



# MAR BASELIOS COLLEGE OF ENGINEERING AND TECHNOLOGY

## INSTITUTIONAL POLICIES

**Policy No. 23**

**Title: ENERGY POLICY**

**Date of Issue:01.05.2022**

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*As per the AICTE Environment Policy 2020, that sets long term goals for educational institutes to conserve natural environment, develop sustainable solutions and control energy consumption, an educational institution has to evolve programs and policies that turns the institute into a carbon-negative institute and promote in educating students and employees on environmental concerns and sustainability, be responsive to the emerging challenges in the Energy sector and Sustainable development of the State and Country. So, it is essential for the educational community to practice sustainable energy that will provide favorable effect on the eco-system.*

### 1. OBJECTIVES

The **Energy Policy of the MBCET** articulates in organizing structured programs to promote awareness on the proper management and conservation of energy that models a resource-efficient and low-carbon campus which demonstrates practice for sustainability.

Through the policy, the Cell focuses on the following objectives:

- a) Utilize energy resources efficiently by introducing innovative technologies
- b) Promote efficient use of renewable energy.
- c) Optimize the Energy consumption and cost.
- d) Reduce, Reuse and Recycle.
- e) Carry out regular internal energy audits to identify energy conservation opportunities.
- f) Regular monitoring and follow up procedures managed by the Institution Energy Audit/Management Cell for effective implementation at department levels.
- g) Train faculty, non-teaching staff, students and housekeeping staff to make the Institute a role model in the area of Energy conservation.
- h) Encourage faculty members to obtain certification as Certified Energy Auditors and Managers.
- i) Establish ties with Industries or Institutions such as the Energy Management Centre, Kerala and conduct a complete Energy Audit.
- j) Promote awareness related with Energy conservation among various sections of society.
- k) Review the Policy on a regular basis.

### 2. SCOPE

The policy facilitates the Energy Management Cell to ensure involvement of all the stake holders of the institution in the practice of Energy Conservation, through awareness programs for students and faculty and encouraging faculty members to obtain certification as Certified Energy Auditors.

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Students and Faculty involvement is facilitated through green audit, encouraging projects related to Energy conservation and Management, Renewable Energy, Waste to Energy, Internal Energy audits, etc. The Electrical Maintenance Cell working under the Electrical Engineering Department functions in regular monitoring of the Grid Interactive Solar Plant, Repair, Re-use and frequent maintenance of equipment to ensure sustainable longevity, Sensor controlled lights, periodic shift to LEDS, etc.

### 3. POLICY STATEMENT

The MBCET Energy Policy articulates commitment of the Institution to the conservation of energy by defining energy management protocol for thermal and electrical energy systems of the institution, focusing on sustainable practices in reducing carbon footprint and other environmental impacts as per Energy Conservation and Management for an eco-friendly green campus.

### 4. RESPONSIBILITY

The Energy Management Team comprises of:

- (i) Bursar
- (ii) Principal
- (iii) NAAC Coordinators, Criteria 7 members
- (iv) Energy Management Cell Coordinator & Members from all departments
- (v) Electrical Maintenance Cell Members.

### 5. RELATED POLICIES/PROCEDURES

- (i) MBCET Environment Policy

The Energy Management Cell should carry out the action plan and ensure the energy resources are made available and utilized optimally.

#### Energy Optimization Plan

1. Regular Monitoring and benchmarking resource use and waste generation.
2. Tie – up with EMC, Kerala to conduct Energy Audit of the College
3. Monitor and evaluate the energy performance levels
4. Setting short term and long term targets and conservation strategies, to achieve and surpass goals for zero-carbon Campus.

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5. Use of energy efficient, star labelled equipment.
6. Periodic maintenance and replacement of other lights/lighting fixtures to LED.
7. Maintaining a sustainable approach by use of existing equipment efficiently till its life cycle ends, and replacing with more efficient equipment when necessary.
8. Reduce eWaste to maximum with proper maintenance, before moving on to Replace & Recycle stage.
9. Maximum use of Daylight for Indoor illumination and natural ventilation.
10. Use of occupancy sensors for classrooms, halls, administrative offices, restrooms and sensor-based switches for streetlights, corridor lighting to optimize energy use.
11. Fine tuning of optimum temperature setting of Air Conditioners and Water coolers.
12. Maximise use of Renewable Energy – Grid Interactive Solar PV System installed in the Campus.
13. Maximum demand optimization by adequate reactive power management
14. Encourage students to undertake UG and PG projects on Energy Management, Energy optimization techniques, Renewable Energy Harvesting thereby promoting a sense of awareness towards Energy use and its cost.
15. Provide training for faculty and students about Energy Management, Energy Auditing.
16. Include Project learning strategies for Energy Conservation and Energy management courses in the curriculum in tie up with Industries.

### **Mechanism:**

The Energy Management Cell should lay down well-defined procedures as mentioned below, that follows the indicated stages.

- i. Create Energy Baseline Assessment
- ii. Define the Energy Agenda of the Academic year
- iii. Create Implementation guidelines
- iv. Review: Monitoring and follow-up

### **6. POLICY HISTORY**

The AICTE Environment Policy 2020, THE ENERGY CONSERVATION ACT, 2001, were referred to draft this policy.

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This Policy was prepared by, being the NAAC Coordinator for Criteria 7 from Electrical & Electronics Engineering Department. It was verified by Mr. F R Rejish Babu, Energy Management Cell Coordinator.

The 1<sup>st</sup> version of the draft was scrutinized by Dr. Muraleedharan Nair, Professor, Mechanical Department, in October 2020.

<b>Version/Date</b>	<b>Prepared by</b>	<b>Approved by</b>	<b>Remarks</b>
V1.0/	Ms.Jomole Joseph ,P	Mr. F R Rejish Babu	Original Version.
V2.0/	Ms.Jomole Joseph ,P	Dr. Muraleedharan Nair	Revised.

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