



22 March 2022

Energy Conservation Policy

OBJECTIVES:

This policy aims to encourage faculty members, staff and students of Ajay Kumar Garg Engineering College, Ghaziabad to understand realistically the need of energy conservation and comprehensively reduce energy consumption, assure acceptable indoor air quality, and improve energy efficiency in the college campus through methods that are consistent with a safe and secure environment.

SCOPE OF THE POLICY:


Conservation of electricity is to be ensured by limiting its usage only when and where needed. Slowly a culture be built amongst faculty and staff to put off appliances, light devices when they leave office. Conservation of electricity is also to be ensured by use of existing solar water heaters on roof of all hostels for providing hot water to hostel students of the college. A roof top solar power plant of capacity 330 KW is linked with the electric grid of Electricity Department where surplus power generated is fed back through a meter installed for this purpose. Same is to be maintained.

This policy is applicable to all lecture theatres, labs, faculty cabins, offices and hostels in the campus for all employees and students of the institute.

POLICY:

(i) **Lighting:** Employees and students shall make every effort to reduce the amount of energy to be used through lighting systems in all campus facilities by:

- Turning lights off in unoccupied spaces.
- Discontinuing the use of incandescent lighting wherever more efficient lighting is possible such as when light-emitting diode (LED) bulbs can be used.
- Maximizing the use of natural light and turning off all non-essential lighting whenever possible.
- Personal safety shall not be compromised from lighting energy reduction decisions.



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Ajay Kumar Garg Engg. College
Ghaziabad



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(ii) Interior Environment

- Every effort will be made to maintain the occupied temperature in all campus facilities at 24 degrees Celsius. This excludes special environmental needs such as Server Rooms and computer laboratories etc.
- Only authorized personnel are allowed to operate the centralized control system of the Air Conditioning units.

(iii) Office Equipment:

- All powered equipment to be used in office should be turned off or placed on standby mode when not in use unless it is detrimental to the operation of the equipment to do so. Items such as copiers, printers etc., should be turned off at the end of the workday.
- Office equipment quantities should be reduced through rationalization at central locations whenever possible.

RESPONSIBILITIES:

Employees and Students are responsible for:

1. Recognizing that energy conservation is important for the institute's fiscal health as well as environmental goals.
2. Complying with the policy.
3. Take actions to conserve energy and reduce energy waste.
4. If employees or students have ideas on energy conservation or wish to report energy waste, they should report to the Office of the Dean Administration or to their respective Department HoDs.

P Singh
Air Cmde (Retd.)
Dean Administration

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Energy conservation

Solar energy: Use of renewable energy is accorded due importance and priority. Solar heaters have been installed in all the six hostels (three for boys and three for girls) and their serviceability is ensured at all times through servicing from the firm annually.

Wheeling to the Grid

330 KW capacity rooftop on grid type Solar power plant having project cost of Rs. 2,15,98,500 has been installed in the year August' 2016. This Solar power plant generates approximately 4,22,000 kWh units of electricity per annum. Generated electricity from Solar power plant is used for administrative, academic and hostel building of college. Surplus energy of Solar power plant is also sent to electricity grid through net metering system.




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Efforts for Carbon neutrality

The bricks and stones used in construction of structures within campus minimize cement plastering which makes it maintenance free. The architecture of buildings ensures maximum sunlight on all floors. This allows high circulation of natural air on all floors. Monthly inspection of college vehicles, timely PUC check and restricted entry of vehicles inside the campus ensures lowest possible emission and pollution free environment thereby neutralizing the carbon effect.



Sensor-based energy conservation

Energy conservation is the effort made to reduce the consumption of energy by using less of an energy service. This can be achieved either by using energy more efficiently (using less energy for a constant service) or by reducing the amount of service used (for example, by driving less). Energy conservation is a part of the concept of Eco-sufficiency.



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All water coolers have been connected through aqua guard water filtration machine. To avoid wastage of water / electricity through overflow, automatic cut-off mechanism has been installed. However, to ensure clean and healthy water supply at all times, all aqua guard machines are constantly monitored and inspected on monthly basis by a team which reports for immediate rectification, if required under an agreement with the firm.

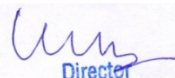
Use of LED bulbs/ power efficient equipment

Following measures have been undertaken to make the power efficient:

1. The architecture of buildings ensures maximum sunlight on all floors, thereby minimizing requirement / usage of heat and light.
2. A committee on energy conservation ensures usage of electricity only where and when required with minimum wastage. The college has gradually moved on from normal light bulbs (least required wattage) to tube lights, slim lights, CFLs and LEDs thus conserving energy to the extent required. This committee also promotes procurement and installation of efficient electrical systems to save electricity. Automatic water dispensers are used in toilets to avoid continuous running of water.

DATA : 2020-21			
S.NO	Power	Type of LED	Total No. of LED Light used in the year 2020-21
1	6W	Round	18
2	6W	Square	15
3	12W	Round	16
4	16W	Round	61
5	20W	Fitting	70
6	24W	Square	8
7	150W	Flat	4
8	50W	Cob	3
TOTAL LED LIGHTS			195

3. High capacity air conditioners are kept off at all the times unless these areas are fully occupied. The thermostats of all air conditioners are set at 25 degrees or above so as to avoid wastage as well as ensuring well-being of individuals which could be due to sudden increase / decrease of temperature.



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