



CALCUTTA INSTITUTE OF ENGINEERING AND MANAGEMENT PRASANTA SUR CAMPUS


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POLICY FOR ENERGY AND ENVIRONMENT USAGE


Secretary
Calcutta Institute of
Engineering and Management

[Note: This document contains 12 pages including this front page]

This policy is discussed and approved in the meeting of governing body of CIEM society and this is effective from 12th June, 2009.


Secretary
Calcutta Institute of
Engineering and Management

SECRETARY,
CIEM SOCIETY
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INTRODUCTION

Calcutta Institute of Engineering and Management is a NAAC accredited 'B+' grade college with a core mission to achieve academic excellence and achievements focusing on the overall development of the students. Our motto is reflected in the name of the institute CIEM (Commitment/Intentionality/Empowerment/Modernization). We are conscious of our fundamental duties as envisaged in the constitution of India and we try to incorporate best possible ways at institutional levels to minimize the impact on environment and ensure resilience and sustainability. We are committed to fulfill the legitimate requirements of our present generation without compromising the ability of future generations to meet their own needs in line with sustainable development goals (SDGs). The college strives to reconcile institutional activities with environmental conservation for a safe and secure future in the era of climate change.

CONTEXT

Calcutta Institute of Engineering and Management is committed to practice and maintain high environmental standards in all of its activities, including teaching, research, and community involvement. The college is ecologically conscious, which reflects in the biodiversity within the campus and is also a testament to our credentials for maintaining high environmental standards.

PURPOSE

The Environmental and Energy Policies of the college is made to provide an overview of the College's vision to minimize the environmental impacts through the available resources and sustainability activities. The policy statement highlights how the college would pursue environmental best practices and inspire the sustainable use of resources at the community level within and outside college premise. It lays out the concepts, delineate priority areas, and methods for the college's environmental plan implementation, management, and evaluation. Its goal is to reduce energy and raw materials consumption that could jeopardize the sustainability measures being taken at college level. This policy will communicate the College administration's goals and objectives to College employees, students, and staffs, as well as aid in the creation of a better environment for future generations.

SCOPE

The policy document will aid in the integration of efficiency and environmental consciousness into daily activities, allowing us to better understand our duties and dedication to natural resource conservation and utilization. Our college has tried to address the issue of sustainability as a part of curricular and extra-curricular activities. We welcome suggestions and promote exchange of ideas to make a more risk-averse, resilient and a sustainable campus. We sincerely hope that Calcutta Institute of Engineering and Management will be a beacon of hope in developing new frameworks for understanding the principle of sustainable development. We're excited to learn about new approaches that could help put the sustainability drive into action. The College will continue to be an enchanting institution for study, research, development, and collaboration. As a result of the execution of this innovative policy Calcutta Institute of Engineering and Management will continue to inspire different organizations of different types from time to time.

PRINCIPLES AND OBJECTIVES

Calcutta Institute of Engineering and Management is committed to environmental development and has implemented various sustainable environmental initiatives in its campus. NSS committee formulates the working structure and oversees these tasks. On the academic front we have subjects on environment through which we incorporate the values of environmental sustainability among our students. We also on an annual basis undertake a mandatory "Green audit" as mentioned in the criteria-7 of NAAC. Following are the initiatives that have been taken at the institution levels for promoting awareness among students of all disciplines about the problems of climate change through academic as well as non-academic outreach activities. We involve different stake-holders of our college in our activities for a broader outreach. As per the resolution taken at the IQAC CELL meeting following goals are to be pursued:

1. Use different innovative initiatives to promote Environmental Sustainability issues.
2. The College will continue to comply with environmental legislation in order to reduce its environmental effect by pursuing a number of goals, including plantation, water management, energy conservation, solid waste management, air quality management, and carbon footprint reduction.
3. Develop and maintain an ISO: 14001 environmental management systems as well as an ISO: 50001 energy management system.
4. Actively collaborate with local groups in the areas of environment, energy efficiency, and sustainable development by engaging in communication with government agencies, municipal corporations, and affiliating colleges.
5. Promote environmental assessment initiatives.
6. Raise awareness about keeping the campus clean and green.
7. Establish sustainable practices on campus and among stakeholders.
8. Ensure the long-term viability and environmental protection of the organization.
9. Take initiatives that are environment friendly (bio- fuel, renewable resources etc.)
10. Reduction in resource consumption.
11. Financial savings via reducing resource use.
12. Practical experience which enriches the students.
13. Improving/updating the institution's profile.
14. Installing in young people an environmental ethic and value system.
15. Conduct audits to identify areas for improvement and make recommendations.
16. Teach sustainable development to students from all disciplines.
17. Promote sustainable development activities and knowledge dissemination.
18. Green campuses and support local sustainability efforts.
19. Engage and share information with local community about environmental sustainability.
20. Implement carbon-neutral policies.
21. Establishment of an environment/green committee to oversee eco-friendly projects on campus and in the surrounding area.
22. Introduce innovative technologies to make efficient use of energy resources.
23. Use of renewable energy sources.
24. Optimize your energy usage and costs.
25. Reduce, Reuse, and Recycle are the three R's.
26. Conduct internal energy audits on a regular basis to find energy-saving options.
27. The Institution Energy Audit/Management Cell manages regular monitoring and follow-up procedures to ensure effective implementation at department levels.
28. To make the Institute a role model in the area of energy conservation.
29. Encourage your faculty members to become Certified Energy Auditors and Managers.

30. Establish relationships with businesses and conduct a comprehensive energy audit.
31. Review the Policy at least once a year.

The college's environmental policy will be pursued through the following priority areas:

1. WATER MANAGEMENT

- Use effective management strategies to conserve water and reduce its use.
- Use of least amount of water possible in accordance with its activities, and it will ensure that the water it uses is both provided and disposed of in the purest possible condition.
- A continuous water conservation program would be implemented to track use, prevent leakage, and remove excessive or unnecessary use.
- Installing rainwater harvesting systems in all campus buildings for ground water replenishment and water self-sufficiency. It will also support artificial recharge and the resurrection of traditional groundwater recharge processes.
- Encourage reporting leaks and swiftly repairing them.
- Employing a caretaker to take quick action to stop any water leaking from taps, pipelines, tanks, and toilet flushes, among other things.
- The institution shall promote efficient water use techniques, such as sprinkler or drip irrigation, in its gardening activities.
- Grease trap mechanism prevents the release and mixing of oil from the college canteen liquid waste in the municipal drainage system. The Biochemical Oxygen Demand in the effluent waste water produced by the college canteen will be lowered.
- RO water plant system for safe and pure drinking is to be installed.

2. SOLID WASTE MANAGEMENT:

- The college will strive to limit waste creation in all possible ways, including reducing the procurement of new materials, reusing and recycling existing materials, and, if this is not possible, disposing of garbage in a manner that has the least environmental impact.
- The usage of plastic to be reduced on campus.
- Waste containers/Dustbins are positioned where they are needed.
- Composting of solid waste from canteens, academic building, and administrative blocks.
- Hazardous and E-waste must be handled, transported, and disposed of properly.
- Hazardous chemicals and toxic hygienic compounds will be used as little as possible at the college
- As the final stage in solid waste reduction and a way to turn waste into a resource, the college has been committed to develop a comprehensive recycling program. It will separate, recycle, and utilize its solid wastes, as well as build a waste-composting unit.
- Engage in the 3Rs of environmental friendliness in a systematic way (Reduce, Reuse and Recycle).
- Collect and recycle paper waste generated on campus in collaboration with students and scrap merchants.
- Develop a technology-centric educational and administrative strategy to reduce solid waste.
- Supporting the digitization of attendance and internal assessment records reduces the consumption of paper.
- Update the college library's e books and e journals collection to reduce the need for printed books.

- Encourage students and teachers to utilize email to submit assignments.
- Take steps to raise student knowledge about food waste and strategies for reducing it.
- Minimizing the usage of packaged foods, as well as the habit of reusing and recycling non-biodegradable items
- Organizing solid waste management workshops for students.

3. E-WASTE MANAGEMENT

The college assures that its technological use and e-waste output have no negative influence on the environment. The college intends to work toward the following goals:

- More arrangements for the disposal of institutional e-waste.
- Working with e-waste recycling firms to recycle electronic waste.
- Awareness among students about e-waste reduction and environmentally responsible e-waste disposal techniques.
- Encouraging e-waste management initiatives at the departmental and societal levels.

4. AIR QUALITY MANAGEMENT:

- Maintain good green cover to enhance CO2 sequestration from campus.
- No vehicle day in a month to be initiated.
- To reduce dust, open places with lawn and grasses should be used.
- Clean Air Initiatives:
 1. Our students and employees are encouraged to take public transportation. We encourage carpooling to college as a way to reduce pollution while also increasing social engagement.
 2. Automobile access is restricted on campus in order to discourage the usage of personal vehicles.
- Smoking Free Campus: The College prohibits smoking and the use of other tobacco products in accordance with the framework given by the National Tobacco Control Programme (NTCP) 2007-2008.
- Transport: The College will take steps to reduce the negative consequences of its traffic on the environment. All faculty, staff, and students will be encouraged to walk, ride bicycles, or take public transportation to and from the college, as well as between its campuses and outdoors the campus, and will be discouraged from using single occupancy private vehicles.

5. REDUCE CARBON FOOTPRINTS:

- Encourage the implementation of many carbon-reduction measures.
- Energy-efficient green building designs that monitor temperature and outside light.
- Implementing the Reduce, Reuse, and Recycle (RRR) approach to achieve zero waste.
- Green computing to cut down on paper usage.
- On-campus "No Vehicle Day" and the use of electric vehicles.
- Use of energy-efficient lighting and equipment.
- An increase in the amount of greenery on campus.

6. ACQUISITION OF SUSTAINABLE RESOURCES

The institution understands that one of the most important ways it can demonstrate its commitment to environmental stewardship is, by making resource purchase decisions. The policies to be undertaken to complete the aforementioned vision are:

- The college will seek to get the most bangs for its buck by balancing immediate and long-term costs, maintenance, life cycle, and environmental costs when acquiring goods and services.
- The college's purchasing policy should be strong, requiring the college to seek items and services that cause the least environmental impact in their manufacturing, distribution, packaging, usage, re-use, recycling, and disposal.
- Avoid the use of any potentially dangerous substance and encouraging suppliers to commit to improving environmental performance.

7. ENVIRONMENT MANAGEMENT SYSTEM

- The college must establish an environmental management system (EMS), such as ISO 14000, and adopt standardized environmental management practices, document their actual use, and get credible third-party verification.
- The college should promote EMS adoption by prioritizing ISO 14000 goods and services in procurement, with the exception of items reserved for the small-scale sector at any given time.

8. ENVIRONMENTAL AUDIT

- The institution is committed to meeting the needs of environmental audits and will make every effort to provide training that will benefit both staff and students.
- The college will be on the lookout for opportunities to collaborate with auditing organizations and will be informed of future developments in worldwide contexts.

9. ENVIRONMENTAL EDUCATION, TRAINING AND AWARENESS

- Outreach and education are very important so that all members of the campus community understand the policy's goals and can help in its execution. This is why college supports and encourages awareness campaigns, seminars, workshops, conferences, and other interactive sessions to ensure that the Green Campus, Energy, and Environment policies are implemented effectively.
- Environment-centric Student Societies and Department Activities: College encourages all departments, as well as specific student groups such as NSS, NCC, and others, to hold events, competitions, and training sessions that will result in beneficial environmental changes at the grassroots level. The institution works with departments and student clubs to help students become active environmental protectors and conservationists.
- **Green Society:** Institutional shifts toward sustainability and environmentally friendly behavior will be percolated down to students, leading to an increase in Green Society membership. Making the society mandatory will give it a larger platform to communicate the institution's environmental principles and raise awareness. Because obligatory societies need a certain number of hours of effort and dedication, the green initiatives and practices that are part of this strategy will be able to expand rapidly.

- **Conduct Green Audit:** The institution intends to undertake a Green Audit of our college campus on a regular basis to analyze our strengths and weaknesses in order to advance our long-term sustainability goals. A green audit can help you figure out how and where you're wasting the most energy, water, or resources. The college can then think about how to make improvements and save money. It can tell you what kind of garbage you have and how much of it you have. Waste minimization initiatives or recycling projects can be implemented. It will promote environmental principles and ethics while also raising health awareness. It helps students comprehend the implications of environmentally friendly behaviors on campus. Green auditing will help you save money by reducing your resource usage. It is critical that the college assess its own contributions to a long-term future.
- **Plastic-Free Campus:** Since its incubation, College has complied with the majority of its responsibilities in terms of solid waste management. In light of the Indian government's decision to ban all single-use plastics due to the harmful effects of plastic use and pollution, the college administration rigorously encourages to reduce the usage of single-use plastics in its property in order to make it a "Plastic Free Campus."
- **Clean Campus Initiatives:** In accordance with the objective of the Swachh Bharat Abhiyan, College vowed to aggressively coordinate cleanliness operations both on and off campus. It pledges to keep this program going. The following is the broad vision:
 - I. Educating students and staff members about the importance of cleanliness and hygiene by staging frequent cleanliness drives. The goal is to encourage them to be proactive in their contributions.
 - II. All community work done by the college's NSS, NCC, and Green Society volunteers will include activities under the Swachh Bharat Abhiyan.
 - III. Staff members will be encouraged to participate in the college's cleaning drive.
 - IV. Competitions for posters and slogans, essay writing, spoken word poetry, speeches, and skits on the theme of "Swachh Bharat" will be held.
 - V. To raise public awareness, rallies on topics related to the Swachh Bharat Abhiyan will be held on and around the college campus.
 - VI. Remove any waste materials, such as damaged furniture and obsolete equipment.
 - VII. Annually administer the promise by students and staff to keep the college campus and its environs clean.
 - VIII. Hold workshops on the 3 Rs: trash reduction, reuse, and recycling.
 - IX. Make a commitment to manage garbage and keep the campus clean, especially during college events.
- **Landscaping Initiatives:** The environment of a college's campus, like its buildings, can be considered as a tangible manifestation of its values. It is an important aspect of a campus's life, giving opportunities for study, recreation, outdoor activities, relaxation, and aesthetic enjoyment. Green campus landscapes also assist in recharging groundwater, control runoff, and purify and cool the air on campus. The landscape is a visual symbol of the college community's dedication to environmental stewardship. Landscape programs are a fantastic approach to raise environmental awareness because campus landscapes are so visible and accessible. In campus, there are more than 25 plant species as well as many acres of grass. The landscape of trees and plants provides clean, cool ambience to the visitors, students and staff, as well as a relaxing atmosphere. College's extensive green cover also supports a diverse range of animals and uncommon birds. By organizing frequent tree plantation drives and encouraging student groups to host tree planting events, the college pledges to enrich this healthy ecosystem and maintain the institution's symbiotic relationship with nature.

10. ENVIRONMENTAL AWARDS:

The Institution pledges to encourage the activists within the college by recognizing their efforts and contributions to environmental sustainability. In this context the college has developed some measures which are as follows:

- I. Departments will be given awards for initiatives in community development through environmental sustainability activities.
- II. An annual award from a well-known environmentalist, to the individual with most efforts towards environmental sustainability.
- III. "Clean and Green Department" award will be presented on an annual basis to encourage and support environmentally sustainable activities.

11. ENERGY CONSERVATION:

- Wherever possible, reduce the amount of electricity consumed.
- Energy-efficient light bulbs are gradually being replaced.
- Use of renewable energy to power the grid.
- Participating in a "No Vehicle Day" on campus.
- Energy conservation by encouraging the use of natural light.
- Renewable Sources of Energy: College is committed to reducing and managing its electricity consumption in a sustainable manner. The college is committed to minimizing non-renewable energy usage by transitioning to clean energy sources such as solar energy for purposes such as lighting the campus.
- Energy Saving and Energy Efficient Equipment: We pledge to install environmentally efficient electrical appliances that save energy and cut down on trash. The college believes in adopting environmentally friendly energy sources such as LED lighting.

ACTION PLAN

ENVIRONMENT

- I. Observance of important days such as ozone day, environment day, earth day, and so on.
- II. Organize a pollution awareness campaign and take preventative actions.
- III. Conduct frequent green/environmental audits and take corrective action as needed.
- IV. Ensure that clean campus practices such as correct waste disposal, e-waste campaigns among stakeholders, rain water harvesting, and monitoring judicious water usage are followed up on and updated on a regular basis.
- V. Activities that promote recycling, reuse, repair, and refurbishment, among other things.
- VI. Deliver an invited discussion (at the department/college level) on various policy updates and environmental studies.
- VII. Establishment/revitalization of an Energy Management Cell (instead of energy audit cell)

ENERGY

- I. Restructuring the Energy Management Cell with representation from all departments to ensure that the energy management program is implemented effectively.
- II. Monitoring and benchmarking resource utilization and waste generation on a regular basis.
- III. Keep track of and analyze your energy efficiency.
- IV. Establishing short- and long-term goals, as well as conservation methods, in order to meet and exceed zero-carbon Campus objectives.
- V. Use of energy-efficient equipment with a star rating.
- VI. Maintenance and replacement of additional lights/lighting fixtures with LEDs on a regular basis.
- VII. Maintaining a sustainable approach by extending the life of existing equipment and replacing it with more efficient equipment as necessary.
- VIII. Before going on to the Replace & Recycle stage, reduce e-waste as much as possible with good maintenance.
- IX. Make the most of natural light for indoor illumination and ventilation.
- X. To save energy, employ occupancy sensors in classrooms, hallways, administrative offices, and toilets, as well as sensor-based switches for streetlights and corridor lighting.
- XI. Optimal temperature settings for air conditioners and water coolers are fine-tuned.
- XII. Increase the use of renewable energy in future by installing a Grid Interactive Solar PV System on campus.
- XIII. Appropriate reactive power management maximizes demand.
- XIV. Encourage students to work on UG and PG projects related to energy management, energy optimization techniques, and renewable energy harvesting, in order to raise knowledge about energy usage and cost.
- XV. Provide energy management and energy auditing training to staff and students.
- XVI. Develop project-based learning methodologies for energy conservation and management courses in collaboration with industry.
- XVII. The Energy Management Cell should establish well-defined procedures that follow the stages outlined below:
 - a) Create an energy baseline assessment
 - b) Define the academic year's energy agenda
 - c) Develop implementation instructions
 - d) Review: Follow-up and monitoring
 - e) A spreadsheet or checklist to keep track of the Energy Management Action Plan's short- and long-term objectives.

POLICY FOR DIASBLED FRIENDLY STUDENTS

- 1. Accessibility Standards:** Establish clear accessibility standards for buildings, facilities, classrooms, and digital platforms.
- 2. Physical Infrastructure:** Conduct regular audits of campus infrastructure to identify barriers to accessibility such as stairs, narrow doorways, or lack of ramps. Implement necessary modifications or accommodations to make the campus more accessible, including accessible parking, elevators, and restrooms.
- 3. Classroom Accommodations:** Provide accommodations in classrooms such as adjustable desks, preferential seating, captioning services for videos, and assistive technology. Ensure that course materials are available in accessible formats for students with visual or hearing impairments.
- 4. Faculty Training:** Offer training programs for faculty and staff on disability awareness, accommodation strategies, and inclusive teaching practices. Encourage professors to design courses with universal design principles to accommodate diverse learning needs.
- 5. Student Support Services:** Establish a disability services office or department to coordinate support services for students with disabilities. Provide assistance with academic accommodations, exam arrangements, note-taking services, and assistive technology loans.
- 6. Accessible Communication:** Ensure that all communication materials, including websites, emails, and printed materials, are accessible to individuals with disabilities. Provide alternative formats upon request and utilize plain language and accessible design principles.
- 7. Transportation Services:** Provide accessible transportation options for students with mobility impairments, including shuttle services equipped with wheelchair ramps or lifts. Ensure that transportation routes and schedules accommodate the needs of students with disabilities.
- 8. Emergency Preparedness:** Develop and communicate emergency evacuation plans that consider the needs of students with disabilities. Train staff and students on procedures for assisting individuals with disabilities during emergencies.
- 9. Social Inclusion Initiatives:** Promote social inclusion and participation for students with disabilities through campus-wide events, clubs, and organizations. Create a welcoming and inclusive campus culture that values diversity and respects the rights of individuals with disabilities.
- 10. Feedback Mechanism:** Establish a feedback mechanism for students to report accessibility barriers or concerns. Regularly review and update the disabled-friendly environment policy based on feedback and evolving best practices.