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भारतीय आयुर्विज्ञान अनुसंधान परिषद
स्वास्थ्य अनुसंधान विभाग, स्वास्थ्य एवं परिवार
कल्याण मंत्रालय, भारत सरकार

Indian Council of Medical Research
Department of Health Research, Ministry of Health
and Family Welfare, Government of India

By e-mail

No. AA-VI/Energy Audit/ICMR/2021

Dated: 13.08.2021

CIRCULAR

Sub: Energy Audit for Electromechanical installations of ICMR-HQ and its Institutes/ Centres.

The energy audit is an essential activity for any organization, wishing to control energy and utility cost. It is a tool to determine and analyze the energy consumption of offices/buildings, in order to determine energy saving options.

The Competent Authority is pleased to issue the following instructions, on energy audit of offices/buildings of ICMR-HQ, Institutes/Centers.

- 1) To perform Energy Performance Assessment of equipments, Electric power distribution network, HVAC, Electric motors, Fans, Water pumps, UPS systems, Lighting systems, Diesel generator sets, Computers, Inverters, Lifts, RO Systems, Canteen/ Kitchen equipments like deep fridge, oven etc. including study of energy consumption pattern and management of power demand in the office/building through the CPWD.
- 2) To identify opportunities for energy saving and to have recommendations for the same, along with cost benefit analysis.
- 3) The broad scope of the Energy Performance Assessment study should be done as per the following:
 - a) **Electricity and fuel consumption**
 - Review of present electricity & fuel consumption and utilization practices and estimation of energy consumption in various load centers like Lighting, Air-Conditioning, Water Pumping and end user applications.

b) Electrical Distribution System

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- Exploring the Energy Conservation Options (ENCON) in DG Sets.

f) Water Pumping System

- Review of water pumping, storage and distribution systems.
- Performance assessment of all major water pumps i.e. power consumption vs. flow delivered, estimation of pump efficiency etc.
- Exploring the Energy Conservation Options (ENCON) in Water Pumping System.

g) Thermic Fluid Heaters / Boilers

- Performance assessment of hot water generators or thermic fluid heaters like estimation of efficiency etc.
- Exploring the ENCON options in this systems

h) Motor Load Survey

- Conducting the motor load survey of all drives to estimate the % loading.
- Exploring the ENCON options in electric drive system.

i) Energy Monitoring & Accounting System

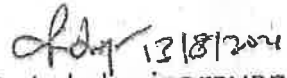
- Detail review of present energy monitoring & accounting system in terms of metering, record keeping, data logging, periodic performance analysis etc. and recommend for effective energy monitoring & accounting system.

j) Others

- Review of present maintenance practice, Replacement policies and building safety practices as applicable to high rising buildings and recommend for improvements.
- Cost-Benefit Analysis of each ENCON options.
- Preparation of Detail Project Report (DPR).

4) To execute the work to make the building energy efficient on above recommendations, cost benefit analysis and DPR through CPWD.

5) To take care of energy efficiency norm while planning for a new building.


Dr. R. Lakshminarayanan

Deputy Director General (Admin)

Copy to:

1. PS to DG/ Sr. DDG(A)/ Sr. FA
2. All Heads of ICMR Division
3. All Directors/ Director-in-charge of ICMR Institutes
4. DDG /ADG(A)/ADG(F)
5. Bank Manager, Canara Bank
6. Dr. L.K. Sharma, Scientist-E with the request to upload in ICMR website.