

TAGORE

INSTITUTE OF ENGINEERING ANDTECHNOLOGY

DEVIYAKURICHI – 636 112, SALEM DISTRICT.

(Approved by AICTE, New Delhi and Affiliated to Anna University Chennai)

ACCREDITED BY "NAAC'

website: www.tagoreiet.ac.in

Email : principaltiet@tagoreiet.ac.in

Tel: +91- 4282 231 374, 231 474

7.1.2 - The Institution has facilities for alternate sources of energy and energy conservation measures

- 1. Solar energy
- 2. Use of LED bulbs/power efficient equipment
- 3. Sensor-based energy conservation
- 4. Wheeling to the Grid
- 5. Bio gas plant

1. Solar energy

The institution has installed a 50KW solar energy system on the rooftop of B Block, and we are now able to provide power supply to the local electricity board office. As a result, the current bill for the college is significantly reduced. Tagore Institute of Engineering and Technology has a practice of solar energy generation to conserve energy. Solar power plants utilize thermal energy from the sun, which is abundant, available, intermittent, yet cheap. This thermal energy is further transformed into electrical energy using photovoltaic panels. A large number of panels are installed in an optimal configuration and harvest light energy from the sun and convert it into electrical energy which feeds into the grid.



Top Roof Solar Panel in "B" Block



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2. Use of LED bulbs/power efficient equipment:

Use of LED bulbs:

The institution has adopted the use of LED bulbs and power efficient equipment within all the buildings as well as around the campus. The sole objective of introducing the use of LED bulbs in the institution is to conserve and reduce the consumption of power. Widespread use of LED lighting has the greatest potential impact on energy savings in the campus. In our campus we are having an LED incubation center from 20.05.2022 onwards organized by the EEE department. Through this we manufacture the LED bulbs and provide them to nearby villages at a low cost.



LED bulb





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3. Sensor based energy conservation:

Sensor based lighting:

The institution also has sensor-based lighting in certain sensitive areas. we have installed sensor-based energy conservation systems. These systems are designed to reduce energy consumption by automatically adjusting lighting based on the presence or absence of individuals in different areas of the campus. By using sensors to detect human activity, the energy conservation systems can determine when areas are unoccupied and subsequently reduce or turn off unnecessary lighting. This not only ensures energy efficiency but also helps to reduce utility bills and carbon emissions.

4. Wheeling of Grid:

In electric power transmission, wheeling is the transportation of electric energy (megawatt-hours) from within an electrical grid to an electrical load outside the grid boundaries. A grid-connected system allows any excess electricity the college produces to be fed back into the grid. If the institution uses more electricity than the system feeds into the grid during a given month, the college pays the power provider only for the difference between what it used and what it produced.



Wheeling of Grid



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5. Biogas plant:

The waste from the hostel, canteen is collected and remitted in the bio-gas plant. A biogas plant is where biogas is produced by means of fermenting food waste and plant waste products. This is done developing methane- containing fuel that is usually present in food waste. The fermentation residue left over from the substrates at the end of the manner can be used as fertilizer. The biogas is produced by the micro-bacterial decomposition of the substrates in oxygen -loose surroundings like below anaerobic situations. This is implemented by pumping the substrates into the fomenters. The substrate is stored beneath anaerobic situations and is periodically shifted via agitators to avoid the formation of surface scum and sinking layers.

This also permits the biogas to rise greater effortlessly. Installing biogas in Tagore Institute of Engineering and Technology campus help in the waste management process as the wastes accumulated in canteen, hostels, mess and laboratories can be used for biogas plant, which in turn can be used for cooking. This fills two purpose simultaneously by energy saving and waste management. Tagore Institute of the engineering technology campus has a biogas plant at present in a small-scale level.



Biogas plant



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