INSTITUTE OF TECHNOLOGY AND MANAGEMENT, GWALIOR

ENERGY AUDIT POLICY

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1. Purpose

The **Energy Audit Policy** aims to ensure efficient energy use at ITM Gwalior, promoting sustainability, reducing operational costs, and minimizing the environmental footprint by optimizing energy consumption across campus operations. The policy outlines the process for conducting regular energy audits to monitor and improve energy performance, implement energy-saving measures, and track the progress of sustainability initiatives.

2. Scope

This policy applies to all departments, facilities, and operations within ITM Gwalior, including the use of electricity from the grid, diesel generators (DG sets), solar power, and other energy sources. It encompasses all building infrastructure, including academic and administrative blocks, hostels, auditoriums, and recreational areas.

3. Objectives

The key objectives of the **Energy Audit Policy** are:

- **Evaluate Energy Consumption**: Measure and evaluate current energy usage across the campus, including electricity, heating, and cooling.
- **Identify Energy-Saving Opportunities**: Detect inefficiencies and propose measures to reduce energy waste.
- **Reduce Carbon Footprint**: Contribute to the institution's goal of sustainability by minimizing greenhouse gas emissions.
- **Continuous Monitoring**: Set targets for ongoing improvement and monitor progress toward energy efficiency goals.

4. Audit Frequency and Process

The energy audit shall be conducted **annually**, to ensure that improvements in energy efficiency are continually identified and implemented. The audit process consists of the following steps:

1. **Pre-Audit Preparation**:
   - **Data Collection**: Collect detailed records of energy bills, equipment inventories, and energy usage data for all campus facilities.
   - **Site Survey**: Conduct a site survey to gather information on energy-consuming systems (e.g., lighting, appliances) and their operational patterns.

2. **Energy Audit Process**:
   - **Data Analysis**: Analyse energy consumption data to identify patterns, peaks in demand, and areas with high energy consumption. The analysis will involve benchmarking against national standards (e.g., ISO 50001).
   - **Energy Performance Evaluation**: Assess energy efficiency, identify wastage, and evaluate the condition of energy-consuming equipment.
   - **Energy Efficiency Recommendations**: Develop a set of recommendations for energy-saving measures based on the audit findings. This includes potential improvements in lighting, cooling, and heating systems, as well as the introduction of energy-efficient appliances and renewable energy sources.

3. **Post-Audit Review:**
   - **Implementation Plan**: Based on the audit recommendations, develop an implementation plan, specifying the steps, timelines, and costs for each energy-saving measure.
   - **Monitoring and Evaluation**: Track the performance of implemented measures by monitoring energy use, calculating savings, and adjusting strategies as needed.

5. Energy Efficiency Measures

To reduce energy consumption and improve efficiency, the following strategies will be prioritized:

- **Lighting**: Transition to energy-efficient LED lighting systems across the campus to replace older, less efficient lighting fixtures.
- **Air Conditioning**: Install energy-efficient air conditioning units and maintain them through regular servicing and proper insulation.
- **Computers and Appliances**: Replace outdated computers and appliances with energy-efficient models to reduce power consumption.
- **Renewable Energy Integration**: Expand the use of solar energy through solar photovoltaic (PV) systems and solar water heating, maximizing the contribution of renewable energy sources.

6. Energy Performance Indicators (EnPIs)

EnPIs will be developed to provide benchmarks for tracking energy performance, including:

- **Electricity Use Per Student**: Measure total electricity consumption per student per year.
- **Electricity Use Per Square Meter**: Measure total electricity consumption per square meter of building area.
- **Annual Energy Savings**: Measure energy savings achieved through implemented energy efficiency measures.

The audit will establish specific, measurable targets to reduce energy consumption, such as a 10% reduction in grid electricity use over the next three years.

7. Monitoring and Reporting

The **Energy Audit Committee** will be responsible for overseeing the energy audit process and ensuring that recommendations are implemented. The committee will:

- **Track Key Metrics**: Monitor energy consumption trends using EnPIs and identify any deviations from expected performance.
- **Report Findings**: Produce an annual **Energy Audit Report** summarizing audit results, savings achieved, and progress towards energy efficiency targets. This report will be shared with management and relevant stakeholders.
- **Review and Adjust Targets**: Annually review the energy efficiency goals and update them based on new findings and technologies.

8. Roles and Responsibilities

- **Energy Audit Committee**: Oversee the audit process, track progress, and ensure that energy-saving measures are implemented effectively.
- **Facility Management Department**: Provide data and support for energy audits, ensure maintenance of equipment, and implement recommended efficiency measures.
- **Finance Department**: Allocate necessary resources for energy efficiency projects and monitor financial savings from reduced energy consumption.

Department Heads: Support energy-saving initiatives within their respective departments by educating staff and students on energy conservation practices.

9. Training and Awareness

Energy conservation is a shared responsibility. The policy emphasizes:

- **Staff and Student Engagement**: Conduct regular training sessions on energy-saving practices and the importance of sustainability.

- **Campaigns and Competitions**: Organize energy conservation campaigns and student competitions to foster a culture of energy responsibility on campus.

10. Compliance and Review

This policy will be reviewed annually by the **Energy Audit Committee** to ensure that it remains up-to-date with technological advancements and best practices. Regular compliance checks will be conducted to ensure adherence to the policy.

This **Energy Audit Policy** will support ITM Gwalior's commitment to sustainability, energy conservation, and environmental stewardship, ensuring continuous improvement in energy performance.

Conclusion

The Energy Audit Policy of ITM Gwalior underscores the institution's dedication to promoting sustainability, reducing operational costs, and minimizing its environmental footprint. By systematically conducting energy audits, identifying inefficiencies, and implementing energy-saving measures, ITM Gwalior ensures continuous improvement in its energy performance. The involvement of all campus stakeholders, including staff, students, and faculty, is critical to achieving the energy efficiency targets set by the policy. As ITM Gwalior continues to prioritize renewable energy integration and energy conservation, the institution is well-positioned to lead by example in creating a sustainable future for generations to come.


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