

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

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TO WHOMSOEVER IT MAY CONCERN

This is to certify that the Paavai Engineering College has facilities for alternate source 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 help to reduce and recycle the energy for its conservation.



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PAAVAI ENGINEERING COLLEGE
4H-7, PACHAL Post, NAMAKKAL Dis:

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

1. SOLAR ENERGY:

Paavai engineering college harnesses solar panels as alternative energy source instead of conventional electric power. Thus solar panels, colloquially referred to as photovoltaic modules, derive their energy from the sun. The photovoltaic system efficiently supplies electricity to various electrical equipment by converting light energy from the sun into electrical power through the photovoltaic effect.

The Solar panel installed a top temple tower block of Paavai Engineering College yields electrical power of 25kW/day. Since the 2017 – 2018 academic years, this power has been actively employed in the microprocessor and microcontroller laboratory, as well as the electronics laboratory with in the Electrical and Electronics Engineering. Notably the installed capacity of the solar panel is 5kW, contributing to a 2% reduction in overall energy consumption.





Fig: Solar control Panel

2. BIOGAS PLANT:

Paavai engineering college has implements an 80 cubic meter biogas plant at the hostel, designed to efficiently manage food waste and other biodegradable garbage produced on the camps. With a daily processing capability of up to 680 Kg of waste, the plant can generate an energy equivalent of 51m³. This anaerobic digester treats organic waste, including energy crops.

The primary purpose of installing the biogas plant on the Paavai campus is to harness energy for the hostel mess, thereby reducing reliance on LPG. The regular LPG consumption, which stands at 34 Kg/day, is positively impacted by this sustainable energy initiative.



Fig: Biogas Plant

3. SENSOR – BASED ENERGY CONSERVATION

Sensor based automation is a technology that links various wireless system to monitor laboratories effectively. The cost effective model takes pride in low power consumption, ensuring reliability within the college.

The automation is integrated into all computer laboratories allowing system to enter sleep mode automatically after a period of inactivity, there by conserving energy. The utilization of sensor based automation results in a 20% reduction in energy consumption.



4. USE OF LED BULBS / POWER EFFICIENT EQUIPMENT

With an impressive energy efficiency ranging from 80% to 90%, LED's stand as a substantial improvement over conventional light bulbs, resulting in significant reductions in energy consumption and cost saving on electricity bills. At Paavai engineering college the transition to LED's, starting from the academic year 2018 - 2019, has replaced CFLs and traditional light bulbs.

Approximately 850 LED's are in use, collectively consuming 4378W/day. The college ensures the regular replacement of CFL's after each burnout. This switch to LED's has yielded a noteworthy 11% reduction in power consumption.

