

OTTOCLICK



ENERGY AUDIT REPORT

CSJMU



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PROBLEM BEFORE AUTOMATION

Continuous Lighting

In many buildings, corridor lighting remains on 24/7, even when there is no one present. This continuous lighting can lead to significant electricity wastage. Implementing motion sensors or timers can automatically turn off lights when there is no activity in the area, thereby reducing unnecessary energy consumption.

Absence of Energy-Efficient Technologies

Some corridors lack energy-efficient technologies, such as LED lighting, occupancy sensors, or programmable lighting controls. These modern solutions can help optimize energy use by adjusting lighting levels based on occupancy and time of day.



Comprehensive Energy Consumption Audit Report

This report provides a detailed analysis of energy consumption across the university buildings, identifying usage patterns, inefficiencies, and opportunities for optimization to promote energy conservation and sustainability

- **Shivaji boys hostel**

Places	Per-day	Per-month	Per-Year
A-Block	6.165	184.95	2219.4
B-Block	7.56	226.8	2721.6
C-Block	6.165	184.95	2219.4
D-Block	7.56	226.8	2721.6
Block Connecting Corridors Lights	1.918	57.54	690.48
TOTAL (UNITS)	29.398	881.04	10,572.48

Summary -

- **Total No. of Lights - 194 lights**
- **Number of sensors to be installed- 105 sensors**
- **Electricity Charge Per Unit- 8 Rs.**
- **Financial consumption -**
 - **Monthly Basis- 7,048/ Month**
 - **Yearly Basis - 84,560 / Year**

• Paramedical Building

Places	Per-day	Per-month	Per-Year
Ground floor	43.2	1296	15552
1st- Floor	43.2	1296	15552
2nd - Floor	47.04	1411.2	16934.4
3rd - Floor	52.8	1584	19008
TOTAL (UNITS)	186.24	5587.2	67046.4

Summary -

- Total No. of Lights including Bathrooms - 388 lights
- Number of sensors to be installed- 175 sensors
- Electricity Charge Per Unit- 8 Rs.
- Financial consumption -
 - Monthly Basis- 44,697 / Month
 - Yearly Basis - 536,371.2 / Year

• Institute of Fine Arts

Places	Per-day	Per-month	Per-Year
Ground floor	26.26	808.8	9705.6
1st - Floor	32.32	969.6	11635.2
TOTAL (UNITS)	58.58	1778.4	21340.8

Summary -

- Total No. of Lights - 58
- Number of sensors to be installed- 55
- Electricity Charge Per Unit- 8 Rs.
- Financial consumption -
 - Monthly Basis- 14227.2 /month
 - Yearly Basis - 170,726.4 / year

• UIET

Places	Per-day	Per-month	Per-Year
Corridor (OAT)	46.02	1380.6	16567.2
Washrooms	46.08	1382.4	16588.8
TOTAL (UNITS)	92.1	2763	33156

Summary -

- Total No. of Lights including Bathrooms - 174
- Number of sensors to be installed- 50
- Number of Timers to be installed- 6
- Electricity Charge Per Unit- 8 Rs.
- Financial consumption -
 - Monthly Basis- 22,104 / month
 - Yearly Basis - 265,248 / year

• JMC

Places	Per-day	Per-month	Per-Year
Ground floor	12.24	367.2	4406.4
1st - Floor	10.2	306	3672
TOTAL (UNITS)	22.44	673.2	8078.4

Summary -

- Total No. of Lights including Bathrooms - 33lights
- Number of sensors to be installed- 17 sensors
- Electricity Charge Per Unit- 8 Rs.
- Financial consumption -
 - Monthly Basis- 5,385.6 / month
 - Yearly Basis - 64,627.2 / year

• Sociology

Places	Per-day	Per-month	Per-Year
Ground Floor	17.96	538.2	6458.4
1st - Floor	25.86	775.8	9309.6
TOTAL (UNITS)	43.82	1314	15768

Summary -

- Total No. of Lights including Bathrooms - 75
- Number of sensors to be installed- 40
- Electricity Charge Per Unit- 8 Rs.
- Financial consumption -
 - Monthly Basis- 10512 / month
 - Yearly Basis - 126,144 / year

• Library

Places	Per-day	Per-month	Per-Year
Ground floor	7.5	225	2700
1st - Floor	4.75	142.5	1710
TOTAL (UNITS)	12.25	367.5	4410

Summary -

- Total No. of Lights including Bathrooms - 49 lights
- Number of sensors to be installed- 22 sensors
- Electricity Charge Per Unit- 8 Rs.
- Financial consumption -
 - Monthly Basis- 2,940/ month
 - Yearly Basis - 35,280/ year

Energy Audit Summary

- **Key Problems Identified**

- Continuous Lighting: Lights remain on 24/7, wasting electricity.
- Lack of Energy-Efficient Technologies: Absence of LEDs and motion sensors.

- **Buildings Assessed and Highlights**

- Shivaji Boys Hostel: 194 lights, annual cost ₹84,560.
- Paramedical Building: 388 lights, annual cost ₹5,36,371.
- Fine Arts Department: 58 lights, annual cost ₹170,726.4 .
- UIET: 174 lights, annual cost ₹2,65,248.
- JMC: 33 lights, annual cost ₹64,627.2.
- Sociology Department: 75 lights, annual cost ₹126,144.
- Library: 49 lights, annual cost ₹35,280.

- **Common Recommendations**

- Install Smart Sensors and Timers: Optimize energy use by controlling lights based on occupancy.

- **Benefits**

- Significant cost savings on energy bills.
- Enhanced sustainability with energy-efficient technologies.

Energy Audit Summary

- TOTAL ELECTRICITY BILL OF Billboards, Corridors Toilets & Exterior Lightings ₹1,282,956
- Expected Drop in Electricity consumption is Almost 60-70% Which is ₹833,921
- Expected bill after automation ₹449,034
- Our current carbon footprint is 1,362,864.5kg CO2
- After Automation carbon footprint 56,129.5 kg CO2

MORE INFORMATION

CONTACT US

Visit us in person and discuss your needs face-to-face. Our location is conveniently situated, making it easy for you to reach us. We'd love to hear from you! If you have any questions about our services, please don't hesitate to reach out to us.

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THANK YOU!