

# **Khwaja Moinuddin Chishti Language University**

**Lucknow, U.P.**

## **Energy Audit Report**

**2021 - 2022**

*Date: 13 JULY, 2022*

**AUDITED BY**

*Prof. Ehtesham Ahmad.*

*Prof. Saman Sayeed*

ई० आशुतोष कुमार श्रीवास्तव  
मण्डल अभियंता  
पूर्वोत्तर रेलवे बरेली

*Ashu*

**Independent Auditor Er. Ashutosh Kumar Srivastava**

*Bmisha*

# Energy Audit

## 1. Energy Audit

Energy is the cornerstone of economic progress, powering industrial growth, technological innovation, and societal development. Effective energy management is essential for optimizing resource utilization, minimizing costs, and mitigating environmental impacts. At its essence, energy management involves strategic planning and the implementation of measures to enhance energy efficiency, thus fostering sustainable growth.

A key tool in energy management is the energy audit, which serves as a systematic assessment of energy usage patterns within facilities. By meticulously analyzing energy consumption and 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 takes on 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

In an era characterized by increasing environmental awareness and the imperative for organizations to operate sustainably, KMC Language University stands at the forefront of commitment to

environmental responsibility and operational excellence. Energy audits, as a cornerstone of this commitment, offer multifaceted benefits that extend beyond mere financial savings. This comprehensive analysis delineates the myriad advantages that energy audits afford KMC Language University, underscoring its dedication to sustainability, cost-effectiveness, and operational efficiency.

- 1. Cost Savings:** Energy audits serve as a strategic tool for KMC Language University to identify and rectify areas of energy waste and inefficiency. By meticulously scrutinizing energy consumption patterns and operational processes, these audits pave the way for the implementation of targeted, cost-effective solutions. Consequently, the university stands to reap substantial financial rewards in the form of reduced utility bills and operating expenses, thereby bolstering its fiscal resilience and sustainability.
- 2. Environmental Impact:** Embracing energy-efficient measures identified through audits, KMC Language University assumes a pivotal role in mitigating its carbon footprint and environmental impact. Through the judicious conservation of energy resources and the attendant reduction in greenhouse gas emissions, the university demonstrates unwavering commitment to environmental stewardship. This concerted effort not only aligns with global sustainability imperatives but also serves as a beacon of inspiration for other institutions to emulate.
- 3. Enhanced Operational Efficiency:** Energy audits furnish KMC Language University with invaluable insights into its energy consumption patterns and operational inefficiencies. Armed with this knowledge, the university can undertake targeted interventions to optimize the performance of its facilities, thereby streamlining operations and bolstering resource management. By fostering a culture of continuous improvement, these audits engender operational efficiency that is not only sustainable but also conducive to academic excellence.
- 4. Regulatory Compliance:** In a landscape rife with evolving energy efficiency regulations and standards, energy audits serve as a bulwark against non-compliance for KMC Language University. By meticulously adhering to regulatory requirements and staying abreast of emerging mandates, the university averts potential fines and penalties while fortifying its reputation as a paragon of legal and regulatory compliance. This proactive approach underscores the university's unwavering commitment to upholding the highest standards of governance and accountability.
- 5. Improved Indoor Comfort:** Energy audits harbor the potential to enhance indoor comfort levels within university buildings, thereby fostering an environment conducive to learning and productivity. By identifying and rectifying issues such as inadequate insulation or inefficient HVAC systems, KMC Language University endeavors to cultivate a nurturing space for students, faculty, and staff. This commitment to holistic well-being underscores the university's ethos of prioritizing the needs and aspirations of its stakeholders.
- 6. Long-term Planning:** Energy audits furnish KMC Language University with a wealth of data and insights that inform strategic decision-making and long-term planning initiatives. By extrapolating current energy usage patterns and forecasting future needs, the university can devise robust strategies to realize its energy efficiency and sustainability objectives. This forward-looking approach not only ensures the university's continued growth and resilience but also positions it as a trailblazer in the pursuit of sustainable development.

Bmisha

REGISTRAR

KHWAJA MOINUDDIN CHISHTI  
LANGUAGE UNIVERSITY,  
LUCKNOW

**7. Educational Opportunities:** Energy audits represent not only a pragmatic endeavor but also an educational opportunity for the entire university community. By actively involving students, faculty, and staff in these initiatives, KMC Language University fosters a culture of environmental consciousness and empowerment. Through experiential learning and engagement, individuals are inspired to champion sustainability practices both within and beyond the university, thereby effectuating lasting societal change.

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

**Total Energy Consumption of KMC Language University, Lucknow**  
**From 1<sup>st</sup> April 2021 to 31<sup>st</sup> March 2022**

Sr. No.	Months	Total Consumption in kWh
1.	April 2021	39750
2.	May 2021	42250
3.	June 2021	45050
4.	July 2021	77900
5.	August 2021	110850
6.	September 2021	102250
7.	October 2021	116550
8.	November 2021	146533
9.	December 2021	
10.	January 2022	
11.	February 2022	
12.	March 2022	156533
<b>Total</b>		<b>837666</b>

Energy management constitutes a critical facet of organizational governance, with increasing emphasis placed on environmental sustainability and the burgeoning demand for energy. In alignment with these imperatives, KMC Language University's energy audit seeks to dissect the institution's electricity consumption, elucidating patterns, identifying areas for optimization, and propounding strategic measures to bolster sustainability.

- Total Electricity Consumption:** Over the stipulated period, KMC Language University consumed a cumulative total of 837666 units of electricity. This aggregate encompasses energy utilization across diverse campus domains, encompassing academic edifices, administrative precincts, laboratories, dormitories, and recreational amenities. The quantification of total electricity consumption serves as a pivotal metric, elucidating the university's overarching energy requisites and serving as a cornerstone for ensuing analytical endeavors.
- Usage Analysis:** A meticulous examination of electricity consumption patterns unveils nuanced insights into usage trends across disparate departments and facilities. By dissecting consumption data, discernible patterns emerge, enabling identification of areas characterized by elevated energy utilization, delineation of peak demand epochs, and discernment of

avenues for optimization. This granular understanding facilitates tailored energy management strategies, thereby augmenting efficiency and curtailing wastage.

3. **Sustainability Initiatives:** KMC Language University espouses a fervent commitment to sustainability and environmental stewardship, manifested through an array of initiatives designed to curtail energy consumption and mitigate ecological impact. Foremost among these initiatives is the adoption of energy-efficient technologies, including LED lighting, energy-efficient HVAC systems, and motion-sensor lighting controls. These technologies engender dual benefits, concurrently reducing energy consumption and engendering long-term cost savings. Additionally, the university has orchestrated awareness campaigns and educational programs, fostering a culture of sustainability and engendering proactive energy conservation amongst stakeholders.
4. **Future Strategies:** In charting a trajectory towards enhanced energy efficiency and sustainability, KMC Language University delineates a series of strategic initiatives:
  - **Expansion of Renewable Energy Sources:** Deliberate exploration of opportunities to integrate renewable energy sources such as solar and wind power into the university's energy portfolio, thereby diminishing reliance on conventional fossil fuels and abating carbon emissions.
  - **Implementation of Energy Management Systems:** Deployment of advanced energy management systems to effectuate real-time monitoring, analysis, and optimization of energy consumption, facilitating proactive energy-saving measures and identification of areas amenable to improvement.
  - **Adherence to Green Building Standards:** Integration of green building principles and sustainability benchmarks into forthcoming construction projects and renovations, ensuring energy-efficient design, construction, and operation of campus infrastructure.
  - **Behavioral Change Programs:** Sustained emphasis on awareness campaigns and educational endeavors to inculcate sustainable behaviors amongst the university community, galvanizing a collective commitment to environmental stewardship.
  - **Strengthening Collaborative Partnerships:** Fortification of collaborations with industry counterparts, governmental entities, and local communities to exchange best practices, pool resources, and catalyze collective action towards a more sustainable future.

KMC Language University's Annual Electricity Consumption Report furnishes a panoramic exposition of the institution's energy utilization dynamics, sustainability undertakings, and forward-looking strategies. By leveraging insights gleaned from electricity consumption analysis, implementing energy-saving measures, and nurturing a culture of environmental consciousness, the university remains resolute in its pursuit of minimizing its ecological footprint and promoting sustainability. As we persist in our endeavors to cultivate a greener milieu, we harbor unwavering confidence that our concerted efforts will engender a more sustainable and resilient university ecosystem.









خواجہ میمن الدین چشتی اردو، عربی-فارسی یونیورسٹی لکھنؤ  
خواجہ مسیح الدین مونو ڈین چشتی اردو، عربی-فارسی یونیورسٹی لکھنؤ<sup>1</sup>  
Khwaja Moinuddin Chishti Urdu, Arabi-Farsi University, Lucknow  
U.P. STATE GOVERNMENT UNIVERSITY

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. प्रौ. सच्यद हैदर अली (व्यवसाय प्रबंधन विभाग)
2. डॉ सौबान सईद (उर्दू 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)  
कुलसचिव

  
REGISTRAR  
KHWAJA MOINUDDIN CHISHTI  
LANGUAGE UNIVERSITY,  
LUCKNOW