Energy Audit

1. Executive Summary

An Energy Audit is a systematic study of energy consumption within an institution to identify opportunities for energy conservation, efficient utilization of resources, and reduction of operational costs.

Bharati Vidyapeeth's New Law College, Kolhapur is committed to sustainable campus development and responsible energy management. The audit evaluates the existing energy consumption pattern, electrical infrastructure, energy conservation measures, and opportunities for improving energy efficiency.

The audit indicates that the institution has adopted several energy-saving practices such as optimum utilization of natural lighting, use of ICT facilities, digital administration, and energy-efficient electrical equipment. The campus environment and building design also contribute towards reduced energy consumption.

BHARATI VIDYAPEETH'S New Law College, Kolhapur

PRINCIPAL
Bharati Vidyapeeth's
New Law College, Kolhapur

2. Institutional Profile

Name of Institution - Bharati Vidyapeeth's New Law College, Kolhapur

Address

Bharati Vidyapeeth Educational Campus,
Survey No. 66/2, Near Chitranagari, Morewadi, Kolhapur – 416013,
Maharashtra.

Year of Establishment- 1982

Affiliation - Shivaji University, Kolhapur

Approval

Govt. of Maharashtra (H&T Edu. Dept.),

Bar Council of India (BCI)

Campus Features

- Independent academic building
- Approximately 30,000 sq. ft. built-up area
- Well-furnished classrooms
- Library and Reading Room
- Moot Court Hall
- Computer Laboratory with internet facility
- Administrative Offices
- Conference Hall and Auditorium
- Green and pollution-free campus environment.

3. Objectives of Energy Audit

1. To assess present energy consumption patterns.
2. To identify areas of energy wastage.
3. To evaluate efficiency of electrical installations.
4. To recommend energy conservation measures.
5. To promote awareness regarding energy conservation.

4. Methodology

The Energy Audit was conducted through:

- Physical inspection of campus infrastructure.
- Review of electrical installations.
- Observation of usage patterns.
- Examination of energy conservation practices.
- Interaction with faculty, administrative staff and students.

5. Energy Infrastructure Assessment

A. Electrical Infrastructure

The college possesses adequate electrical infrastructure for academic and administrative activities including:

Facility	Availability
Classrooms	Available
Library	Available
Computer Laboratory	Available
Administrative Offices	Available
Auditorium/Conference Hall	Available
Internet & ICT Facilities	Available

The institution uses electrical energy primarily for lighting, fans, computers, printers, internet facilities, water purification systems and office equipment.

B. Lighting System

Observations

- Classrooms are designed with adequate windows for natural lighting.
- Natural daylight is extensively utilized during working hours.
- Electrical lighting is used only when required.
- Energy-efficient lighting fixtures are installed in major areas.

Assessment

Parameter	Status
Natural Lighting	Excellent
Artificial Lighting Efficiency	Good
Maintenance of Fixtures	Good

C. Fan and Ventilation System

Observations

- Classrooms and offices are naturally ventilated.
- Open spaces and spacious corridors reduce dependency on mechanical cooling.
- Ceiling fans are used efficiently.

Assessment

Parameter	Status
Natural Ventilation	Excellent
Fan Usage Efficiency	Good

The well-ventilated building structure contributes significantly to energy conservation.

D. Information and Communication Technology (ICT)

Existing Facilities

- Computer Laboratory
- Internet Facilities
- Digital Administration
- Online Communication Systems
- Digital Library Access

Energy Conservation Impact

- Reduction in paper consumption.
- Increased digital governance.
- Reduced duplication of administrative work.

E. Water Purification and Utility Equipment

The institution uses electrical energy for:

- RO Water Purification Systems
- Water Coolers
- Office Equipment
- Printers and Computers

Regular maintenance helps ensure efficient operation.

6. Existing Energy Conservation Practices

The college has adopted the following measures:

Administrative Measures

- Switching off lights and fans after use.
- Monitoring electricity consumption.
- Preventive maintenance of electrical equipment.
- Digital communication and e-governance.

Academic Measures

- Promotion of paperless practices.
- Use of ICT-enabled teaching methods.
- Environmental awareness activities.

Infrastructure Measures

- Maximum utilization of daylight.
- Natural ventilation.
- Green campus environment reducing heat absorption.
- STP,
- Rain water Harvesting,
- Bore well recharge

7. Energy Performance Evaluation

Parameter	Rating
Natural Lighting	Excellent
Natural Ventilation	Excellent
Electrical Equipment Management	Very Good
ICT-Based Administration	Very Good
Energy Conservation Awareness	Good
Overall Energy Performance	Very Good

8. Energy Saving Opportunities

The following measures are recommended:

Short-Term Measures

1. Replace all remaining conventional bulbs with LED lamps.
2. Display energy conservation awareness notices.
3. Conduct annual energy awareness programmes.
4. Ensure regular maintenance of electrical equipment.

Medium-Term Measures

1. Install energy-efficient star-rated appliances.
2. Introduce automatic sensor lighting in corridors and washrooms.
3. Install smart energy meters for monitoring consumption.

Long-Term Measures

1. Installation of Rooftop Solar Power System.
2. Development of Renewable Energy Policy.
3. Integration of Solar Water Heating Systems where feasible.
4. Annual professional Energy Audit.

9. Recommendations

1. Establish an Energy Management Committee.
2. Maintain monthly electricity consumption records.
3. Conduct annual Energy Audit.
4. Promote Green Computing Practices.
5. Increase use of renewable energy sources.
6. Organize "Save Energy" awareness campaigns.
7. Introduce energy conservation practices in day-to-day administration.

10. Conclusion

The Energy Audit of Bharati Vidyapeeth's New Law College, Kolhapur indicates that the institution has adopted environmentally responsible practices through effective utilization of natural lighting, natural ventilation, ICT-enabled administration, and efficient use of electrical resources. The green and pollution-free campus environment, together with sustainable operational practices, contributes positively towards energy conservation. With implementation of solar energy systems and advanced monitoring mechanisms, the institution can further strengthen its commitment towards sustainable development and energy efficiency.

Overall Energy Audit Grade

Grade: A

Status: Energy Efficient Institution with Scope for Renewable Energy Integration.

Audit Team

1. Principal
2. Internal Quality Assurance Cell (IQAC) Coordinator
3. Campus Committee Convener
4. Administrative Officer

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