ENERGY AUDIT

STUDY PERIOD (TWO YEARS) 2022 - 2023

Sustainability study

REPORT

Studied for

[illegible] Educational Society's

Vaagdevi College of Pharmacy

2-2-457/3, [illegible]gar, Hanamkonda,

[illegible], Telangana, India

Studied in the capacity of

Accredited and Certified

Green Building Professional

Studied by

Greenvio Solutions

Website: https://thegreenviosolutions.co.in/

Email: greenviosolutions@gmail.com

Valid till April 2024

Background reference image Janko Ferlic on pexels

Principal
Vaagdevi College of Pharmacy
Hanamkonda, Warangal-506 001

Disclaimer

The Audit Team has prepared this report for the **Viswambhara Educational Society's Vaagdevi College of Pharmacy** located at *2-2-457/3, Ramnagar, Hanamkonda, 506001, Telangana, India* based on input data submitted by the College analysed by the team to the best of their abilities.

The details have been consolidated and thoroughly studied as per the various guidelines for Green Buildings available in National and International Standards; the report has been generated based on comparative analysis of the existing facilities and the prerequisites formulated by various standards. The inputs derived are a result of the inspection and research. These will further enhance and develop a Healthy and Sustainable Institution.

These can be implemented phase wise or as a whole depending on the decision taken by the Hon'ble Management and College. The warranty or undertaking, expressed or implied is made and no responsibility is accepted by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report.

The audit is a thorough study based on the inspection and investigation of data collected over a period of time and should not be used for any legal action. This is the property of Greenvio Solutions and should not be copied or regenerated in any form.

The Report is prepared by the Team of Greenvio Solutions under their brand and department – Sustainable Academe as Consultancy firm with the Project Head - Ar. Nahida Shaikh who is as an Accredited and Certified Green Building Professional-Architect. Green Building consultancy is her forte and she is one of the most sought after names when it comes to providing excellent quality services within the stipulated time frame.

The Study is conducted in capacity of Accredited & Certified Green Building Professional with extensive experience.

Greenvio Solutions

Developing Healthy and Sustainable Environments

We are an Environmental and Architectural Design Consultancy firm

Sustainable Academe is our department for conducting Audits

Palghar District, Maharashtra- 401208

sustainableacademe@gmail.com

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Acknowledgement

The Audit Assessment Team thanks the **Viswambhara Educational Society's Vaagdevi College of Pharmacy, Telangana, India** for assigning this important work of Energy Audit. We appreciate the cooperation extended to our team during the entire process.

Our special thanks are due to **Ch. Narsimha Reddy,** President; **Ch. Rathnakar Reddy,** Treasurer; **Ch. Devender Reddy,** Secretary and Correspondent and everyone from the Management.

Our heartfelt thanks to the Chairperson of the entire process **Dr. Challa Srinivas Reddy,** Principal and Professor for the valuable inputs.

We are also thankful to **College's Task force the Assistant Professors** who have collected data required - **Dr. E. Venkateshwarlu,** Professor Head, Department of Clinical pharmacy & Pharma D. and **Dr. B. S. Sharvana Bhava**, IQAC Coordinator & H.O.D. Pharma Dept.

We highly appreciate the assistance of the **entire Teaching, Non-teaching and Admin staff** for their support while collecting the data.

Sustainable Academe
Brand of Greenvio Solutions, Palghar District, Maharashtra- 401208

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Hanamkonda, Warangal-506 001

Contents

Evidence documents for Site visit of external audit team

[illegible]

Audits covered: ✓ ☐ Green audit ✓ ☐ Energy audit ✓ ☐ Environment audit

Institute: VAAGDEVI COLLEGE OF PHARMACY **Date:** 6th May 2023

Document objective: Inferences of the Site visit

Observations (Positive aspects)	**Suggestions** (Improvement aspects)
Green Audit	
- Rain water harvesting pit available in the premises - Social initiatives & waste management undertaken	- Increase reflectance & documentation of all facilities & activities
Energy Audit	
- Solar panels are installed checked during visit for alternate source of energy	- Install solar Hot water Heater system in hostels - Install sensor based water taps, lights, hand dryer (Educational area)
Environment Audit	
- pharmacognosy garden	- Increase green cover on roof top & vertical garden - Improve ground level green cover through beautification

Signature & round seal
Name: [illegible] SP [illegible] REDDY
Designation: PRINCIPAL
For the said Institute

Signature & round seal
Name: Mrs. F. A. Shaikh
Designation: Project Coordinator
For The Greenvio Solutions

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Hanamkonda, Warangal-506 001

Evidence documents for Site visit of external audit team

Audit team headed by external expert - Ar. Nafisa Abdulla
Accredited & Certified Green Building Professional, ISO 14 (IMS)
Audit objective: Green Building up gradation of the premises

Audits covered: ☐ Green audit ☐ Energy audit ☐ Environment audit

Institute: VAAGDEVI COLLEGE OF PHARMACY **Date:** 6th May 2023.

Document objective: Proof of the Site visit

Meeting with the core team

Investigation of the systems

Vaagdevi College of Pharmacy V.C.P

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Name: Mrs. F. A. Shaikh
Designation: Project Coordinator
For The Greenvio Solutions

Vaagdevi College of Pharmacy Ramnagar, Hanamkonda

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1. Introduction

1.1 About the Society

To impart higher education of high quality in the backward region of Telangana, some young, technically qualified persons with philanthropic qualities under the guidance of senior persons, established the Viswambhara Educational Society in Warangal on 3rd April 1993.

The main aim of the society is to offer higher education of high quality and noble values to the students of the backward region of Telangana and help in the upliftment of society. ***As a maiden effort, the society started Vaagdevi College of Pharmacy in 1997.***

The firm commitment of management and dedicated efforts of faculty started attracting many students to join in courses offered by ***Vaagdevi College of Pharmacy*** year after year. The College has grown in leaps and bounds in recent times and today, it is one of the most sought-after colleges in the region.

With the success of initial efforts and patronage of its stakeholders, Viswambhara Educational Society spread its educational services to the breadth and width of many disciplines like – engineering, pharmacy, physiotherapy, M.B.A, M.C.A, Education, and physical education apart among many undergraduate and postgraduate non-professional programs.

Today Vaagdevi Group of institutes is managing thirty colleges including - Engineering Colleges, Pharmacy Colleges, Management Colleges, M.C.A Colleges, Physiotherapy Colleges, Education Colleges, Ayurvedic Medicine Colleges, Paramedical and Nursing Colleges apart from conventional Degree & P.G Colleges.

Thus, Vaagdevi Group of Colleges has been making steady and tremendous strides in the present day, living up to the expectations of the people at large by imparting value-based education through professional and non-professional courses. It is now poised for a big leap in developing as a Deemed University.

1.2 Statements of the Institution

1.2.1 Vision

The institute envisions

- *Equipping students with the critical thinking skills, global perspective and respect for the core values of loyalty, honesty and compassion.*
- *Helping students acquire these abilities is the cornerstone of the education.*
- *Offering students will be successful now and will be prepared for the future.*
- *Generating young people who will lead the nation to a brighter future by becoming engaged, smart, appreciated citizens and professionals.*

1.2.2 Mission

The College adheres and focuses

- *"To prepare outstanding pharmacists, educators, scholars, and researchers and to advance the field of pharmacy education as a whole through research on the science and art of teaching and learning, the use of industrial and clinical procedures, the effective use of technology, the analysis development of leadership and educational policies."*

1.2.3 Aim

The College has formulated the following aim to achieve its mission

- *Providing professional aspirants from both urban and rural areas with delivering top-notch instructions, student-centered teaching and learning techniques, and cutting-edge infrastructure to professionals seeking to make their mark in wherever they are placed.*
- *Imparting technical education, also by using online advanced classes, resources like e-books, e-learning, e-library, etc., which encourage independent thought, develops strong subject matter expertise, sharpens modern skills, and produces attitudes supportive of the holistic development of young minds.*
- *Enhancing the nation's healthcare by developing the institution into a Centre of Academic and Research Excellence in Pharmaceutical Education and becoming a global leader in the fields of pharmacy practice and pharmaceutical sciences.*

1.2.4 Objective

The main objective of the college is to produce and qualify pharmacy graduates who satisfy the following characteristics:

- *Handle chemicals efficiently and safely while according to all applicable rules and regulations.*
- *Possesses the ability to formulate and prepare Pharmaceutical products*
- *Assess the quality and amount of raw materials and Pharmaceutical products using a variety of qualitative and quantitative analytical techniques.*
- *Utilize their in-depth understanding of their fundamental knowledge to offer the community and patients about drug information and education services regarding the usage of pharmaceuticals and medical devices.*
- *Possess the fundamental understanding of the pathogenesis of a disease, pharmacology and pharmacotherapy necessary to collaborate with other healthcare professionals in enhancing the delivery of healthcare services via the use of evidence based information and to manage unusual or extremely difficult cases.*
- *Planning, designing, and carrying out research with the proper methodology*
- *Develop student's presentation, marketing, business administration, computation and numeric skills*
- *Demonstrate student's communication skills, ability to work in a team, time-management, critical thinking, decision making and problem solving strategies*
- *Perform duties in accordance with the Law, Morality and Professional standards*
- *Capable of continuing education for the purpose of enhancing one's professional knowledge and abilities*
- *To ensure the sustainability of good practice, manage the effective and safe delivery of pharmaceuticals and take part in programmes for quality assurance and improvement*

- *Demonstrate a professional mind set by conducting business ethically and maintaining expertise over time through lifelong learning*

Finally, the student stepping out from this college should be a well-educated and trained professional acclimatized with all the future prospective and goals to be faced in advance.

1.3 Assessment of the Institute

1.3.1 Affiliation

The College has all its courses approved and is affiliated with the **Kakatiya University,** a public university located in the Indian state of Telangana.

1.3.2 Certification

The College has received the following Certifications:

- **ISO** – The certification related to ISO 9001:2015 (Quality Management Systems) was received on 23 July 2023.
- **AISHE –** The certification from the Department of Higher Education Statistics Division, New Delhi in 2022 and the code is *C-27290.*

1.3.3 Approval

The courses provided by the college are approved by the following bodies:

- **Pharmacy Council of India (PCI), New Delhi** received in 2001 with the affiliation number being PCI – 2552.
- **All India Council for Technical Education (AICTE), New Delhi** received in 1997 with the affiliation number being 1-12136136.

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2. Overview

2.1 Summarised Populace analysis

2.1.1 Students data

The student data (shared by the Institute) shows there were an **approximately 634 students in academic year 2022-2023 and 529 students in academic year 2021-2022** in the premises.

2.1.2 Staff data

The staff data shows the premises had an approximate of **49 nos. of Staff Members** on the premises in both academic years.

2.2 Site and Building spread area

The **total site area is 2.2 acres** and the **total Built-up area of the Institute is 1,02,758 sq. ft. (9,550 sq. m)**

2.3 Institute Infrastructure

2.3.1 Establishment

The Institute was established in **1997.**

2.3.2 Spatial Organisation

There are provisions for staircase for accessibility on the premises, whereas there are amenities such as CCTV, a first aid room, etc. The Building is a Reinforced Cement Concrete (RCC) framework building.

2.4 Operation and Maintenance of the premises

The interview session was held with the staff regarding the operation and working hours. The schedule is mentioned below.

- **Main Institutional areas** - 7:30 am to 6:00 pm, Monday to Friday for around 250 days.
- **Library areas** – 7:30 am to 9:30 pm, Monday to Saturday for around 320 days.

3. Research

3.1 About the Green Building Study Audit

It is a systematic study of the aspects which make the Institution sustainable and healthy premises for its inhabitants.

3.2 Analysis of the Green Building Study Audit

The procedure included detailed verification as follows:

- Investigation
- Technical discussion with team
- Observations
- Inferences

3.3 Strategy adopted for Green Building Study Audit

The strategies included data collection from the admin department, actual inventory, investigation to check the operation and maintenance, analysis of the data collection, and preparation of the Report.

3.4 Activities undertaken for the Green Building Study Audit

- Discussion with the Institute
- Allotment and Initiation by the Institute
- Data collection
- Submission of the files

Evidence documents for Site visit of external audit team

Audits covered: ☑ Green audit ☑ Energy audit ☑ Environment audit

Institute: VAAGDEVI COLLEGE OF PHARMACY **Date:** 6th MAY 2023

Document objective: Induction Meeting attendance sheet

S. No.	Name	Committee	Designation	Signature
1.	Mrs. F. A. Shaikh	External	Project Coordinator	
2.	Ar. Nahida Abdulla	External	Project Head	
3.	Dr. C. Srinivas Reddy	INTERNAL COLLEGE COMMITTEE	PRINCIPAL	
4.	Dr. B.S. SHARVANABHAVA		IQAC - Coordinator & H.O.D, Pharm.D.	
5.	Dr. E. Venkateshwarlu		H.O.D., Pharmacology.	
6.	Dr. A. MAKARANDH		ASSISTANT PROFESSOR	
7.	Ms. V. RASHMITHA		ASSISTANT PROFESSOR	
8.	Mrs. M. SUMALATHA		ASSISTANT PROFESSOR	
9	Ms. K. SHARANYA		ASSISTANT PROFESSOR	
10	Dr. K. SRINIVAS REDDY		H.O.D., Pharmacognosy.	
11.	Mr. N. KOMURA REDDY		ADMINISTRATIVE OFFICER	

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Evidence documents for Site visit of external audit team

Audit team headed by external expert - Ar. Nahida Abdulla
Accredited & Certified Green Building Professional by IGBC (LEED)
Audit objective: Green Building up gradation of the premises

Audits covered: ☑ Green audit ☑ Energy audit ☑ Environment audit

Institute: VAAGDEVI COLLEGE OF PHARMACY **Date:** 6th May'2023

Document objective: Exit Meeting attendance sheet

S. No.	Name	Committee	Designation	Signature
1.	Mrs. F. A. Shaikh	External	Project Coordinator	
2.	Ar. Nahida Abdulla	External	Project Head	
3.	Dr. C. SRINIVAS REDDY	INTERNAL COLLEGE COMMITTEE	PRINCIPAL	
4.	Dr. B.S. SHARVANA BHAVA		IQAC - Coordinator & H.O.D - Pharm.D.,	
5.	Dr. E. VENKATESHWARLU		H.O.D - Pharmacology	
6.	Dr. A. MAKARANDH		ASSISTANT PROFESSOR	
7.	MS. V. RASHMITHA		ASSISTANT PROFESSOR	
8.	Mrs. M. SUMALATHA		ASSISTANT PROFESSOR	
9.	MS. K. SHARANYA		ASSISTANT PROFESSOR	
10.	Dr. K. SRINIVAS REDDY		H.O.D. - Pharmacognosy	
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4. Investigation

4.1 Sources analysis

The primary and secondary sources of energy consumption are based on the electrical supply through the local government.

4.2 Energy efficiency analysis

4.2.1 Energy efficient practices for alternative sources

- Additional provisions such as solar hot water heaters, solar parking etc., should be introduced in the near future.

- The premise has LED Lights contribute to 45% in terms of number and **21% of the power requirement** is met through the same. As per our study we could conclude that both of these numbers should improve.

4.2.2 Energy efficient equipment

- The premise has LED Lights in multiple spaces.
- The air conditioners are BEE star labelled appliances and new.
- There are no energy efficient fans in the premises.

5. Documentation

5.1 Primary sources of energy consumption

- **Electrical (Metered) –** Light, Fans, Equipments, Pumps comprise these sources.
- **Renewable energy –** There are **107 Solar panels** to harness solar energy in the premises through solar panels.

5.2 Secondary sources of energy consumption

The premise uses batteries, inverters & UPS as backup for administrative purposes. The details of the existing sources are documented below:

S. No.	Name	Nos.
1	UPS	2
2	Inverters	1
3	Gas cylinders	7

Table 1: Details of secondary sources of energy consumption

5.3 Actual Electrical Consumption as per Bills

The College spends a substantial amount on electricity bills every month. However, we would like to recommend the use of alternate sources of energy to harness the electrical loads and reduce the monetary expenses.

S. No.	Month	Year	Amount
1	August	2022	95,041
2	September	2022	1,13,923
3	October	2022	1,04,417
4	November	2022	94,154
5	December	2022	1,01,866

Table 2: Details of the electrical consumption

5.4 Calculated Electrical Consumption as per inventory

The electricity bills provide actual consumption data. The following is the calculated consumption. It is done to understand the percentage of energy usage in the premises by various applications. It is based on the inventory collected and interviews with the staff.

The additional data such as wattage is taken from market research. In terms of electrical consumption, the main sources are lights, fans, air conditioner, and equipment. The inventory and data collection for sources of energy consumed in the premise in summarised in the following sections.

The following documentation is based on the consumption practice of the premises on a regular working day.

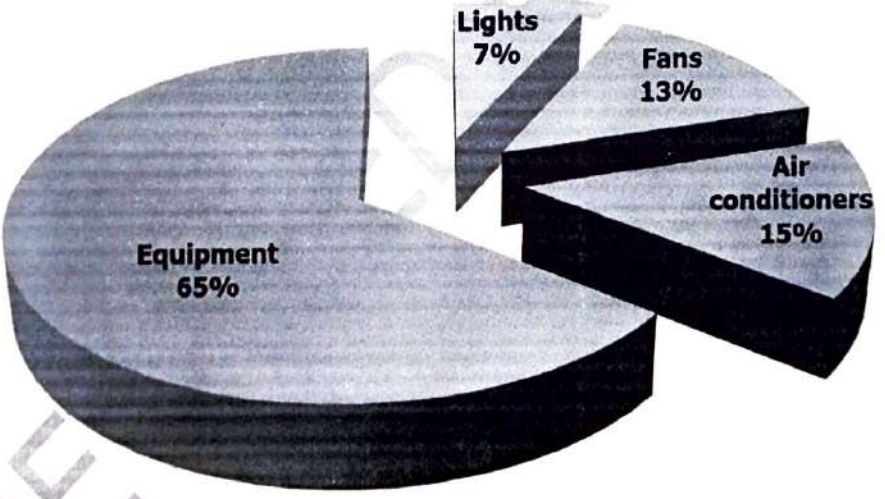

Figure 1: Summary of the calculated electrical consumption as per inventory

The above graph shows that equipment consumes 65% whereas the air conditioners consume 15% while the fans consume 13% and the lights consume 7% of the total calculated electrical energy.

5.5 Lights

5.5.1 Types of lights based on the numbers

There are a total of **222 nos. of lights on the premises;** the following table shows the various types of lights on the premises.

S. No.	Type	Nos.
1	**LED** (Energy-efficient lights)	100
2	**Non-LED** (Non Energy-efficient lights)	122

Table 3: Summary of the types of lights on-premise

5.5.2 Types of lights based on the power consumption

The energy consumption of lights is **10,380 kWh** of energy.

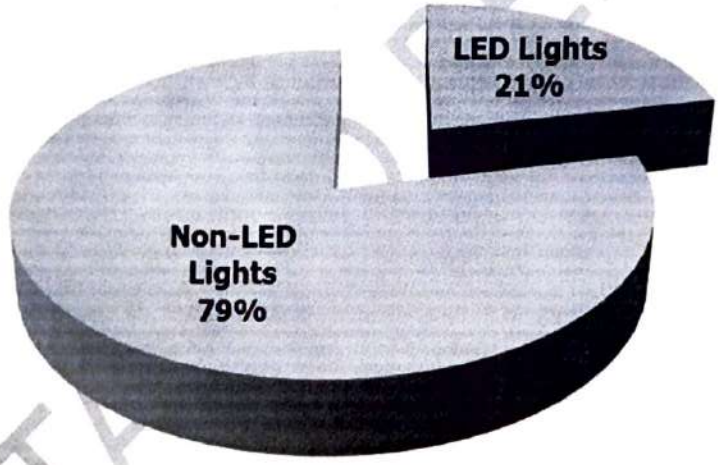

Figure 2: Energy consumed by types of lights in the premise based on the usage study

The analysis of the types of Lights on the premises shows that the **Non-LED lights consume 79%** while the **LED lights consume 21%** of the total power consumed by lights.

5.5.3 Usage analysis

The premise has LED Lights contribute to 45% in terms of number and **21% of the power requirement** is met through the same. As per our study we could conclude that both of these numbers should improve.

5.6 Fans

5.6.1 Types of fans based on the numbers

There are a total of **221 fans** on the premises as follows:

S. No.	Type	Nos.
1	Ceiling fans	211
2	Small Motor exhaust fans	8
3	Wall mounted fans	2

Table 4: Summary of the types of fans in the premises

5.6.2 Types of fans based on the power consumption

The energy consumption of fans is **19,472 kWh** of the energy.

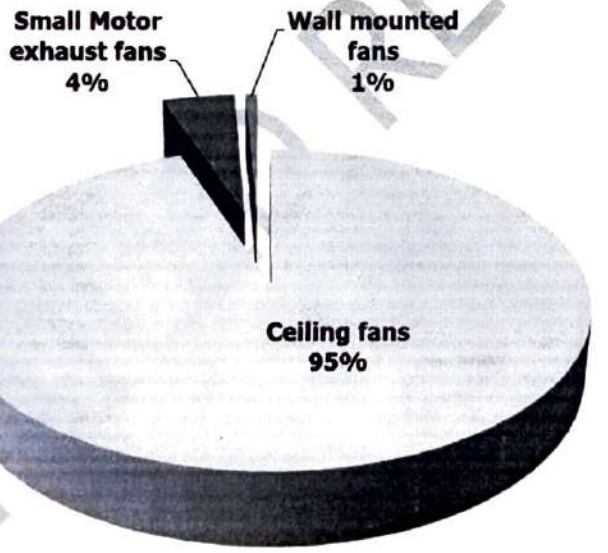

Figure 3: Types of fans based on power consumption

The above analysis shows the **Ceiling fans consume 95%** whereas the **small motor exhaust fans consume 4%** and the **wall mounted fans consume 1%** of the total power.

5.6.3 Usage analysis

There are no energy efficient fans in the premises.

5.7 Air conditioners

5.7.1 Types of air conditioners based on the numbers

There are **two window air conditioners and one centralised air conditioning system** on the entire premises.

5.7.2 Building-wise consumption analysis

The energy consumption of air conditioner is **21,594 kWh** of energy.

5.7.3 Site investigation observations

The Outdoor units are cleaned properly and do not possess dust collection problems.

5.7.4 About the replacement of current air conditioners

Though there is not an immediate requirement for replacement.

However, whenever the Institute undergoes redevelopment or a new Block is constructed there can be provisions for replacement with energy-efficient appliances that require less power consumption.

5.8 Equipment

5.8.1 Types of Equipment

There are **153 nos. of equipment** in the Educational sector.

5.8.2 Types of equipment as per their energy contribution

The energy consumption of equipment is **93,665 kWh** of energy.

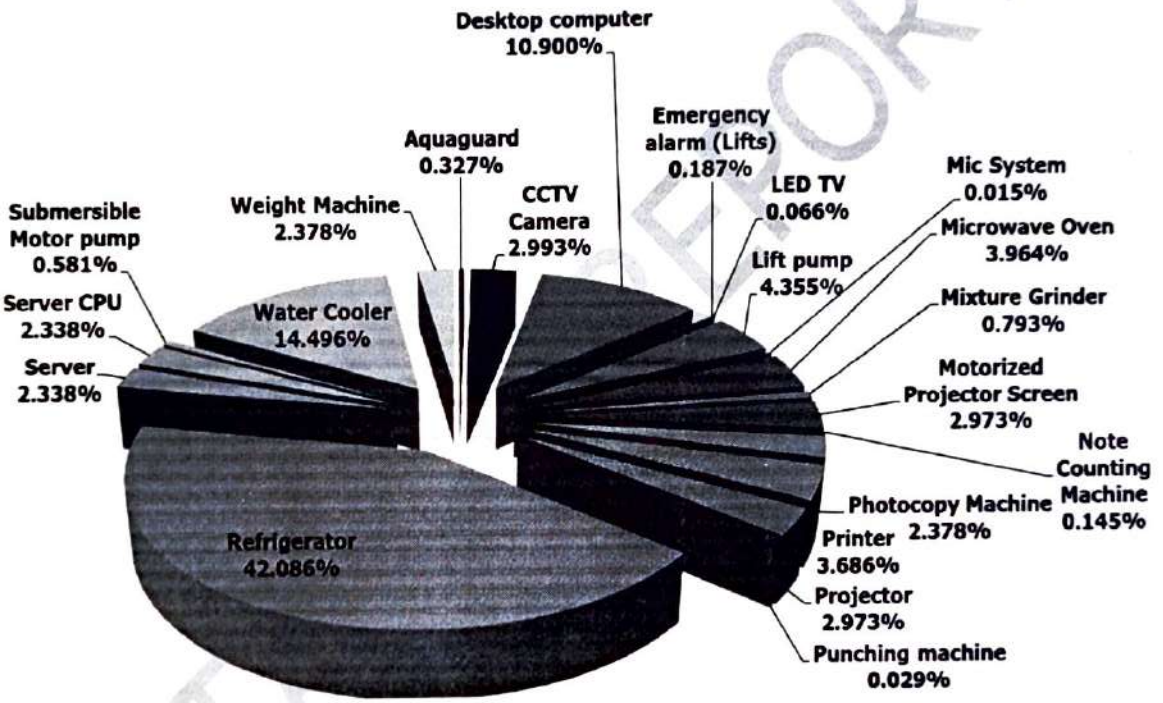

Figure 4: Energy consumed by types of equipment in the educational sector based on the usage study

The above summary shows that the **refrigerator consumes more energy at 42.086%** while the **water cooler consumes 14.496%** the **desktop computer consumes 10.900%** and the **lift pump consumes 4.355%** these are the maximum consumers as compared to other equipment.

6. Suggestion

6.1 Section-wise suggestions

The following suggestions are to be considered as a ***first priority*** for implementation. These **should be executed within the next 1.5 to 2.5 years from the date of the Report submission.** The Institute can execute a plan after discussion with Project Head.

6.1.1 Electromechanical systems – Electrical and Lighting

Section 1 - Non-LED lights

The current light analysis shows that Non-LED lights consume anywhere between 50W to 54W and even more when in use; these should be replaced with LED lights which consume on an average 12-16W when in use. Our technical analysis shows that there would be a reduction of an average of **67% reduction** in energy consumption through lights specifically as a part of the electro -mechanical system if all **Non-LED lights on all floors** are replaced with an energy efficient appliance whenever the College undergoes renovation.

Section 2 - Ceiling fans

The current Fans are in proper working conditions and maintained well. The ceiling fans are in more quantity and consume at least 45W when in use. These should be replaced with energy efficient fans consuming 14W when in use. Our detailed study states that is all the **ceiling fans on all floors** if replaced with star rated appliance results in a reduction of average of **69% reduction** in energy consumption if replaced with energy efficient appliance. It will be suggested to either replace these now if College can have certain plans else the replacement can be done when fans get damaged or are not in working condition.

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6.2 General suggestions

The following details are consolidated study recommendations related to 'entire Institute' and should be considered as ***second priority*** for implementation, once the section wise recommendations are implemented. The following recommendations should be ***implemented within 2.5 to 3.5 years from the date of the Report submission.***

6.2.2 Alternatives towards Smart premises mechanisms

6.2.2.1 Facility management systems, controls

(Includes electromechanical systems – Electrical, Water)

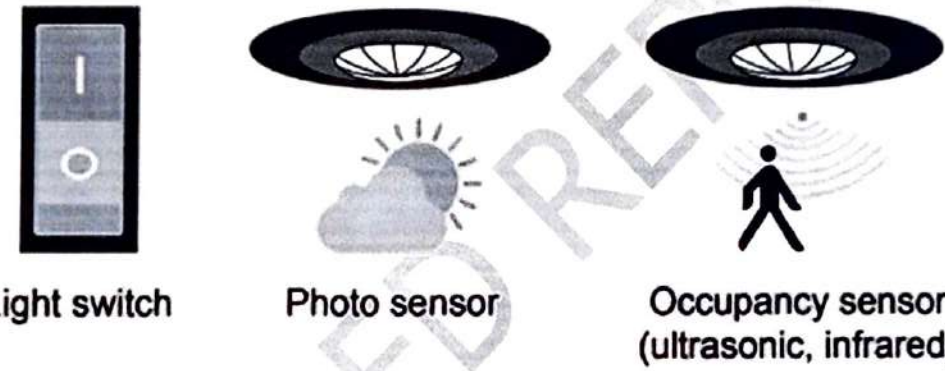

Plate 1: Understanding the lighting concepts

Source: https://seors.unfccc.int/applications/seors/attachments/get_attachment?code=NG125PFE4WHMWSYAK8TCAKIHMWX0F4QD

The above diagram provides a detailed study of how the system controls should be incorporated in the premises as fare as lighting systems are considered. The suggestions for this sub-section are listed below.

- Install PIR control of the lighting in the toilet areas.
- Install low flow taps with automatic shut off in the toilets.
- Install push button timer control in all rooms lighting and ceiling fans.
- Install Power Electronics control of the Foyer notice board lighting.
- Installation of intelligent lighting controller will help in controlling the lighting energy.
- Use of photo sensor switch for street light controlling helps in conserving the lighting energy.

On-site investigation and physical verification

Audit Team during the visit and other photos collected during data documentation

Meeting with the core team, group photo with the team and site investigation

Investigative parameters – Ecological Management – Wheelchair, Ramp and Plantations

Investigative parameters – Energy Management – Solar panels and electrical appliances

Investigative parameters – Water & Waste Management – Rain water harvesting pit, Dustbins & vending machine

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7. Compilation

The study is based on the data collected, analyzed, rechecked, and confirmed through multiple modes. For the quality study, some standards/ notes have been referred to. These are listed and noted below. However, no direct references have been used anywhere. These are used as a base to analyze and study the data collected.

Specific references for study related to energy

- https://www.energy.gov/eere/buildings/zero-energy-buildings
- https://www.dsaarch.com/zero-net-positive-energy
- U.S. Energy Information Administration
- https://www.happysprout.com/inspiration/what-is-smart-gardening/
- https://housing.com/news/smart-gardening/
- Inference study reference image - Zsuzsa Bóka from Pixabay
- Inference study reference image - https://solarpowerproject.in/solar-panels-for-parking-lots.php

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Green Policy

Prepared by

External Expert: Ar. Nahida Abdulla (ASSOCHAM GEM Certified Professional – Registration no. 22/718)

Greenvio Solutions

An environmental and architectural design consultancy (Socio-environ responsibility)

Motto: Developing Healthy and Sustainable Environments

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Website: https://thegreenviosolutions.co.in/

Proposed for the prestigious

Viswambhara Educational Society's

Vaagdevi College of Pharmacy

2-2-457/3, Ramnagar, Hanamkonda, 506001, Telangana, India

Date of preparation of policy: Tuesday, 30 May 2023

Policy no: GV/ PL/ 05-23/ L-2

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Hanamkonda, Warangal-506 001

Green Policy

DISCLAIMER – This policy has been prepared by the team of 'Greenvio Solutions' based on the audit of the Institute. The inferences suggested by the team during the audit have been used as a base in formulating the policy. The documentations suggested below are based on the practical implementation capacity of the Institute. Hence, it is a feasible policy that can be practiced by the stakeholders of the Institute.

V.E.S's Vaagdevi College of Pharmacy *along with* ***Greenvio Solutions*** *shall undertake the following approaches towards sustainability.*

- *Take certain provisions for* ***Green Building parameters*** *to be implemented in a cost-effective manner through consultancy with Greenvio Solutions.*
- ***Social practices through green management*** *- Continue the number of practical and virtual activities under social welfare and community development initiatives for the students and staff.*
- ***Water Management*** *- The water conservation measures shall be extended to rain sensitization and outreach programs etc.*
- ***Waste Management*** *- Precautions shall be taken towards waste segregation at source; in addition to organic, biomedical, paper waste management.*
- *Join hands with local municipal corporations on local, regional, national and international level to develop substantial programmes for* ***community development****.*
- *Increase the* ***environmental interventions*** *in the educational programmes and document the same through multiple platforms*
- *Educate the students to undertaken initiatives for the* ***socio-environmental welfare*** *for nearby localities and adopted areas.*

Principal
Vaagdevi College of Pharmacy
Hanamkonda, Warangal-506 001

Environment Policy

Prepared by

External Expert: Ar. Nahida Abdulla (ASSOCHAM GEM Certified Professional – Registration no. 22/718)

Greenvio Solutions

An environmental and architectural design consultancy (Socio-environ responsibility)

Motto: Developing Healthy and Sustainable Environments

greenviosolutions@gmail.com

Website: https://thegreenviosolutions.co.in/

Proposed for the prestigious

Viswambhara Educational Society's

Vaagdevi College of Pharmacy

2-2-457/3, Ramnagar, Hanamkonda, 506001, Telangana, India

Date of preparation of policy: Tuesday, 30 May 2023

Policy no: GV/ PL/ 05-23/ L-1

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Environment Policy

DISCLAIMER – This policy has been prepared by the team of 'Greenvio Solutions' based on the audit of the Institute. The inferences suggested by the team during the audit have been used as a base in formulating the policy. The documentations suggested below are based on the practical implementation capacity of the Institute. Hence, it is a feasible policy that can be practiced by the stakeholders of the Institute.

V.E.S's Vaagdevi College of Pharmacy *along with* ***Greenvio Solutions*** *shall undertake the following approaches towards sustainability.*

- *At present (Academic year 2021-2022 and 2022-2023) there are* ***32 nos. of plantations*** *in the premises. Appropriate carbon sequestration study and documentation shall be undertaken in future.*

- *The same shall be extended to the surroundings as part of the environmental* ***awareness campaign*** *for beyond environment promotional activities.*

- *Increase the* ***green cover*** *along the courtyards and duct areas through vertical plantations – This activity will be updates on a macro level upon discussion with the Management since it is a shared campus with other institutes in the premises.*

- ***Documentation*** *of the mapping and zones of the premises.*

- ***The Fire and Life safety practices*** *are in place as per the investigative study; the same shall be continued and extended through sensitization programs.*

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Energy Policy

As per the Indian Green Building Standards

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Energy Policy

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V.E.S's Vaagdevi College of Pharmacy *along with* ***Greenvio Solutions*** *shall undertake the following approaches towards sustainability.*

- *Increase staff and student's* ***sensitization*** *about importance of energy conservation at the Institute and in respective households.*
- *Explore opportunities for* ***alternative sources*** *of energy at the Campus level.*
- *Explore opportunities for* ***reducing the air conditioning loads*** *if possible after due discussions with external experts and internal engineers.*
- *The* ***calculated electrical load of the premises is approximately 1,45,111 kWh*** *for the current academic year 2022-2023; the following analysis is combined for entire premise taking into considerations calculated electrical consumption as per inventory.*

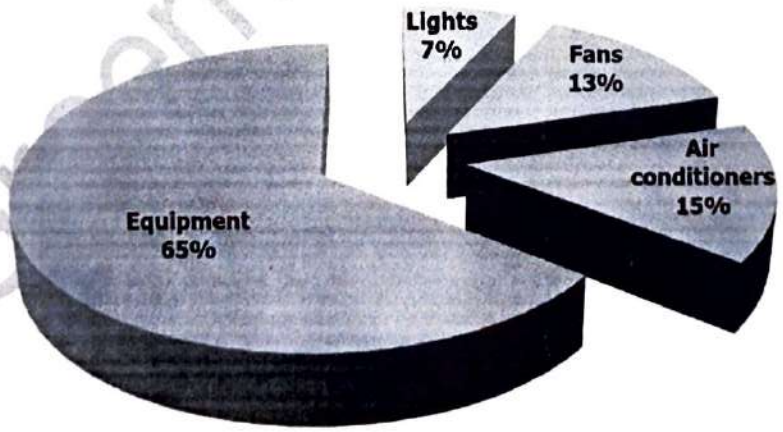

Figure 1: Summary of the calculated electrical consumption as per inventory

The above graph shows that equipment consumes 65% whereas the air conditioners consume 15% while the fans consume 13% and the lights consume 7% of the total calculated electrical energy.

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Date: 19 July 2023
Ref no: LA/19/07/88

Letter of Appreciation

For

Implementing the recommendations suggested during the Green, Energy and Environment Audit Process

Awarded to

Viswambhara Educational Society's

Vaagdevi College of Pharmacy

2-2-457/3, Ramnagar, Hanamkonda, 506001, Telangana, India

With reference to the above cited subject we appreciate the efforts of the Institute's in **implementing the activity of printing and putting up awareness posters related to Waste, Water, Save Environment, Plastic awareness.** The Institute's has printed these and put them at appropriate locations in the premise.

We hope the Institute's continues similar efforts in the future as well. We have attached some of the photographic evidences in this letter.

Best regards,

Ar. Nafisa Shaikh
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Sustainable Academe
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An environment Design and Consultancy developing Healthy and Sustainable Environments
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Note: These photographic evidences were shared by the Institute's post the suggestion given to the Institute.

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