



TRINITY COLLEGE FOR WOMEN NAMAKKALNAAC – SSR CYCLE-I

7.1 Institutional Values and Social Responsibilities

7.1.3 Quality Audit

2. ENERGY AUDIT



TRINITY COLLEGE FOR WOMEN
(ARTS & SCIENCE)

Mohanur road, Namakkal-637002, Tamilnadu.

Alternate Sources of Energy

IQAC

TRINITY COLLEGE FOR WOMEN (ARTS & SCIENCE)
NAMAKKAL, TAMILNADU



TRINITY COLLEGE FOR WOMEN

(ARTS & SCIENCE)

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7.1.3 ALTERNATE SOURCE OF ENERGY AND ENERGY CONSERVATION MEASURES

SOLAR ENERGY

SOLAR PANEL:

Our institution has had a Solar system facility since 2017. It cost Rs.8,56,500 .Solar power plant has a 20 KVA capacity grid. It is installed on the terrace of Main –Block in our campus. **Photovoltaic cells** convert sunlight into electricity .A photovoltaic (PV) cell, commonly called a solar cell, is a non mechanical device that converts sunlight directly into electricity, which can then be used in our college campus electrical items like fan, tubelight,LED lights, Refrigerator and Air Conditioned Machine., etc. Solar energy technologies and power plants do not produce air pollution or greenhouse gases when operating. Using solar energy can have a positive, indirect effect on the environment. Solar energy replaces or reduces the use of other energy sources that have larger effects on the environment.


Solar panel installation comes with a number of benefits.

- Reduce the electric bill.
- Cheaper power source.
- Return on investment.
- Not harmful to the environment.
- Requiring little work to keep in good condition.
- Earn tax credits and rebates.
- Energy independent.

SENSOR LIGHT

- Sensors are devices that detect changes in the source/environment and collect signals, and accordingly, the reaction is designed. Sensor lights play an important role in our institution. It is installed in our institution's main block hall for safety and security. At night if anybody enters the hall then immediately it will glow.




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The advantage of sensor lights are

- Sensor lights are capable of saving energy.
- They are designed to immediately turn on as soon as they detect movement in their range, and then turn off again when there is no longer any movement.

LED BULBS

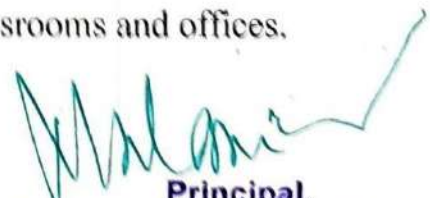
LED stands for **light emitting diode**. An electrical current passes through a microchip, which illuminates the tiny light sources we call LEDs and the result is visible light.

The advantage of sensor lights are

- To prevent performance issues, the heat LEDs produced are sucked up into a heat sink.
- LEDs are progressively common in street lights, parking garage lighting, walkway and other outdoor area lighting, refrigerated case lighting, modular lighting, and task lighting.
- It emits almost no heat, and most of the light they emit is within the visible spectrum.
- Its lights are highly energy efficient and consume up to 90% less power than incandescent light bulbs.
- Its lights are not affected by switching often. It does not cause any reduction in their lifetime or efficiency.
- Its high efficiency and directional nature of LEDs makes them perfect for many industrial uses.

So usage of LED bulbs is practiced in our Institution classrooms and offices.




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Wheeling to the grid

Our Institution has wheeling to the grid for the reason of transmission of electric power through the transmission line as a whole College. It is a cluster of electric installations and devices that can dispatch electricity over a long way. Wheeling also enables high efficiency and decreases the cost of electricity.



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ENERGY AUDIT:

The classrooms and other halls are well- ventilated. Usage of LED bulbs is practiced in the classrooms and offices. The Discipline Committee members and the students' volunteers are instructed to switch off all the lights and fans when not in use. Our institute has solar panels towards power for the campus to reduce electricity consumption. Steam cooking practice is used in the hostels. Only Vegetarian food items are strictly preferred inside the campus. Communication within the campus like circular is done through intercom, e-mail, whatsapp (social media) resulting in reduction usage of paper. Smart Classrooms, Online teaching through webex, google meet, zoom, lectures uploaded in you tube, Biometric system for faculty attendance entry etc are in practice as per modern era. At the same time, our state is known for our culture, as per tamil tradition every Wednesday uniform saree is must for all the students. Yoga, sports and some meditation classes are engaging for creating the students mind-free environment and insist the concentration power and energy to focus on studies enthusiastically.

Sensor light plays an important role in our institution. It is installed in our main block hall. Sensor lights are effective in saving energy. They are manufactured turn on spontaneously as soon as they detect motion in the range, and then turn off again when there is no longer any movement. At night, if anybody enter in the hall then automatically will light for safety and security.



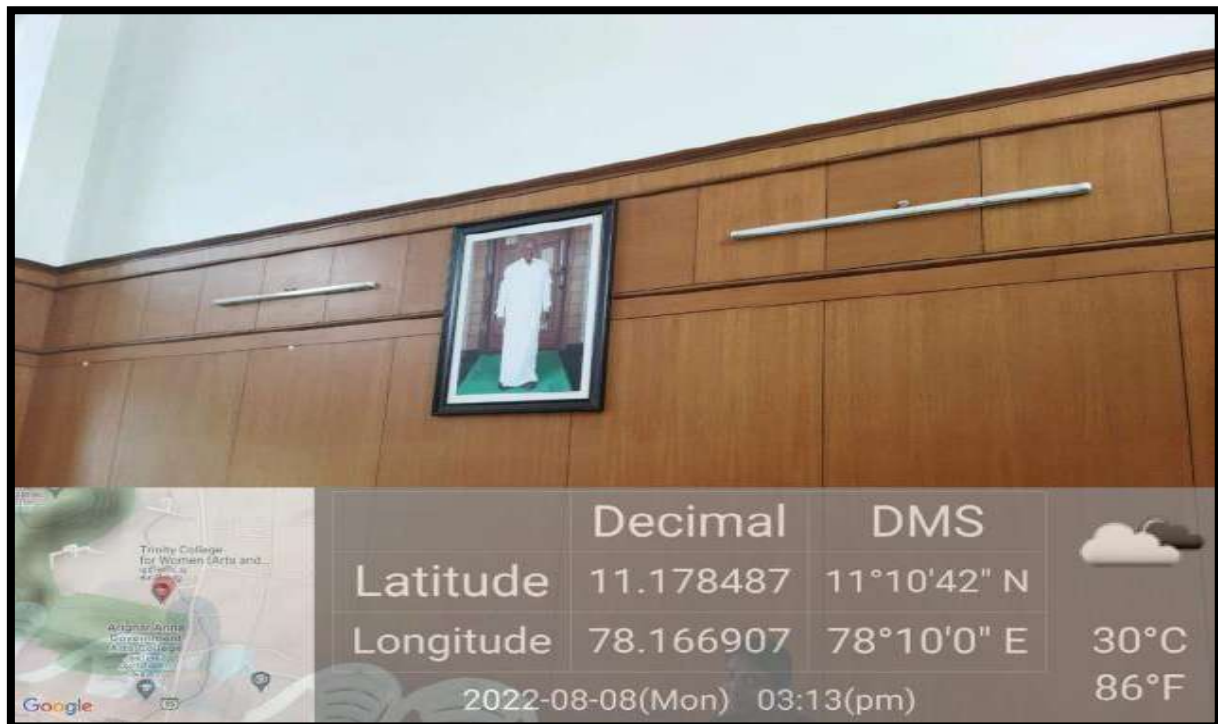
SOLAR PANEL



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