

Shri Shivaji Education Society's, Vidyanagar, Karad's,
Board for Higher Education, Vidyanagar, Karad
Yashwantrao Chavan College of Science, Karad,
Dist. Satara (MH), India-415 124



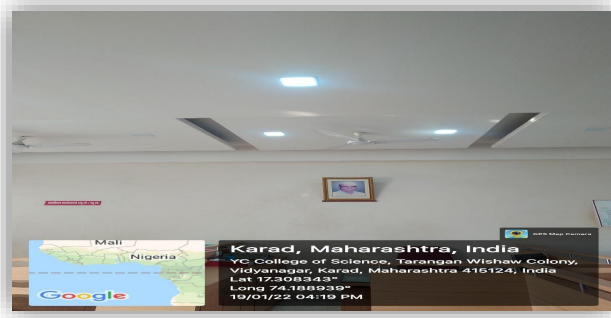
Criterion VII

Institutional Values and Best Practices

Key Indicator – 7.1

Institutional Values and Social Responsibilities

7.1.2: Alternate sources of energy and energy conservation measure



Introduction

Yashwantrao Chavan College of Science, Karad utilizes renewable energy resources efficiently to reduce environmental impact. The east-west orientation of buildings provides natural sunlight, reducing artificial lighting and improving indoor air quality. The windows and vents enhance airflow. The goal is to achieve a specified percentage of energy consumption from renewable sources. The institute adopted the following objectives in order to attain this goal:

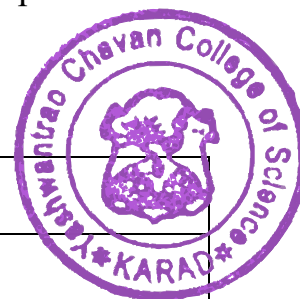
Objectives of Policy:

- choosing LED lighting over traditional sources
- utilizing alternative energy sources
- place an energy-saving boards near the switchboard
- minimize the quantity of air conditioners on campus
- operate fans and air conditioners minimally, switching them on only when absolutely necessary
- use solar energy to light the streets on campus
- install sensor-based systems to minimize power usage
- install biogas plant near the mess
- conduction of routine green and energy audit



Institutional initiative towards the use of alternate sources of energy and energy conservation measures

The institute has implemented energy-efficient measures across its campus, replacing traditional lighting with LED bulbs and installing solar water systems in hostels. The college encourages students and staff to switch off lights and monitors when not in use, promoting a culture of conservation. Water level controllers and level sensor systems help regulate water usage, while LCD monitors are promoted for their energy efficiency. Solar power is integrated for outdoor lighting, contributing to a cleaner campus environment. The college also promotes the use of electrical vehicles (EVs) among students and faculty to reduce carbon emissions and promote eco-friendly transportation.



Sr. No.	Facilities for alternate sources of energy
1.	<u>Solar Energy</u>
2.	<u>Biogas Plant</u>
3.	<u>Wheeling to the greed</u>
4.	<u>Sensor based energy conservation</u>
5.	<u>Use of LED Bulbs</u>

Solar Energy

The institute is promoting sustainability by utilizing renewable energy through solar water heaters on the roofs of both boys' and girls' hostels. With a combined capacity of 1000 TRS, these eco-friendly solutions provide efficient water heating. Solar street lights are installed at various places. The initiative not only reduces environmental impact but also promotes clean energy practices, creating a more responsible living environment. The slogan "Save Energy, Save Water, and Save Earth" is widely promoted through rallies. The institute also installed a solar-powered street light on campus.

Solar Heater's Install on the roof of Boy's Hostel



(25/08/2019)



Solar Heater's Install on the roof of Girls' Hostel



16/12/2018



Solar street light



19/03/2022

Biogas Plant

In order to utilize the renewable energy resources, The institute installed Biogas plant near the hostel.



14/11/2023



Wheeling to the greed

Electric power is easily provided to number of areas inside the institute campus infrastructure, such as labs, classrooms, libraries, and administrative offices. using certain wheeling techniques.

Wheeling to the greed facility Provided by College



18/09/2022

UPS



15/02/2023



Sensor based energy conservation:

To reduce energy consumptions the following systems are installed in the campus

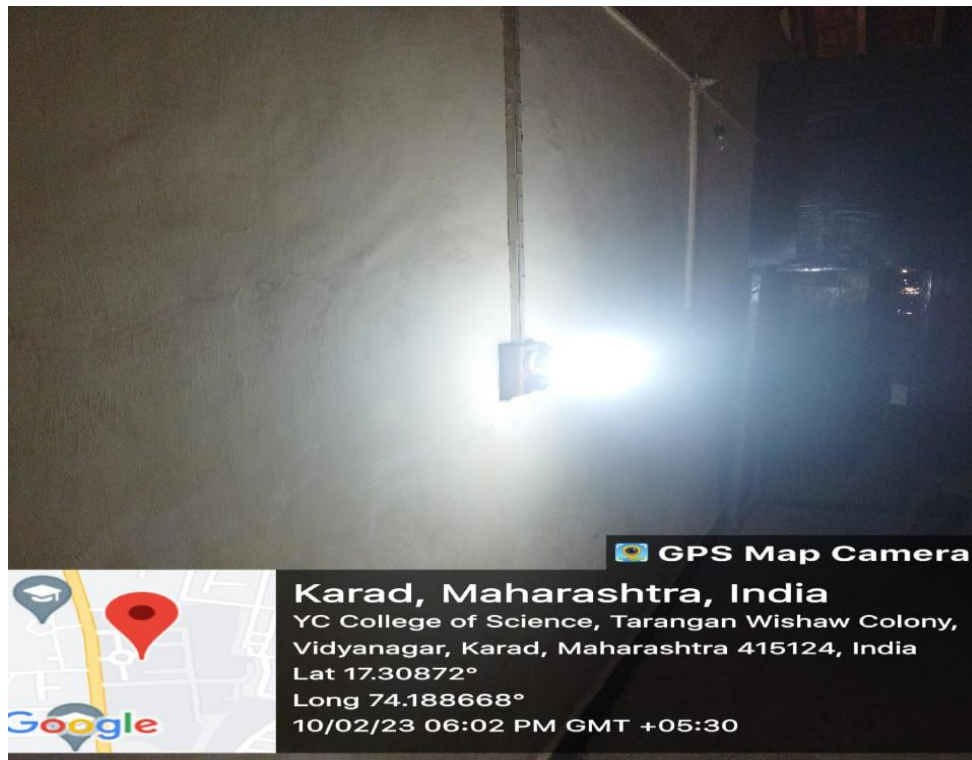
- Motion Sensor Based LED Bulbs
- Floating sensor-based water level controller System
- Thermal sensor based automatic Equipment



a) Motion Sensor Based LED Bulbs

In certain locations on campus, human sensor-based LED lighting is used. The motion sensors built into these LED lights are able to recognize when people are in rooms and other areas. The sensor detects when someone enters a room and instantly turns on the LED bulbs to provide light where it is needed. This capability is especially useful in dimly lit spaces and places where traditional lighting may not be needed or used frequently. The human sensor-based LED lights are placed in strategic places, including toilets, store rooms, stairwells, and areas with poor lighting. This bulb only turns on the lights when it detects human motion. In addition to significantly reducing energy use, these energy-efficient LED bulbs improve resident safety and convenience on campus.

Use of motion sensor based LED bulb

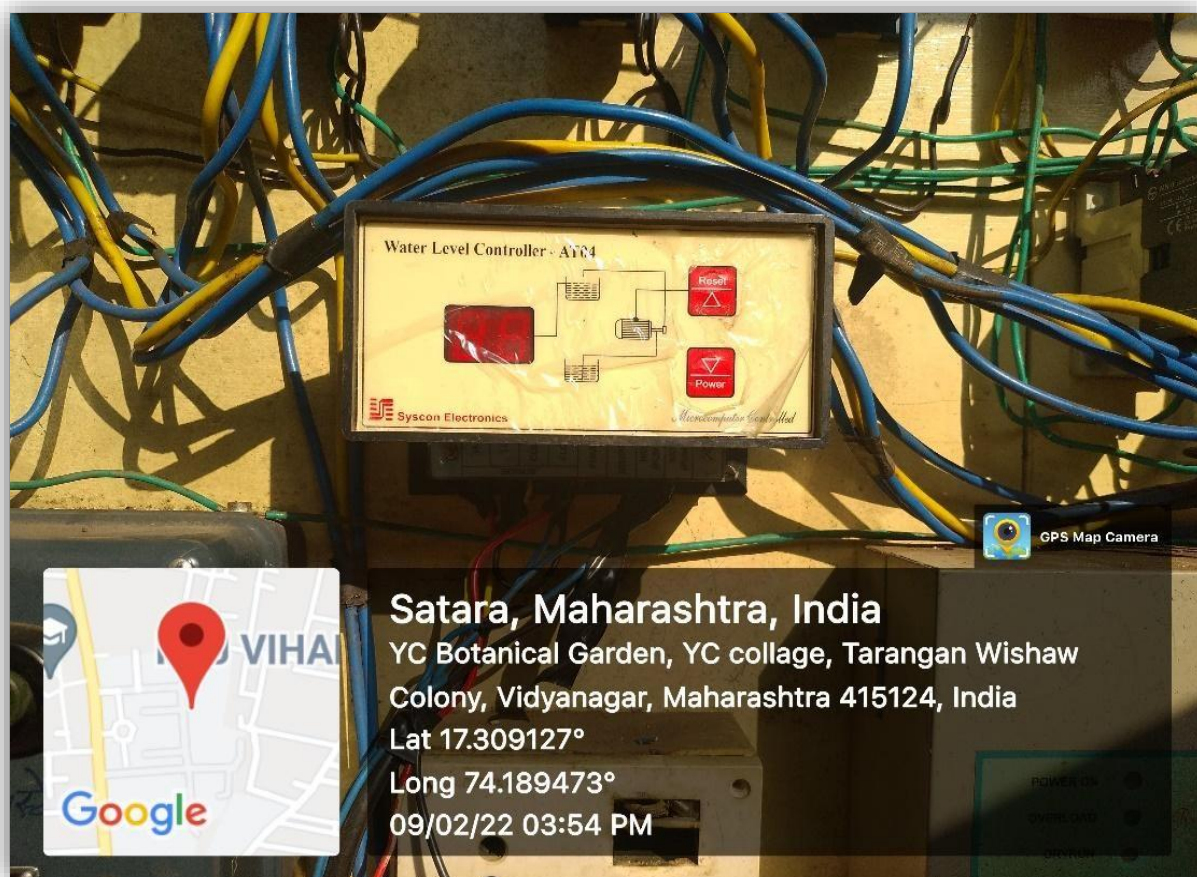


10/02/2023

b) Floating sensor-based water level controller System

The water float sensor is one of the system's essential parts of the water level controller. These devices are strategically placed within the campus's water tanks. While the float sensors provide real-time information on the water levels within the tanks, the water level controller continuously monitors them. This automatically manages the supply of water, eliminating overflow and waste and enabling effective management of water resources. It lowers power usage in addition to water-saving measures.

Water level controller



09/02/2022



Water Float Sensor



09/02/2022



Sensor based equipments:



Thermal sensor based automatic centrifuge



18/09/2018

Thermal sensor based automatic BOD Incubator



19/03/2024

Thermal sensor based automatic Incubator



19/03/2022
Text

Thermal sensor based automatic Water-cooling system



13/01/2022

Sensor based automatic Biometric machine



19/03/2022

Sensor based automatic Biometric machine

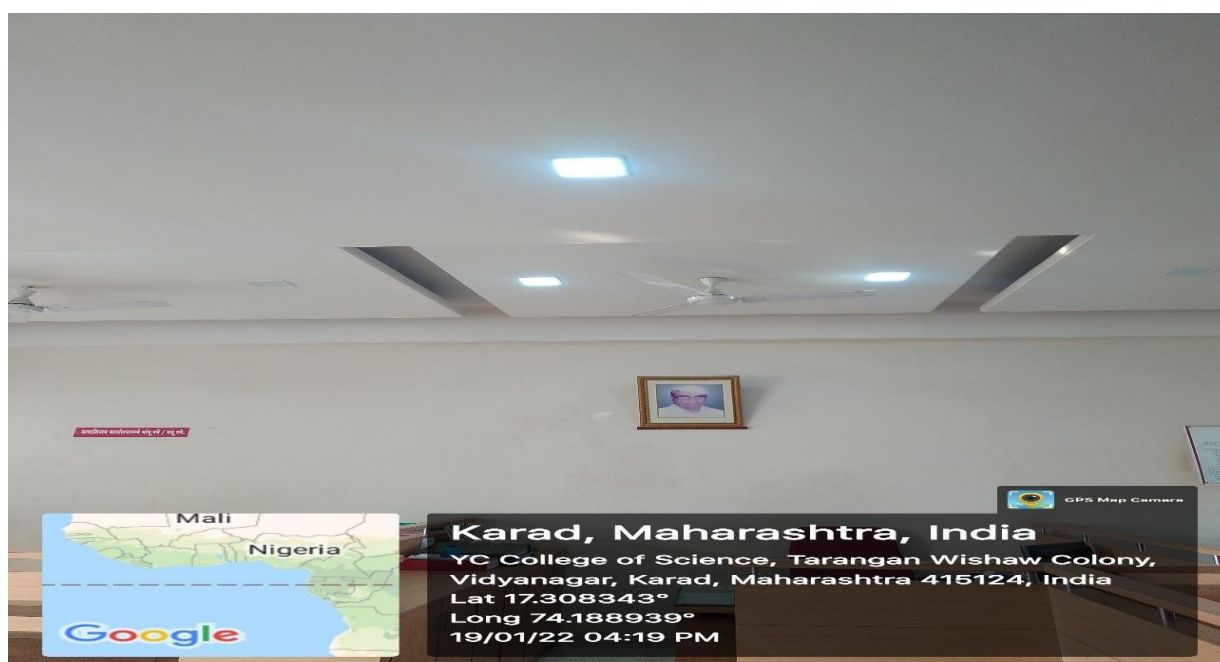


19/03/2022

Use of LED Bulbs/tubes and LCD Monitor

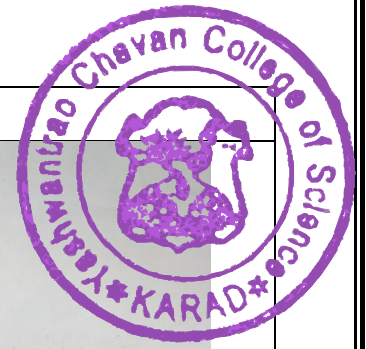
LED bulbs and tubes are a popular choice for energy-efficient lighting solutions on the institute campus. It offers numerous benefits, such as being highly energy-efficient, consuming less energy while providing the same brightness, and reducing electricity consumption and bills. LED bulbs also have a longer lifespan, reducing maintenance costs and requiring fewer bulb replacements. They provide instantaneous illumination, enhancing safety and productivity. They are eco-friendly, reducing carbon emissions associated with electricity generation. Hence, on the institute campus, it is properly used. Also, energy-efficient LCD monitors have mostly taken the place of old computer monitors.

Use of LED Bulbs



19/01/2022





Use of LCD Monitors

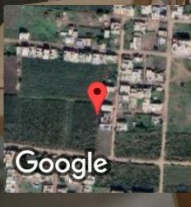
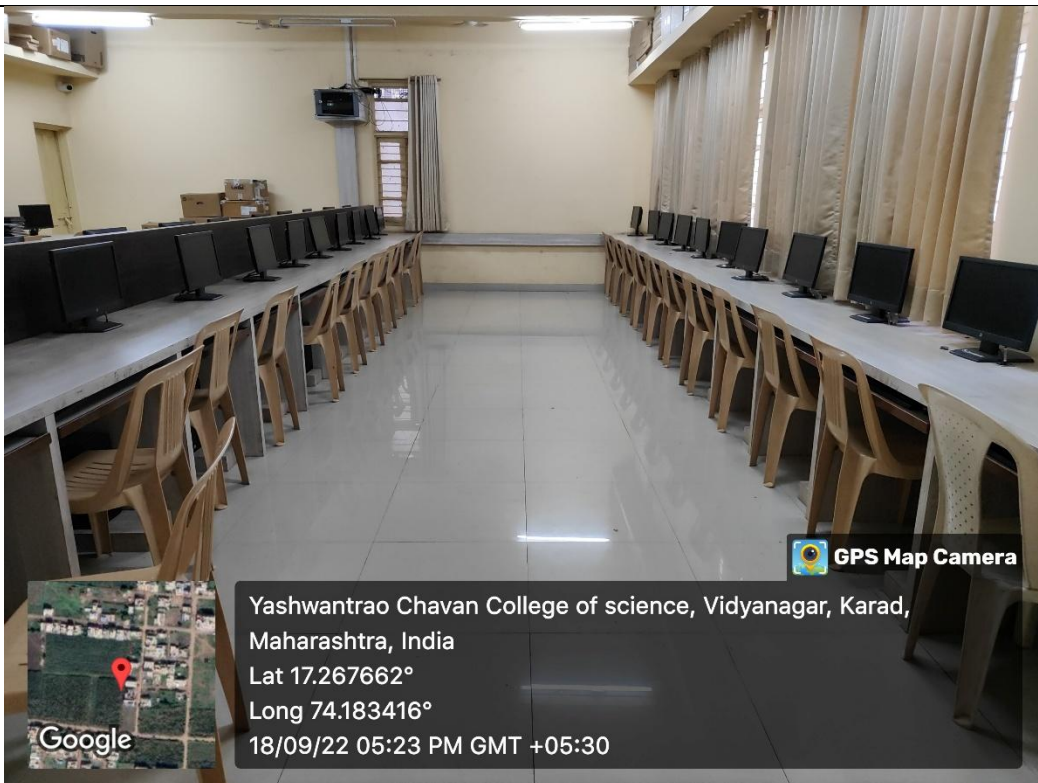


Karad, Maharashtra, India

YC College of Science, Tarangan Wishaw Colony,
Vidyanagar, Karad, Maharashtra 415124, India
Lat 17.308343°
Long 74.188939°
19/01/22 04:08 PM

GPS Map Camera

19/01/2022



**Yashwantrao Chavan College of science, Vidyanagar, Karad,
Maharashtra, India**
Lat 17.267662°
Long 74.183416°
18/09/22 05:23 PM GMT +05:30

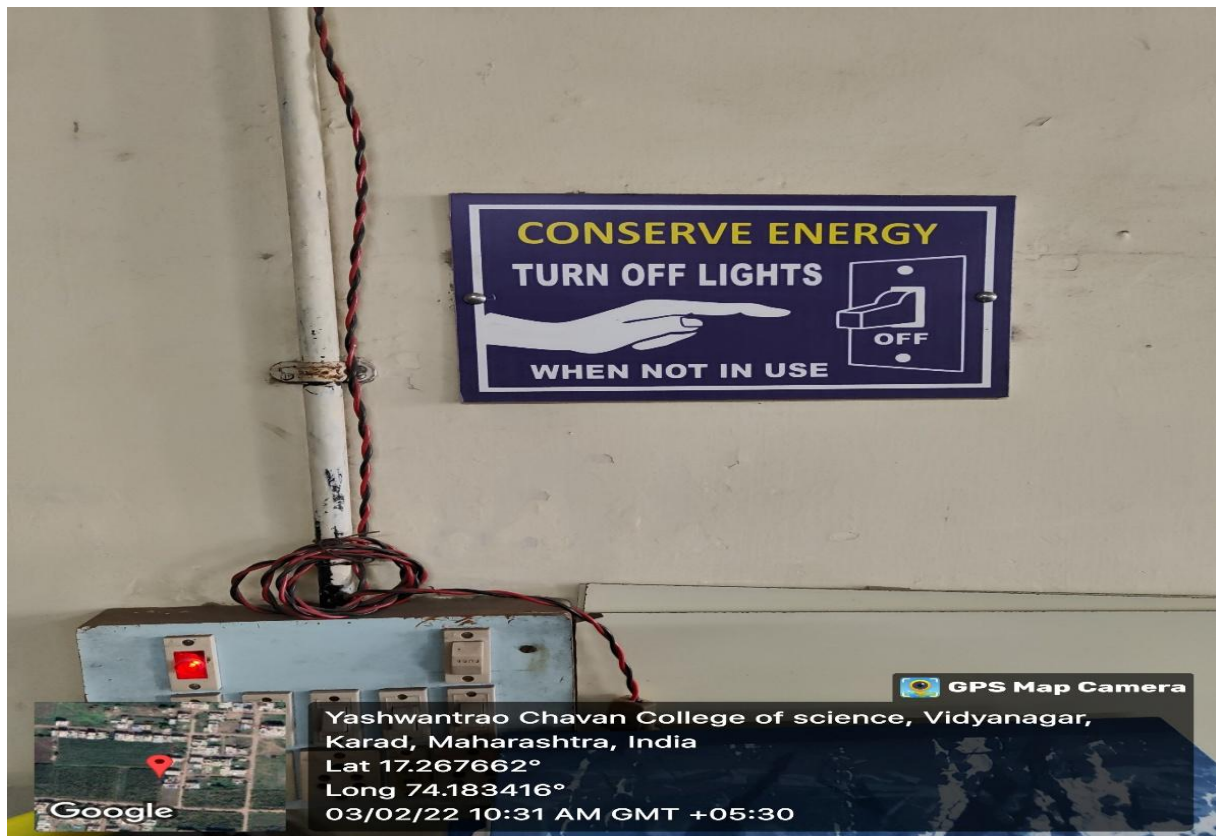
GPS Map Camera

18/9/2022

Energy conservation sign boards



03/02/2022



03/02/2022

Electric vehicals Awareness board



13/01/2022

Co-ordinator,
Internal Quality Assurance Cell (IQAC),
Yashwantrao Chavan College
of Science, Karad



Principal
Yashwantrao Chavan College of Science
Karad