



ENERGY AUDIT REPORT FOR SANSKRITI COLLEGE



Elion Technologies & Consulting Private Limited

307, 3rd Floor, DDA Lal Market, H-Block

Vikas Puri, New Delhi-110018

Contact No: +91 9013923982,+91 9013890526

Web: www.elion.co.in.



Table of Contents

Content	Page No.
Acknowledgement	3
Site Information	4
Executive Summary	5
Chapter-01 Introduction	6
Chapter-02 Energy Consumption & Analysis	8
Chapter-03 Lighting System	10
Chapter-04 Air Conditioning	13
Chapter-05 Pumps & Motors	15
Photographs	16
Conclusion	17
Disclaimer	18



Acknowledgement

Elion Technologies and Consulting Pvt Ltd places on record it's thanks to Sanskriti College, Rajasthan for entrusting the task of conducting energy audit study.

We acknowledge with gratitude the whole hearted support and cooperation extended by all team members while carrying out the study.



Site Information

Name of College	Sanskriti College
College Address	Sanskriti Marg, Shipra Path, Mansarovar, Jaipur 302020
Execution Partner	ELION Technologies & Consulting Pvt Ltd
Communication Address	307, 3rd Floor DDA Lal Market H-Block Vikas Puri, New Delhi, 110018
Date of Audit	20 th September 2024
Year of Audit	2024 – 2025
Audit Participants from Site	Sanskriti College
Total College Area	2000 Sq.m
Total Green Area	90 Percent



Executive Summary

Sanskriti College has a proud legacy of nine years, consistently imparting excellence in education and empowering students for a successful future.

Sanskriti College is a distinguished institution that provides value-based education and fosters a sustainable educational environment. With a focus on global education, the college offers high-quality and affordable education that enhances the knowledge, skills, values, and confidence of its students. It instills a spirit of leadership, integrity, and social justice in its students while promoting their participation in extracurricular and sports activities. The commitment of the faculty and students to diversity, social justice, and democratic citizenship is unparalleled. Sanskriti College nurtures Indian culture and traditional values while emphasizing a modern and scientific outlook. Its goal is to impart rational thinking and deep-rooted Indian 'Sanskar' to its students, enabling them to make a mark of difference in the world.

List of courses offered by the institute:

- B.A. (Hist., English Lit., Socio., Pub.Ad., Pol.Sc., Psy., Eco., Geog.)
- B.Com (Abst, Badm, Eafm)
- B.Sc. (Chem., Zool., Bot., Phy., Math's, Geog., Econ., Stat., Psy.)
- B.Sc. (Hons. Bio Grp Chem , Zool., Bot.)
- B.Sc. (Hons. Maths Grp Chem , Phy., Maths)
- BBA
- BCA
- BVA

Electricity is supplied by Local Electrical Distribution Company at and is stepped down to 415V using a transformer of rating 315KVA.

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



Chapter 01: Introduction

M/S Sanskriti College, Rajasthan evinced interest in availing the services of Elion Technologies and Consulting Pvt Ltd for conducting energy audit of their premise.

Elion Technologies and Consulting Pvt Ltd team conducted the Detail Energy audit on 20th September 2024.

This report is on the energy audit carried out M/S Sanskriti College, Rajasthan. The detailed energy audit comprised of the following activities:

- Data collection of power consuming equipment's.
- A brief session on energy management was conducted to seek more inputs from the personnel engaged in operation and maintenance of electro mechanical services.
- Analysis of collected data.
- Discussion with the officials on the identified proposals.
- Discussion and reporting of the findings of energy audit with the Engineers and management staff.

All the identified energy savings proposals have been discussed with the executives concerned before finalizing the projects.

The contents of the report are based solely on the data provided by Sanskriti College, Rajasthan officials during the energy audit.

The management should implement the suggestions made in the report after verifying requisite safety aspects.

Methodology for Energy Audit:

The following is a list of general procedure and information undertaken during the energy audit:

- General information of the site.
- Baseline energy description.
- Past energy consumption bills which includes electricity bills.



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

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



Chapter 02: Energy Consumption Details

Following table below show the electrical utilities installed in the campus:

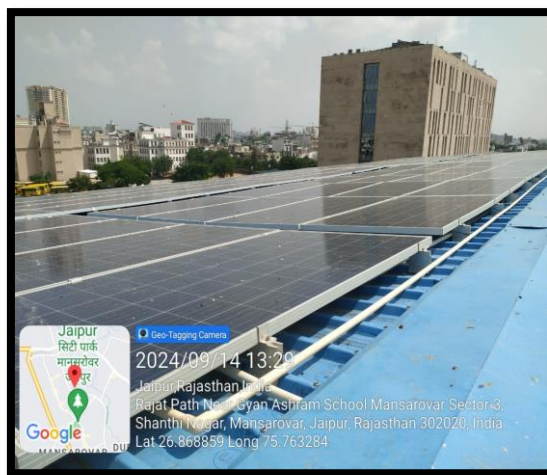
Rating of Transformer (in KVA)	315 KVA
Year of installation of the Transformer	2014
Rating of DG Set (in KVA)	62.5 KVA
Rating of Capacitor Bank (if present)	NA
Capacity of Solar Power Plant (if installed)	16000 KVA rh

The main areas of energy consumption as observed during the audit are as follows:

- Air Conditioners
- Lighting
- Fans
- Motors & Pumps
- Desktops & Printers

The main sources of energy to meet the required consumptions are as follows:

- Electricity supply from Power Distribution Company.
- Backup power from DG Set.





Chapter 03: Lighting System

Following is the summary of lights installed at various locations of the college campus:

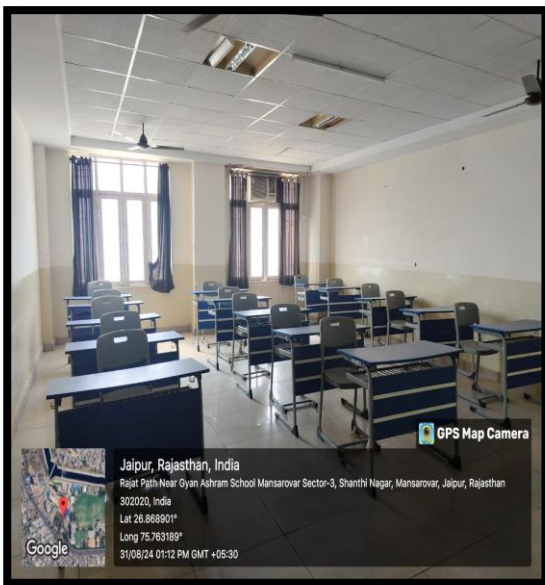
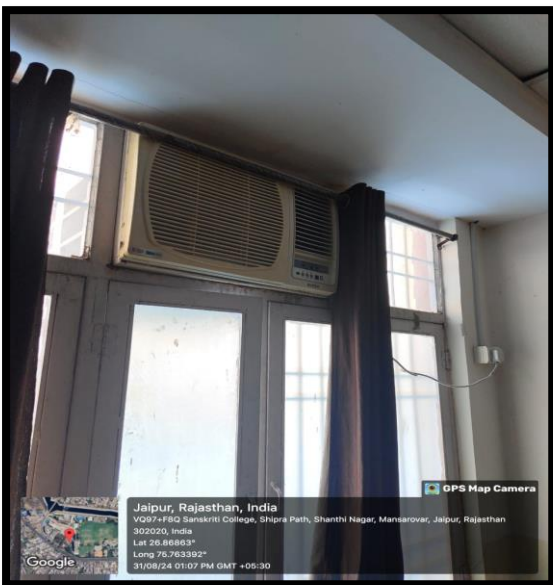
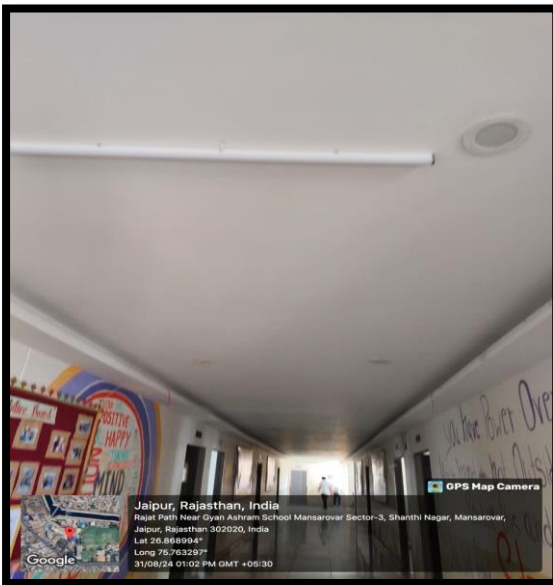
Type of lights (LED/CFL/Conventional Bulb/Tube Light)	Location	Rating	Quantity
LED	Office Reception Counselling	12W	300
Display LED	Office Reception	-	2
Fan	Class Rooms Staff Room	-	100
Tube Light	Class Rooms Wash Rooms	12W	53
Windows AC	Office Class Rooms	1.5 Ton	16
Split AC	Student Welfare, Reception, Lab, Counselling	1.5 Ton	7
Projector	Class rooms	-	2
Computer	Office LAB	-	42

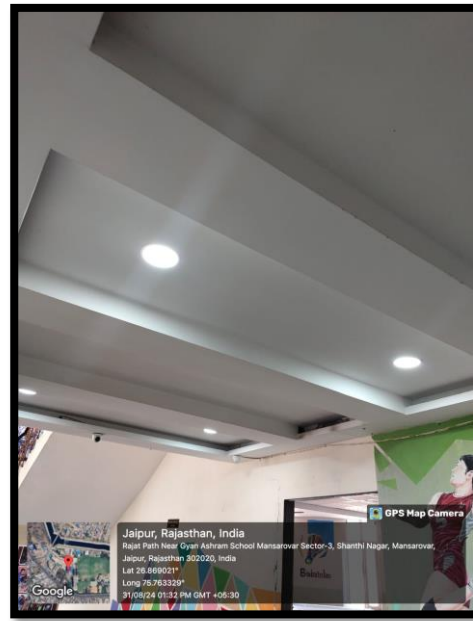
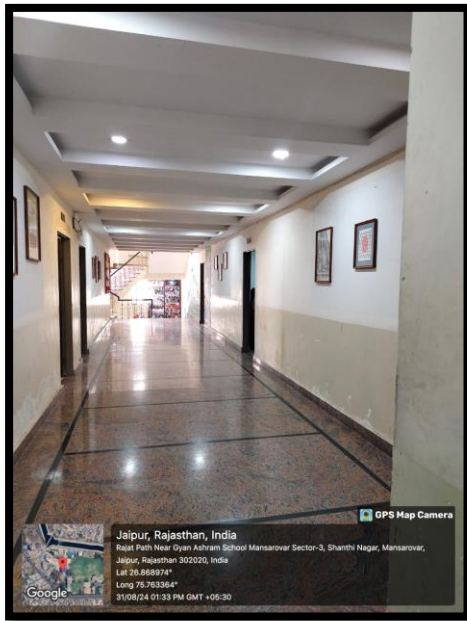
Observation:

- Most of the lights used in the campus are LEDs. Campus has replaced all the conventional lights with energy efficient LED lights which is a good practice.

Recommendation:

- Regular cleaning of light fixtures to be done to get maximum lux level.
- Stickers emphasizing "Save Electricity" or "Switch Off" shall be displayed near sockets or switches.







Chapter 04: Air Conditioning

Split, and Windows Air Conditioners are used in facility for air conditioning. Following is the list of ACs present in the campus:

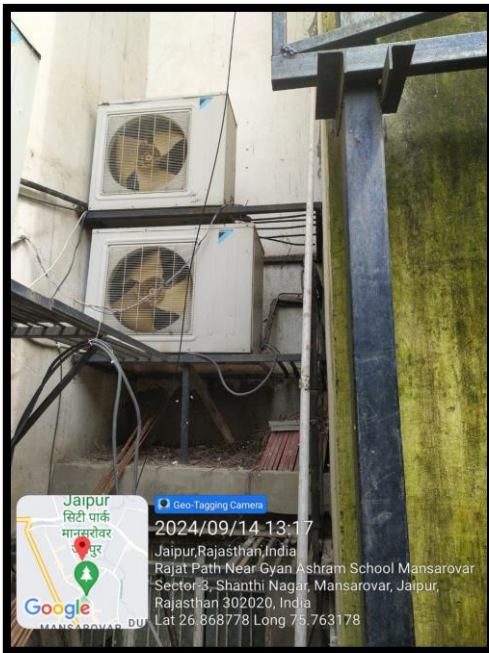
Type of AC (Windows/Split/Package and Location)	Capacity in Ton	Whether any star rating available	Set Temperature	Whether AC performance is satisfactory (Yes/No)
Windows AC	1.5 Ton	4	24	Yes
Split AC	1.5 Ton	4	24	Yes

Observation:

- All air conditioners are found to be functioning properly and well maintained.
- Regular servicing and maintenance of air conditioners are done with proper cleaning.

Recommendation:

- All doors to be kept closed while using the air conditioners and regular annual service of AC's should be carried out.
- Set Temperature of Air Conditioner shall be maintained at 26°C.
- A reduction in 1°C set point temperature, the energy cost comes down by 5%. By carefully selecting the seasonal temperature in different areas as per requirement considerable saving on account of power consumption can be achieved.
- Whenever Air Conditioners are replaced in future, BEE 5 star rated air conditioners shall be considered which are energy efficient.
- Installation of AC energy savers can be considered for air conditioners having longer running hours.





Chapter 05: Pumps and Motors

Name of Pump and make	Running Hours	Any VFD	Rated Capacity in KW	Flow Rate	Head	RPM
Pluga pump; Balta Startes	3-4 hrs	-	0.746 Kw	230-440 V	120 feet	3000

Name of Pump and make	Flow Rate	Measured Power/Current	Suction Pressure	Discharge Pressure
-	230V-440V	1 HP	-	-

Observation:

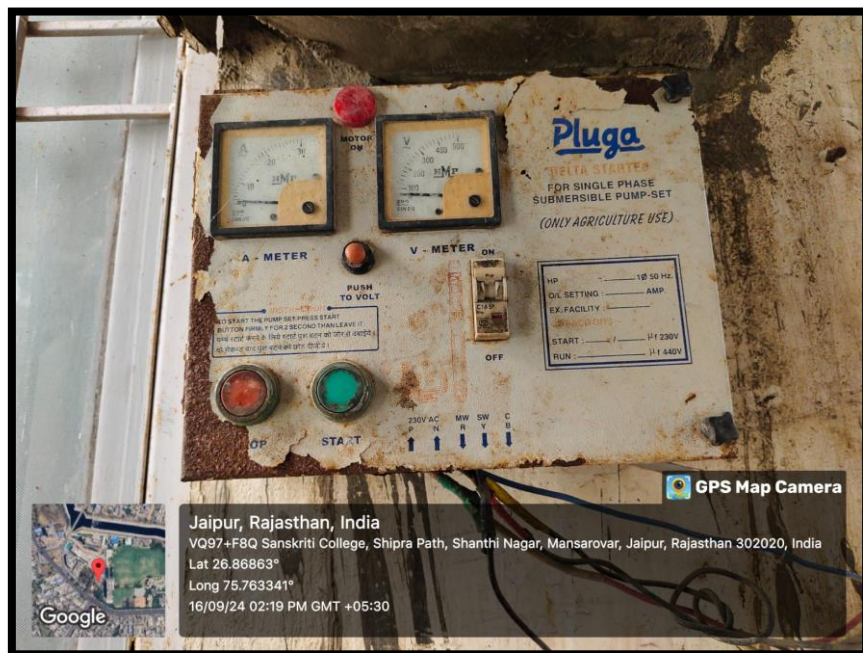
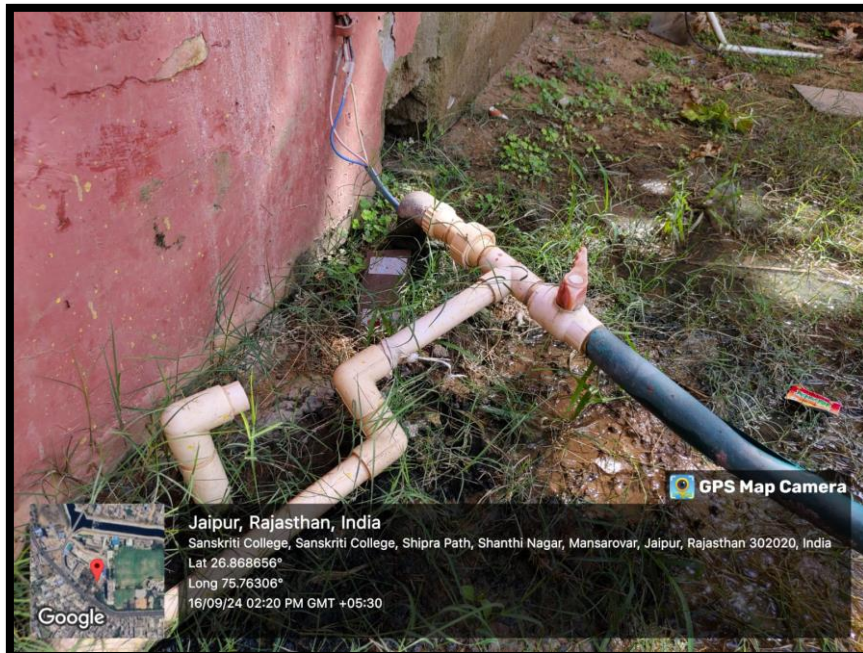
- These pumps are strategically placed to ensure efficient water distribution and management throughout the Campus. All pumps and motors are functioning properly and well maintained.

Recommendation:

- Proper maintenance and upkeep of pumps and motors to be done.



Photographic Evidence





Conclusion

The energy audit performed at Sanskriti College, Rajasthan showcased commendable efforts towards sustainability within the college. The replacement of conventional lights with energy-efficient LED alternatives marks a significant stride in reducing energy consumption.

Despite these advancements, there remains untapped potential for further enhancing energy efficiency. The audit report likely contains specific recommendations aimed at maximizing sustainability efforts. Implementing these suggestions could significantly bolster the college's energy-saving initiatives, continuing the positive trajectory towards a more environmentally conscious campus.

End of Report



Elion Technologies & Consulting Private Limited

Registered Office:
307, 3rd Floor, DDA Lal Market, H-Block
Vikas Puri, New Delhi-110018
Phone No: 011-28541888, 9013890526
Email: support@elion.co.in
Website: www.elion.co.in

DISCLAIMER

All information contained in this report is based on the data available and observations made during the audit. All recommendations made in this audit report should be duly evaluated by the management before implementation.

Elion Technologies and Consulting is not liable for any damages incurred by the organization through implementation of the energy saving proposals either to it or to any third party getting impacted by the implementation of this report.

No warranty, guarantee, or representation, either expressed or implied, is made as to the correctness or sufficiency of any representation contained herein. This report may not address every possible loss potential, violation of any laws, rules or regulations, or exception to good practices and procedures. The absence of comment, suggestion, or recommendation does not mean the property or operation(s) is in compliance with all applicable laws, rules, or regulations, is engaging in good practices and procedures, or is without loss potential. No responsibility is assumed for the discovery and/or elimination of hazards that could cause accidents or damage at any facility that is subject to this report.