



Examination of Energy Audit Report 2023-24
Government Science College, Chatrapur, Odisha

Date: January ⁵ 4, 2025

Introduction:

This report presents the findings and recommendations of the energy audit examination conducted at Government Science College, Chatrapur, Odisha. A reference energy audit reporting checklist, provided in an Excel spreadsheet, was used as a guide for this examination. A walk-through audit was conducted with Assistant Professor, Physics, Shri Pradyumna Madai.

Corrections and Recommendations:

1. The following equipment should be added to the Connected Load: refrigerators, ovens, micro-ovens, and induction heaters in the laboratories.
2. Please avoid mentioning the 5, 15 Amp plug points unless permanently supplying ACs, water coolers, etc. on continuous basis.

Recommendations:

1. Consider disconnecting and relocating the 26W tube lights above windows receiving good sunlight from the outside after assessing lux levels in different rooms.
2. Install energy meters for individual areas with high energy consumption.
3. Utilize timers for streetlights and other outside lighting fixtures.
4. Replace traditional streetlights with solar-powered lights.
5. Increase the use of LED lighting from 60% to 90%.

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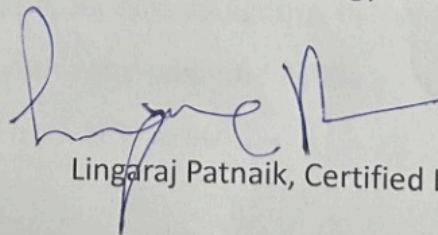
6. Analyze Contract Demand vs. Actual MD based on monthly electricity consumption bills. If the ratio is very low, go for reduction of Contract Demand.
7. Measure Power Factor (PF) at the 430V supply outputs after the transformer and consider installing capacitor banks to improve PF to >0.9 .
8. Establish an electrical room with a distribution panel for lighting and other loads.
9. Replace taps/faucets in bathrooms, toilets, and urinals with spring-loaded ones.
10. Procure a lux meter to measure classroom illumination, particularly in classrooms with low illumination.
11. Explore the feasibility of installing solar panels for street lighting, outside lighting, and potential electricity sales to the supplier.

Goodwill Recommendations:

1. Ensure the existing solar panel at the top of the Humanity Block has a parapet for safety and provide handrails at the top of the ladder leading to the roof.
2. Install a proper electrical panel room covering lighting load, motor and other loads.
3. Organize training sessions for students and staff on energy conservation, safety, and preventive maintenance.

Certification

This report is submitted by Lingaraj Patnaik, Certified Energy Auditor.



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