

# **Khwaja Moinuddin Chishti Language University**

**Lucknow, U.P.**

## **Energy Audit Report**

**2020 - 2021**

*Date: 20 JULY, 2021*

**AUDITED BY**

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REGISTRAR  
KHWAJA MOINUDDIN CHISHTI  
LANGUAGE UNIVERSITY,  
LUCKNOW

# Energy Audit

## 1. Energy Audit

Energy serves as the lifeblood of economic progress, underpinning industrial growth, technological innovation, and overall societal development. Effective energy management is paramount, aiming to optimize resource utilization while minimizing costs and environmental impacts. At its core, energy management entails strategic planning and implementation of measures to enhance energy efficiency, thereby driving sustainable growth.

Central to the practice of energy management is the conduct of energy audits. These audits serve as systematic assessments, meticulously analyzing energy usage patterns within facilities. By identifying areas of inefficiency and waste, energy audits provide valuable insights for implementing targeted improvements and cost-saving measures.

In the context of India's commitment to achieving Net Zero emissions, energy management assumes heightened significance. With a comprehensive objective to reduce carbon footprints and combat climate change, efficient energy management becomes imperative. By aligning economic growth with environmental sustainability, energy management plays a pivotal role in realizing India's green ambitions.

### 1.1 Resource of Energy Audit

Energy resources utilized by all the departments, support services, and the administrative buildings of KMC Language University, include Electricity, and Diesel Generators installed on the campus.

### 1.2 Energy Audit Objective

#### I. Primary Objective:

- Acquire and analyze data to understand consumption patterns across the university campus.
- Calculate energy wastage based on the findings from the initial data analysis.
- Implement feasible and cost-effective solutions to optimize energy usage and reduce wastage.

#### II. Secondary Objectives:

- Provide the university with valuable experience in energy management, serving as an initial exposure to this field.
- Enable the university to identify energy distribution patterns within its infrastructure.
- Foster technical and managerial skills necessary for future energy projects and initiatives.
- Contribute to ongoing follow-up projects, enhancing the university's overall technical and management exposure.
- Facilitate significant reductions in energy consumption, thereby contributing to the university's sustainability goals and overall achievements.

### 1.3 Benefits of Energy Audit

Energy audits offer numerous benefits to KMC Language University, supporting its commitment to sustainability, cost-effectiveness, and environmental responsibility:

- Cost Savings:** Energy audits identify areas of energy waste and inefficiency, allowing the university to implement cost-effective solutions to reduce energy consumption. By optimizing energy usage, KMC Language University can lower its utility bills and operating expenses, resulting in significant cost savings over time.
- Environmental Impact:** Implementing energy-efficient measures identified through audits helps to reduce the university's carbon footprint and overall environmental impact. By conserving energy and reducing greenhouse gas emissions, KMC Language University demonstrates its commitment to environmental stewardship and sustainability.
- Enhanced Operational Efficiency:** Energy audits provide valuable insights into the university's energy consumption patterns and inefficiencies. By addressing these issues, KMC Language University can improve operational efficiency and optimize the performance of its facilities, leading to smoother operations and better resource management.
- Regulatory Compliance:** Energy audits ensure that KMC Language University complies with relevant energy efficiency regulations and standards. By staying up-to-date with regulatory requirements, the university avoids potential fines and penalties while demonstrating its commitment to legal and regulatory compliance.
- Improved Indoor Comfort:** Energy audits may identify opportunities to improve indoor comfort levels within university buildings. By addressing issues such as inadequate insulation, inefficient HVAC systems, or poor building design, KMC Language University can create a more comfortable and productive environment for students, faculty, and staff.
- Long-term Planning:** Energy audits provide valuable data and recommendations that can inform long-term planning and decision-making processes. By understanding current energy usage patterns and forecasting future needs, KMC Language University can develop strategic initiatives to achieve its energy efficiency and sustainability goals.
- Educational Opportunities:** Energy audits offer educational opportunities for students, faculty, and staff to learn about energy conservation, efficiency, and sustainability practices. By involving the university community in energy audit initiatives, KMC Language University can raise awareness about environmental issues and empower individuals to take action towards a more sustainable future.

#### 1.4 Total Energy Consumption of KMC Language University

**Total Energy Consumption of KMC Language University, Lucknow**  
**From 1<sup>st</sup> April 2020 to 31<sup>st</sup> March 2021**

Sr. No.	Months	Total Consumption in kWh
1.	April 2020	54000
2.	May 2020	44150
3.	June 2020	49550
4.	July 2020	92750
5.	August 2020	91250

Sr. No.	Months	Total Consumption in kWh
6.	September 2020	179850
7.	October 2020	54600
8.	November 2020	97350
9.	December 2020	31900
10.	January 2021	68750
11.	February 2021	32750
12.	March 2021	81450
<b>Total</b>		<b>878350</b>

Energy management stands as a pivotal aspect of modern organizational operations, particularly in educational institutions like KMC Language University. With growing concerns over environmental sustainability and the escalating demand for energy, efficient energy management practices have become imperative. This comprehensive report delves into KMC Language University's annual electricity consumption spanning from April 1st, 2020, to March 31st, 2021. Through a detailed analysis of energy usage patterns, sustainability initiatives, and future strategies, this report aims to provide valuable insights into the university's commitment to environmental stewardship and energy efficiency.

**Total Electricity Consumption:** During the specified period, KMC Language University consumed a total of 878,350 units of electricity. This figure encompasses energy usage across various campus facilities, including academic buildings, administrative offices, laboratories, dormitories, and recreational areas. The total electricity consumption serves as a key indicator of the university's overall energy requirements and forms the foundation for further analysis and strategic planning.

**Usage Analysis:** A thorough analysis of electricity usage patterns reveals valuable insights into consumption trends across different departments and facilities within the university. By dissecting energy consumption data, we can identify areas of high energy usage, peak demand periods, and potential opportunities for optimization. For example, academic buildings may exhibit higher energy consumption during daytime hours, while dormitories may experience peak demand in the evening. Such insights enable us to tailor energy management strategies to specific usage patterns, thereby maximizing efficiency and minimizing wastage.

**Sustainability Initiatives:** KMC Language University is committed to promoting sustainability and environmental responsibility through various initiatives aimed at reducing energy consumption and minimizing our ecological footprint. One of the key initiatives includes the adoption of energy-efficient technologies, such as LED lighting, energy-efficient HVAC systems, and motion-sensor lighting controls. These technologies not only reduce energy consumption but also contribute to cost savings over the long term. Additionally, the university has implemented awareness campaigns and educational programs to promote energy conservation among students, faculty, and staff. These initiatives foster a culture of sustainability and empower individuals to take proactive steps towards reducing their energy usage.

**Future Strategies:** Moving forward, KMC Language University is poised to implement strategic initiatives aimed at further enhancing energy efficiency and sustainability. These strategies may include:

- 1. Expansion of Renewable Energy Sources:** Exploring opportunities to integrate renewable energy sources such as solar and wind power into the university's energy mix to reduce reliance on traditional fossil fuels and decrease carbon emissions.
- 2. Energy Management Systems:** Implementation of advanced energy management systems to monitor, analyze, and optimize energy usage in real-time, enabling proactive energy-saving measures and identifying areas for improvement.
- 3. Green Building Standards:** Incorporation of green building principles and sustainability standards into new construction projects and renovations to ensure energy-efficient design, construction, and operation of campus facilities.
- 4. Behavioral Change Programs:** Continued emphasis on awareness campaigns and educational programs to instill sustainable behaviors and practices among the university community, fostering a collective commitment to environmental stewardship.
- 5. Collaborative Partnerships:** Strengthening collaborations with industry partners, government agencies, and local communities to share best practices, leverage resources, and drive collective action towards a more sustainable future.

KMC Language University's Annual Electricity Consumption Report offers a comprehensive overview of the university's energy usage, sustainability initiatives, and future strategies. By analyzing electricity consumption patterns, implementing energy-saving measures, and fostering a culture of environmental responsibility, the university remains steadfast in its commitment to reducing its ecological footprint and promoting sustainability. As we continue to strive towards a greener future, we are confident that our collective efforts will pave the way for a more sustainable and resilient university community.





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दिनांक: 10/07/2018

कार्यालय ज्ञाप

विश्वविद्यालय द्वारा माननीय कुलपति जी के आदेशानुसार विश्वविद्यालय में उर्जा लेखा परीक्षा सिमित (Energy Audit Committee) का गठन तीन वर्षों अथवा अग्रिम आदेशों तक किया जाता है जिसका विवरण निम्नवत् है-

1. प्रौद्योगिकी विभाग (व्यवसाय प्रबंधन विभाग)
2. डॉ सौबान सर्झन (उर्जा विभाग)
3. डॉ नलिनी मिश्रा (शिक्षाशास्त्र विभाग)
4. श्री शबीह हैदर (लेखाकार, वित्त कार्यालय)
5. श्री आशुतोष श्रीवास्तव (मंडल अभियंता, पूर्वोत्तर रेलवे बरेली)

(अशोक कुमार अरविन्द)  
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