AMITY UNIVERSITY
RAJASTHAN

Kant Kalwar, NH-11-C,
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Energy Efficiency Plan

Date:02/12/2024

Introduction:

Amity University Rajasthan (AUR) is committed to fostering a sustainable and energy-efficient campus by optimizing energy use, reducing greenhouse gas emissions, and promoting responsible consumption. The Energy Efficiency Plan outlines a structured and systematic approach to manage, monitor, and minimize energy consumption through innovation, awareness, and continuous improvement. This initiative aligns with the University's Sustainability Policy and national goals of achieving Net Zero and promoting renewable energy integration.

Purpose & Vision:

Purpose:
To establish a data-driven and accountable framework that ensures judicious utilization of energy resources, reduction in overall energy consumption, and promotion of renewable energy solutions across the university campus.

Vision:
To transform AUR into a model of energy efficiency and environmental stewardship, contributing to India's commitment toward sustainable development and carbon neutrality.

Objectives:

1. To achieve a minimum 20% reduction in overall energy consumption over next three years.
2. To implement smart, energy-efficient systems across academic, administrative, and residential blocks.
3. To promote energy-conscious behavior among students, faculty, and staff through training and engagement.
4. To integrate renewable energy solutions and ensure responsible use of natural resources.
5. To establish robust monitoring, reporting, and evaluation systems for continuous improvement.

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Scope:

This plan applies to:

- Academic and Administrative Buildings
- Hostels and Residential Facilities
- Laboratories and Workshops
- Central Utilities (HVAC, Water Pumping, etc.)
- Street and Campus Lighting Systems
- Renewable Energy Installations
- All University Staff, Faculty, and Students

Key Principles:

1. **Leadership Commitment:** Senior management at AUR provides strategic direction and allocates resources to achieve energy efficiency goals.
2. **Data-Driven Decisions:** Energy audits, monitoring systems, and performance data form the basis for targeted interventions.
3. **Sustainable Infrastructure:** Adoption of energy-efficient design, construction, and retrofitting measures.
4. **Behavioral Change:** Promoting awareness and encouraging energy-efficient habits among the university community.
5. **Transparency & Accountability:** Regular assessment and reporting of energy performance metrics.
6. **Innovation & Technology Integration:** Encouraging adoption of smart systems and renewable technologies.

Strategic Components:

1. **Energy Audit & Baseline Assessment:**
    - Conduct periodic energy audits to evaluate current consumption patterns and establish a performance baseline.
    - Identify high-consumption areas and potential zones for improvement.
2. **Target-Setting:**
    - Commit to a 20% reduction in total energy consumption over three years.
    - Define annual targets and review progress quarterly.
3. **Governance & Responsibility:**

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- A Sustainability Team and a dedicated Energy Efficiency Committee oversee implementation and compliance.
- The committee ensures inter-departmental coordination and accountability.

4. **Infrastructure & Technology Upgradation:**
   - Replace conventional lighting with LEDs and sensor-based lighting systems.
   - Upgrade HVAC systems for optimized efficiency and better load management.
   - Introduce smart building technologies and energy management systems for real-time monitoring.
   - Improve insulation and optimize building envelope design to reduce heat load.
5. **Renewable Energy Integration:**
   - Expand the use of solar photovoltaic systems, solar water heaters, and explore wind-based microgeneration.
   - Aim for at least 25% renewable energy contribution in total power usage by 2030.
6. **Awareness:**
   - Conduct training programs, workshops, and energy awareness campaigns for all stakeholders.
   - Introduce incentive programs for innovative energy-saving ideas and practices.
7. **Monitoring & Reporting:**
   - Install energy monitoring devices and develop dashboards for data visualization.
   - Use energy management software to automate tracking, analysis, and reporting.
   - Prepare annual Energy Performance Reports highlighting achievements and challenges.
8. **Maintenance & Optimization:**
   - Adopt a preventive maintenance schedule to ensure all electrical and mechanical systems operate at peak efficiency.
   - Regular calibration of equipment to prevent energy wastage.
9. **Procurement & Collaboration:**
   - Partner with vendors and suppliers offering energy-efficient products and technologies.
   - Incorporate sustainability criteria into procurement policies.
10. **Compliance & Benchmarking:**
    - Ensure adherence to Bureau of Energy Efficiency (BEE) guidelines and ISO 50001: Energy Management System standards.
    - Participate in energy benchmarking, certification, and recognition programs at state and national levels.

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Implementation & Accountability:

- The Energy Efficiency Committee will prepare an annual implementation roadmap.
- Periodic internal audits and external reviews will assess plan effectiveness.
- Annual progress reports will be presented to the University Management Board for policy review and budget allocation.

Review & Continuous Improvement:

The Energy Efficiency Plan will be reviewed annually to assess outcomes, identify gaps, and integrate new technologies and best practices. Feedback from energy audits, stakeholders, and external evaluators will guide continuous improvement measures.