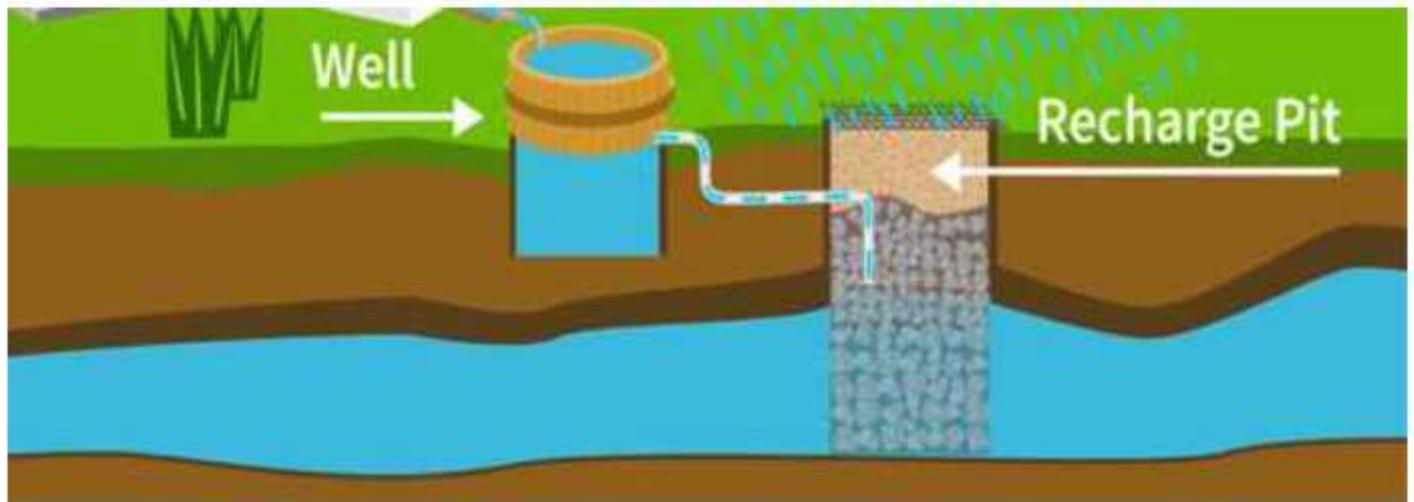


Observations :

At Present 59% area campus is having the Excellent Green cover

Chapter No. 4: Study of Waste Management

Water Conservation



Soak Pits for water conservation: Bore well recharging - Good Initiative

Observations: The College has the facility of rain water harvesting pit.



A soak pit for rainwater provided which helps in collecting and disposing of water.



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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.

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

Environmental consciousness and sustainability friendly initiatives

- 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.



Observations: Biogas Plant found - it is under construction.

Chapter No. 5 : 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.



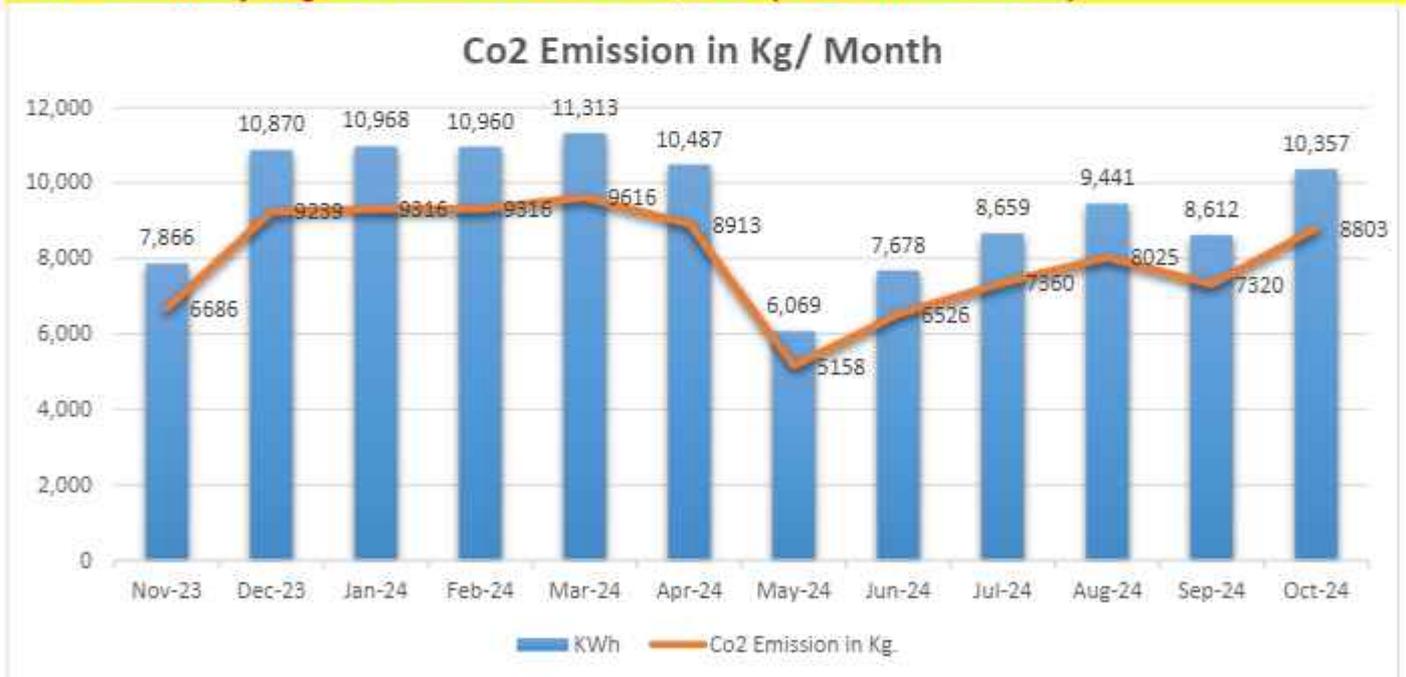
Basis for computation of CO2 Emissions: Electricity Import

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

Annual Electricity Import details: 113280 KWh/Year (Ref. Mahavitrans Bill)



Observations:

The College Imports Electrical Energy during Night for various Electrical gadgets.

Average Annually Carbon Emission due to Electricity IMPORT = 96288 Kg of CO2 into atmosphere.

Suggestions:

1. Install additional Solar Power plant of 50 KW capacity
2. Install Occupancy Sensors to minimize losses in Lighting System

Chapter No. 6 : **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.

Principal



Best Practices & Activities

Several significant and fruitful awareness programs both students and staff of the Campus are arranged every year in the campus. Reflections from students are Evident how effective such awareness programs conducted in the campus. Major programs conducted in the campus during the last Five years.

Nature camps, field trips and some of these activities are year round programs and others are regular year wiser semester wise or any other stipulated time bound programs.

Joint Initiative with MEDA Gov. of Maharashtra Institution

Environmental education through systematic environmental management approach.



National Energy Conservation Week 14th Dec to 20th December

Nature camps, field trips and some of these activities are year round programs and others are regular year wiser semester wise or any other stipulated time bound programs.

National Energy Conservation Week Activities

Joint Initiative with MEDA Gov. of Maharashtra

ENERGY CONSERVATION AWARENESS RALLY



World Environment Day 5th June NSS Activities

The concept behind the tree plantation initiative was to convey the message that tree plantation helps in maintaining a clean eco-friendly environment and reduces pollution and improves green environment.



Mr. Shivajirao Patil Kavekar
Ex-MLA, Latur
Founder President : JSPM, Latur
Chairman : MNS Bank, Latur



Mr. Ajeet Patil Kavekar
Vice President, JSPM, Latur
Corporator, Municipal Corporation, Latur
M.Sc Biotechnology (University of Exeter, England)
MBA Human Resources (Symbiosis International University)
MA International Business (University of Leeds, England)



Creative's Advn: 9673288699

जागर
पर्यावरणाचा
प्रयत्न स्वतःला
वाचवण्याचा

जागतिक पर्यावरण दिन

५ जून

Swami Ramanand Teerth Marathawada University, Nanded Affiliated

SWAMI VIVEKANAND MAHAVIDYALAYA, LATUR
B.Sc., B.Com. (English Medium) & B.A.

JSPM Campus, P-74, MIDC, Near PVR Talkies, Kalamb Road, Latur
☎ 02382-222250, 9404485265 ✉ svmlatur@gmail.com

🌐 www.svmlatur.in @svmlatur @svm_latur

Green Club Activities National Service Scheme