



A.D.M College For Women (Autonomous)

Nationally Accredited with 'A' by NAAC (Cycle-IV)

Nagapattinam -611 001

TamilNadu.



ENERGY AUDIT 2023-2024 ENERGY AUDIT REPORT

The rapid economic development at local, regional and global level has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Energy Campus for the institute which will lead for sustainable development.

ADM College is deeply concerned and unconditionally believes that there is an urgent need to address these fundamental problems and reverse the trends. The purpose of the audit was to ensure that the practices followed in the campus are in accordance with the Energy Policy adopted by the institution. It can make a tremendous impact on student health and learning college operational costs and the environment.

Energy audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of environmental diversity, energy usage. It was initiated with the motive of inspecting the work conducted within the organizations whose exercises can cause risk to the health of inhabitants and the environment. The 'Energy audit' aims it is a technique used to establish the pattern of energy use, and identifies the areas where energy can be saved or where energy can be used judiciously. An energy audit consists of a detailed examination of how a facility uses energy, what the facility pays for that energy, and finally, a recommended program for changes in operating practices or energy consuming equipment that will effectively save on energy bills.

The primary objectives of energy audit are to identify and evaluate opportunities to reduce energy consumption per unit of product output and reduce operating costs through energy conservation and planning. Energy audit provides a "bench- mark" for

managing energy in the organization and also provides the basis for planning a more effective use of energy throughout the organization.

1. Methodology

In order to perform energy audit, the methodology included different tools such as preparation of questionnaire, physical inspection of the campus, observation and review of the documentation and data analysis, measurements and recommendations. The study covered the following areas to summarize the present status of environment management in the campus:

Observation on electricity bill analysis connected load list

2. Observations

a) Energy Use and Conservation

This indicator addresses energy consumption, energy sources, energy monitoring, lighting, appliance,. Energy use is clearly an important aspect of campus sustainability and thus requires no explanation for its inclusion in the assessment.

a) Observations

Energy source utilized by the campus is electricity only. The entire campus including common facility centers are equipped with LED lamps and LED tube lights, except at few locations. Besides this, solar lights panel is installed in campus. Computers are set to automatic power saving mode when not in use. Also, campus administration runs switch-off drill on regular basis.

Electricity Bill Analysis

The following table shows the energy consumed in units from March 2021 to March 2022

ELECTRICITY BILLS FOR ACADEMIC YEAR 2021-22

a) Observation on Electricity Bill Analysis

From the above table observed that (LTCT)

Average monthly energy consumption of the college campus 3706 units

Total monthly billing is Rs.69136 Average unit rate is Rs.9

From the above table observed that (Service No: 226)

Bimonthly energy consumption of the college campus 7410 units

Total monthly billing is Rs.76612

	Light (CFL)										
9.	AC	04	-	02	-	-	-	-	-	-	-
10.	Lift	01	-	-	-	-	-	-	-	-	-
11.	Xerox Machine	01	-	04	-	-	01	-	-	-	-
12.	UPS	20KVA (2) 10KVA (2) 5 KVA(1)	-	5 KVA (1)	-	-	10KVA (1) 5 KVA(1)	-	-	-	-
13.	DG Set	15KVA (2) 25KVA (1)	-	10KVA (1)	-	-	-	-	-	-	-
14.	Fridge & Freezer	02	-	01	-	-	-	02	-	-	-
15.	Garden Light	-	-	-	-	-	-	07	-	20	-

Energy Saving Measurement

The following tables represents the payback period for proposal load.

Payback calculation

40W FTL vs 18W LED Tube Light

Saving Operation (per month analysis)

Particular	FTL	LED
Luminaire Type	40W	18W
Wattage	40	18
Total no. of Luminaire	239	263
Working hour per day(Hrs)	8	8
Working Day per month (Day)	25	25
Electrical Units consumed per month (KwHr)	1912	2104
Per Unit Electrical cost(Rs.)	8	8

Total Electricity cost per month(Rs.)	15,296	16,832
Electrical Saving	with use of LED(Rs.)	15488
Investment	76,612	
Payback in month	10 MONTH	
Per Annum Saving	185856	

Conclusions

Considering the fact that the institution is predominantly ADMC, there is significant environmental research both by faculty and students. The environmental awareness initiatives are substantial. The installation of few numbers solar panels system are noteworthy. This may lead to the prosperous future in context of Energy Campus & thus sustainable environment and community development.

About the Institution

- i. Name of the Institution : ADM COLLEGE FOR WOMEN
- ii. Year of Accreditation : 2023(FOURTH CYCLE)
- iii. Address : NO:1, College Road, Velipalayam, Nagapattinam -611 001.Tamilnadu.
- iv. Grade awarded by NAAC :A (CGPA: 3.09)
- v. E-Mail :principal@ adjadmc.ac.in
- vi. Contact person for further details : Dr. Anbuselvi, Principal
- vii. Website : <https://www.adjadmc.ac.in/>

From

Dr.P.B.Nagabalasubramanian,
Head - Department of Physics,
Dr.Kalaignar M. Karunanithi Government Institute for Post Graduate Studies &
Research, Karaikal

To

The Principal
ADM College for Women
Nagapattinam.

Dear Madam

The Internal Audit for Energy was conducted in 15.04.2023 with IQAC team and a detailed report was submitted. This audit was focused on tangible assets as primary evidence, including knowledge tests among employees regarding the regulations and procedure versus the available tangible evidence for verification of compliance. All possible evidence was also viewed.

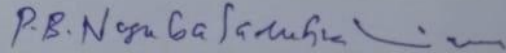
The College has adopted energy efficient practices such as usage of LED fittings, maximum usage of day lighting etc.

I appreciate the support of Management, involvement of faculty members and students in the process of making the Campus Energy Efficient.

Thanking you,

Place : Karaikal
Date : 15.04.2023

Yours faithfully,


Dr.P.B.Nagabalasubramanian,
Head - Department of Physics,
Dr.Kalaignar M. Karunanithi
Government Institute for Post
Graduate Studies & Research,
Karaikal.

