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BUILDING ENERGY ASSESSMENT
OVERVIEW
ONLINE PROFESSIONAL COURSES LED BY THE WORLD'S TOP SPECIALISTS
ONLINE TRAINING BY KRISHNAJI PAWAR
LEED AP(BD+C),GSAS CGP,GCP,ISO 14001
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MODULE 4

Role of an Energy Auditor or Manager

KRISHNAJI PAWAR - CEO & FOUNDER

LEED AP(BD+C),GSAS CGP,GCP,ISO 14001

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BUILDING ENERGY ASSESSMENT OVERVIEW

ASHRAE and other entities have defined energy audits as processes in which engineering service providers identify and recommend efficiency opportunities to clients

Learning Objectives

- Introduction
- Principles and Concepts of Energy Assessment
- Types of Energy Audits or Assessments
- Role of an Energy Auditor or Manager
- Energy Assessment and Audit Professional Certification
- Benefits of Energy Audits or Assessments
- Summary and Resources

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INTRODUCTION

Aims to reduce energy use and/or cost of operating a building and improve indoor environmental quality.

- Steps include:

1. Collecting and analyzing historical energy use.
2. Studying the building and its operational characteristics.
3. Identifying potential measures to reduce energy use and/or cost.
4. Conducting an engineering and economic analysis of potential modifications.
5. Preparing a list of measures to capitalize on potential synergies and cost reductions.
6. Preparing a report documenting the analysis process and results.

- May include additional steps for implementation, including engineering and design, construction administration, commissioning, or measurement and verification of energy savings.

THE FUNCTION OF AN ENERGY AUDITOR

- Energy auditors are professionals with diverse backgrounds, including non-engineers, contractors, and engineers.
- They are employed by various organizations, including state energy agencies, gas and electric utilities, engineering firms, ESCOs, building performance contracting firms, and HVAC equipment manufacturers.
- Objectivity and independence are crucial to prevent potential bias in energy audit reports.
- Energy auditors have the responsibility to advocate for energy conservation, presenting the economic and social case for energy improvements.
- They should not make assumptions about the owner's immediate financial capacity and limitations, but provide relevant information for future energy planning.



THE FUNCTION OF AN ENERGY AUDITOR +

- The energy auditor is not obligated to provide a completed design during the energy audit, but to conduct a feasibility study.
- They must acknowledge that a building has numerous stakeholders, and must maintain a professional, unbiased stance.
- They must disclose any health and safety deficiencies in a building, even if it results in increased energy consumption.
- The primary objective of the energy audit is to rank energy enhancements in order of importance.
- Energy auditors maintain communication with tenants, property managers, and building proprietors, and understand utility invoices.



THE FUNCTION OF AN ENERGY AUDITOR++

- They have the ability to discern unfulfilled demands within the realm of energy work and communicate these demands to policymakers, program administrators, government officials, educators, non-governmental organizations invested in energy conservation, and other relevant stakeholders.
- Energy auditing requires considerable physical exertion, including inspecting crawlspaces, attics, roof access, working in high temperatures, and handling unclean materials.





COMMERCIAL BUILDING ENERGY AUDITING OVERVIEW



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COMMERCIAL BUILDING ENERGY AUDITING OVERVIEW+

- Energy auditors should not preclude potential enhancements by imposing assumptions on the owner or manager.
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ENERGY MANAGER'S ROLE IN BUILDING MANAGEMENT

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ENERGY MANAGER'S ROLE IN BUILDING MANAGEMENT

- The energy manager is responsible for reducing energy consumption in buildings or portfolios.
- They maintain documents like equipment user manuals, drawings, R-values, and records of energy enhancements.
- They maintain billing records for utilities, including water, to monitor and establish energy consumption benchmarks.
- They obtain and maintain occupancy information, schedules, and other energy-related data for program controls and energy audits.
- They estimate the energy consumption of certain enhancements.

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- They identify and eliminate leaks in gas, water, and compressed air systems.
- They can perform additional duties beyond breach detection, such as ensuring photocell-controlled lights turn on and off at the right times.
- They may acquire energy audits on a periodic basis or establish internal capacity to conduct such assessments.
- They oversee the implementation of energy improvements, requiring the same level of meticulousness as construction projects.
- They provide building management with a report on energy issues, including recommendations and results.

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CONTACT US

+91 6363032722

info@beyondsmartcities.in

learn.beyondsmartcities.in

#55,HMR Layout ,Bengaluru ,India



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