ENERGY AUDIT REPORT

2024

LALIT CHANDRA BHARALI COLLEGE

MALIGAON, GUWAHATI, ASSAM

CERTIFICATE

This is to certify that Lalit Chandra Bharali College Guwahati Assam has conducted Energy Audit in May-2024 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.

25/5/24

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25-05-2024

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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_2 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	6526	30	69485/-
2	Minimum	2589	12	38698/-
3	Average	4429	23	50085/-

2. Energy Conservation Projects already installed

- Usage of STAR Rated ACs at new installations.
- Usage of LED lights at all indoor locations.
- Usage of LED Lights for outdoor lighting.
- Solar Rooftop system Installed.

3. Key Observations

- Energy generated from Rooftop Solar panels are utilized in block A, B and C (excluding Computer and Electronics laboratory).

- There are about 381 Nos. of 18 W LEDs, 335 Nos. of ceiling and wall fans.
- There are 09 Nos star rated ACs and 2 nos. of Old ACs which need to be replaced with STAR Rated ACS
- 7 nos. of old exhaust fans are replaced with STAR rated fans.
- Billing contracted demand is reduced from 192 KVA to 100 KVA

Recommendation:

1. Distribution of power from existing solar panels to reduce grid consumption
2. Replacement of 2 nos. Old 1.5 TR ACs with star rating ACs.
3. Optimize the temperature setting of ACs to 23-25 degree Celsius.