

# ENERGY AUDIT REPORT

2023



LALIT CHANDRA BHARALI COLLEGE  
MALIGAON, GUWAHATI, ASSAM

## CERTIFICATE

This is to certify that Lalit Chandra Bharali College Guwahati Assam has conducted Energy Audit in June-23 for knowing present electrical energy consumption, Identification of energy conservation and saving opportunities for Implementation to greenhouse gas emission for environmental protection. This energy Audit is also aimed to assess impact of Installed renewable energy applications.

*AK* 11/05/2023

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Founder & chief  
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*Mantu* 11/05/23

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## The Audit Team:

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## **Energy Audit Requirement**

An energy audit determines the amount of energy consumption affiliated with a building and the potential savings associated with that energy consumption. Additionally, an energy audit is designed to understand the specific conditions that are impacting the performance and comfort in your facility to maximize the overall impact of energy-focused building improvements.

An energy audit is a systematic review of the energy consuming installations in a building or premises to ensure that energy is being used sensibly and efficiently. An energy audit usually commences with the collection and analysis of all information that may affect the energy consumption of the building or premises, then follows with reviewing and analyzing the condition and performance of various building services installations and building management, with an aim at identifying areas of inefficiency and suggesting means for improvement.

Through implementation of the suggested improvement measures, building owners can get the immediate benefit for paying less for energy bills. On the other hand, lowering of energy consumption in buildings will lead to the chain effect that less fossil fuel will be burnt for electricity generation by the power supply companies and relatively less pollutants and greenhouse gases will be introduced into the atmosphere, thus contributing to conserve the environment and to enhance sustainable development.

### **Executive summary**

After the Field measurements & analysis, we present herewith important observations made and various measures to reduce the Energy Consumption & mitigate the CO<sub>2</sub> emissions. Lalit Chandra Bharali College, Guwahati, consumes Energy in the form of Electrical Energy used for various gadgets, Office & other facilities.

## 1. Present Energy Consumption

In the following Table, we present the details of Energy Consumption

Table 1: Details of energy consumption

Sl No.	Parameter	Energy consumed(units)	Maximum Demand(KVa)	Bill Amount(Rs.)
1	Maximum	7433	36	109009/-
2	Minimum	2702	9	34871/-
3	Average	5067	15.4	63421/-

## 2. Energy Conservation Projects already installed

- (i) Usage of STAR Rated ACs at new installations.
- (ii) Usage of LED lights at all indoor locations.
- (iii) Usage of LED Lights for outdoor lighting.
- (iv) Solar Rooftop system Installed.

## 3. Key Observations

- (i) As per the recommendation given in Energy Audit report 2022, billing contract demand has been reduced from 226 KVA to 100 KVA.
- (ii) Energy generated from Rooftop Solar panel is fully utilized.
- (iii) There are about 129 Nos. of 18 W LEDs.
- (iv) There are 7 Nos. of 1.5 Ton Old ACs ( in Laboratory, Department of Computer Science) which needs to be replaced with STAR Rated ACs.
- (v) Old ceiling fans need to be replaced with STAR rated fans.
- (vi) Optimize the temperature setting of ACs to 23-25 degree Celsius.

## **Recommendation:**

1. Distribution of power from existing solar panels to reduce grid consumption
2. Replacement of 399 Nos. Of old ceiling fans with star rating fans.
3. Replacement of 6 Nos. of 1.5 Ton Old ACs (in Laboratory, Department of Computer Science) which needs to be replaced with STAR Rated ACs.