

COLLEGE OF ENGINEERING AND TECHNOLOGY

Thirupachur-63 1203, Tiruvallur TK & DT Approved by AICTE New Delhi & Affiliated to Anna University, Chennai (A Telugu Minority Institution)

ALTERNATE SOURCES OF ENERGY AND ENERGY CONSERVATION MEASURE



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Sri Venkateswara College of
Engineering and Technolog
Thirupachur, Thirupallur - 624



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ALTERNATE SOURCES OF ENERGY AND ENERGY CONSERVATION MEASURE

The following facilities have been built by our organization to encourage the use of alternative energy sources and to put energy conservation measures into practice:

- The college has installed a solar energy plant to produce renewable energy in order to meet its energy needs.
- To save energy, sensor-based solar lights have been installed at a number of sites across campus.
- Throughout the college, LED bulbs are used to meet lighting requirements while consuming less energy.
- In order to create a favorable microclimate during periods of occupancy, buildings are equipped with exhaust fans and natural ventilation systems that replace stale air with fresh air.

Our campus offers a variety of alternative energy sources:

- 1. Energy from solar
- 2. Sensor-based lights
- 3. LED bulbs to reduce energy consumption
- 4. Bio gas plant

The facilities listed above are attached below and have been geotagged.

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SOLAR ENERGY

Sri Venkateshwara College of Engineering and Technology made a significant step towards sustainability by installing a 10 kilowatt on grid solar rooftop plant. Transitioning from traditional energy consumption to renewable sources like solar power not only reduces electricity bills but also contributes to environmental conservation by decreasing carbon emissions. This move aligns with global efforts to mitigate climate change and promotes a more

sustainable future.

Our campus is implementing some fantastic sustainable technology initiatives. By utilizing hybrid inverters, charge controllers, and solar panels, we are not only ensuring energy efficiency

but also reducing the campus's environmental footprint.

Students benefit greatly from being exposed to such technologies as they gain a deeper understanding of environmental impacts and the importance of sustainability. essential areas like classrooms, laboratories, canteens, and administrative offices with solar energy demonstrates a practical application of renewable energy sources.

Moreover, by relying on solar panels to meet the majority of the college's energy needs, we are effectively combating harmful greenhouse gas emissions and contributing to the global effort to mitigate climate change. Since solar panels are clean, they do not cause any form of pollution.

Type: 10 KW ON GRID

Installed main F-block, College premises

Month and year of Installation: 04/2013

Sri Venkateswara C

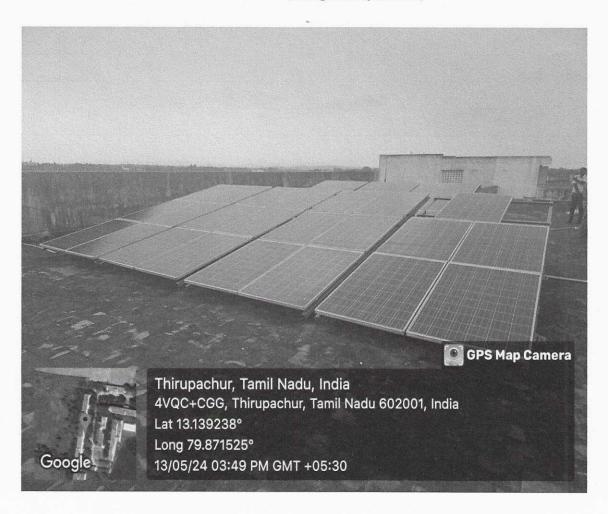
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Solar energy panel installed at F-black (SVCET)

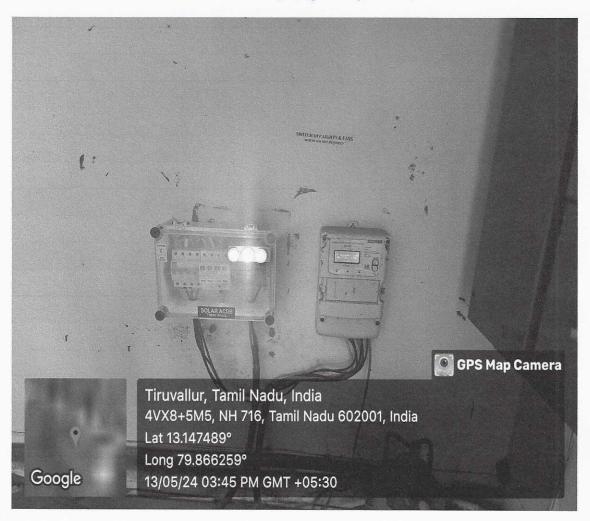


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Solar ACDB three phases at F-black



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Solar energy panel installed at F-black (SVCET)



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UTL solar installed at F-black ground floor

SENSOR BASED ENERGY CONSERVATION

Energy-saving devices are used by SVCET to preserve energy. Solar street lights that operate on their own were installed and are being maintained on campus.

USE OF LED BULBS POWER EFFICIENT EQUIPMENTS



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- LED bulbs are highly valued by SVCET college due to their remarkable energy efficiency, as they use 80% less energy than conventional incandescent lamps.
- LED bulbs are free from harmful substances like mercury, commonly found in traditional bulbs, and are fully recyclable, promoting environmental sustainability.
- The average lifespan of LED bulbs is substantially longer than that of traditional bulbs, ranging from 25,000 to 50,000 hours, as opposed to just 1000 hours for traditional bulbs.
- * Extensive use of LED bulbs is observed throughout the college campus, particularly in high-traffic areas such as the conference hall, offices, and other essential locations.
- Street lights are strategically placed along pathways to ensure safety and visibility, with LED technology enhancing efficiency and reducing energy consumption.
- LED lights adorn the roof of the conference hall and other relevant areas, providing optimal lighting while being self-illuminating for enhanced convenience and energy efficiency.

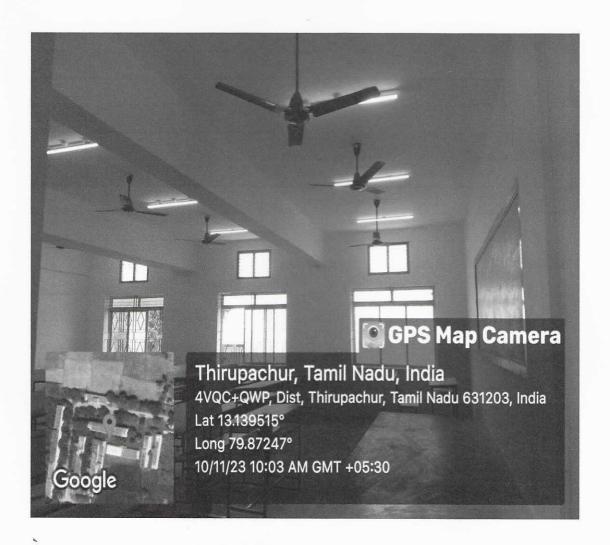
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LED bulbs in class room at A-black

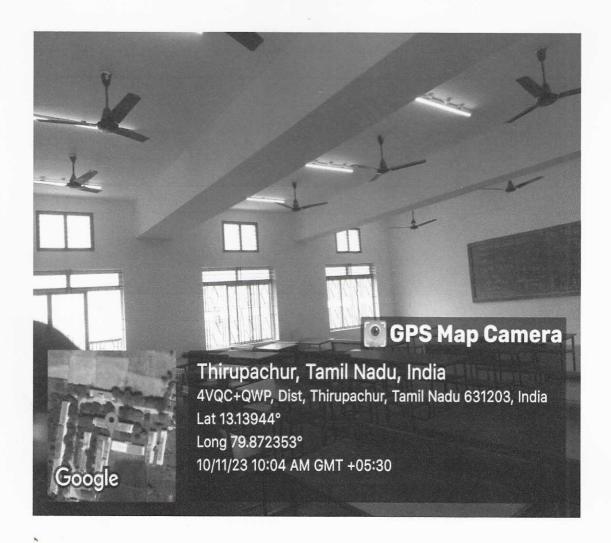


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LED bulbs in class room at C-black

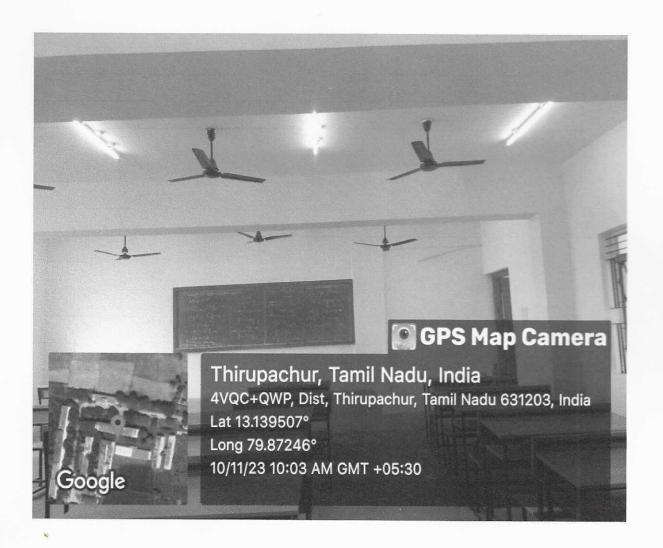


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LED bulbs in class room at F-black



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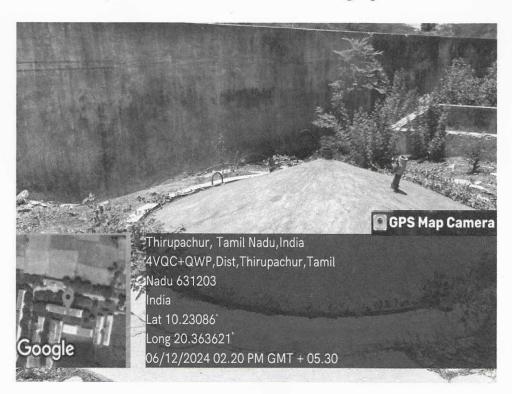


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5. BIOGAS PLANT

The biogas facility collects and remits the garbage from the hostel and canteen. A biogas plant is where waste materials from plants and food are fermented to make biogas. This is accomplished by creating fuel that contains methane, which is typically found in food waste. Fertilizer can be created from the fermentation residue that is still present in the substrate after the process is finished. The micro bacterial breakdown of the substrate in oxygen-free environments, such as under anaerobic conditions, produces biogas. This is accomplished by pumping the substrates, which are kept in anaerobic conditions and are periodically moved to prevent the development of sinking layers and surface scum. The SVCET campus's installation of a biogas plant aids in trash management as the waste accumulated in canteen, and hostels area can be used for biogas plant.



Biogas plant showed at canteen back side



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