



PAAVAI ENGINEERING COLLEGE

(Autonomous Institution)

(Approved by AICTE and Affiliated to Anna University)

(Accredited by National Board of Accreditation, New Delhi & NAAC (UGC) with 'A' Grade)

Paavai Nagar, NH - 7, PACHAL, NAMAKKAL - 637 018. Tamil Nadu

☎ 04286-243038, 58,88 & 98 Fax: 04286-243068 Email: pecprincipal@paavai.edu.in website: http://pec.paavai.edu.in

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the Paavai Engineering College has facilities for alternate sources of energy and energy conservation measures such as

- Solar energy
- Biogas plant
- Sensor – based energy conservation
- Use of led bulbs / power efficient equipment

The college has taken initiatives in providing in sustaining, conserving, and the source of energy. All these alternative source of energy helps to reduce and recycle the energy for its conservation.



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7.1.2 INSTITUTION HAS FACILITIES FOR ALTERNATE SOURCES OF ENERGY AND ENERGY CONSERVATION MEASURES.

1. SOLAR ENERGY:

Solar panel is one of the alternate source of energy instead of electrical energy used in Paavai engineering college. The solar panel derive it energy form solar energy. The term solar panel used as colloquially for a photo voltaic module. The photo voltaic system supply electricity to electrical equipment. The photo voltaic module use light energy form sun to generated electricity through photo voltaic effect.

Solar panel which is installed in the temple tower block of Paavai Engineering College generates electrical power of 25kW/day. This power is utilized in microprocessor and microcontroller laboratory, electronics laboratory of Electrical and Electronics Engineering department from 2017 -2018 academic year onwards. The panel installed capacity is 5kW. It is used to conserve 3% of energy consumption.




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Fig: Solar Panel



Fig: Solar control panel



2. BIOGAS PLANT:

The college have installed a biogas plant having capacity of 80 Cubic Meter (2 Nos of Cu.M) at hostel of Paavai Engineering College to process food waste and other biodegradable garbage generated on the campus. The plant capable of processing up to 680kg of waste daily. The plant has the capacity to generate energy equivalent to 51 m³. A biogas plant is anaerobic digester that treats form waste of energy crops.

Bio gas plant is installed in Paavai campus in order to utilize the energy for cooking in the hostel mess to reduce the usage of LPG. Regular usage level of LPG is 34 kg/day.



Fig: Biogas Plant




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3. SENSOR – BASED ENERGY CONSERVATION

The sensor based automation is a technology that connects most of the wireless system and ensures monitoring of the laboratories. The implemented model in cost effect has low power consumption and is reliable of the college.

Sensor based automation is implemented in all computer laboratories. Whenever the systems are not used and there were no people around, it automatically switch off itself, in order to save energy. By using sensor based automation 10% energy is saved.




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4. USE OF LED BULBS / POWER EFFICIENT EQUIPMENT

With an estimated energy efficiency of 80-90% compared to conventional light bulbs, LEDs significantly reduces energy consumption and thus help save money by lowering electricity bills.

In Paavai Engineering College LED is used instead of CFL and conventional light bulbs from the academic year 2018-2019 onwards. Around 400 LED is used with total wattage of 2315W/day. Replacement of CFL will be carried out regularly after blown out of every CFL. Approximately 3% of power is saved after the usage of LED.




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