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ENERGY AUDITS 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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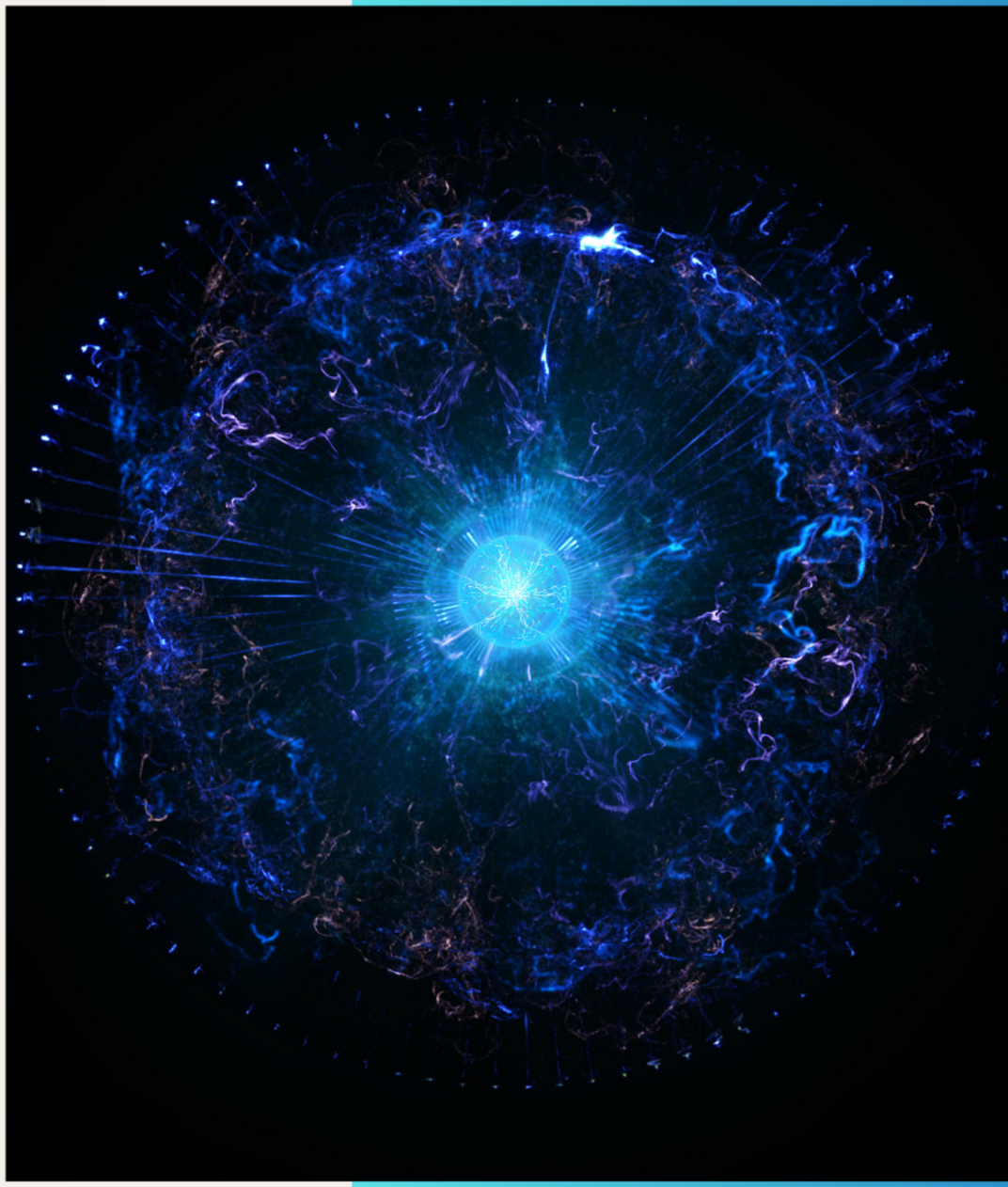
MODULE 1

Introduction and Course Outline

KRISHNAJI PAWAR - CEO & FOUNDER

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

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ENERGY AUDITS OVERVIEW

The Energy Audits Overview course provides an introduction to the concept of building energy assessment, including its various types, professional certification, and the advantages that audits offer.

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BRIEF ABOUT ME

Krishnaji PAWAR

CEO & FOUNDER



Krishnaji Pawar is founder and CEO of Beyond Smart Cities. Before being named CEO in January 2020, Krishnaji held leadership roles at Beyond Smart Cities in both Sustainability ,Energy & Environmental Consultancy.

Specialized in developing sustainable design strategies for Green Building Certification Systems (LEED, GSAS, etc.), Energy & Water Conservation, Commissioning, Environmental Impact Assessment & Environmental Management Systems.

Currently responsible for 3,787 million square feet Green Building /Energy modeling Consulting since January 2008 in UAE, India and Qatar.

Learning Objectives

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

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INTRODUCTION

- Understand energy audit objectives and auditing process steps.
- Define the necessary information for field visits and data analysis.
- Understand audit levels and plan for successful audits.
- Effectively communicate audit results to clients.
- Understand the role and responsibilities of an energy auditor and CEA/BEAP certification requirements.

BUILDING ENERGY ASSESSMENT

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- Construction consumes 40% of the nation's energy.
- Interest in energy conservation is driven by pollution, climate change, energy costs, and fossil fuel dependency.
- Architecture 2030 aims for a 50% reduction in the energy consumption of existing structures.
- Energy audits evaluate energy systems to identify energy conservation opportunities.
- Energy efficiency improvements are integrated into construction work, aiming for building transformation.





WHAT IS ENERGY AUDIT?



- An energy audit, also called an energy assessment, is an evaluation of a building's energy systems in order to identify opportunities for reducing energy.
- Energy improvements form part of the implementation of the work, actually reducing energy by making changes in buildings. We seek to transform our buildings.

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ENERGY IMPROVEMENT GOALS



- Environmental: Reduce carbon emissions, reliance on fossil fuels, and pollution.
- Financial and Economic: Reduce energy costs, increase property value, and economic development.
- Political: Reduce dependence on foreign fuels, conflict over fuels, and strain on electric power grids.
- Health and Comfort: Improve human health, indoor air quality, and comfort due to reduced drafts, glare, cold/hot indoor spaces, and light pollution.

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ENERGY EFFICIENCY AND PRIORITIES



- Energy efficiency often involves multiple goals, but priorities can vary among individuals and organizations.
- The owner may prioritize energy savings, while the CFO/COO may prioritize cost savings.
- Facility managers may prioritize reducing comfort complaints, while occupants may prioritize a bright, healthy work environment.
- Recognizing and navigating these differences is crucial in energy work.

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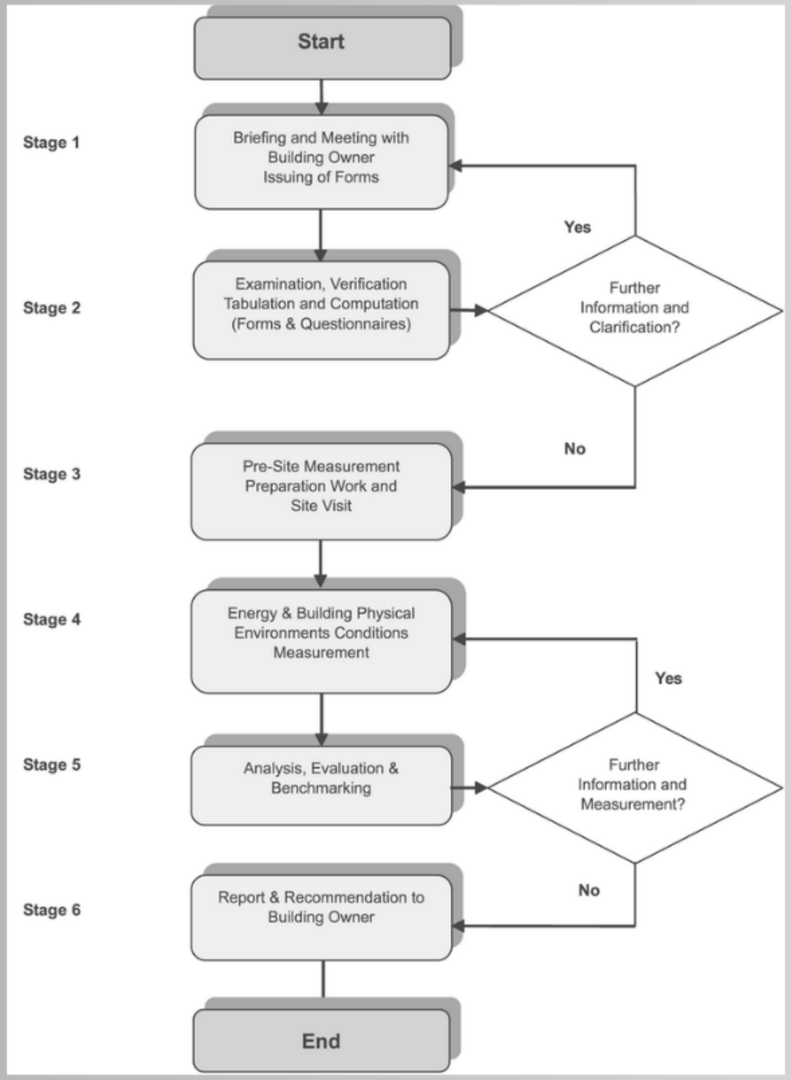
ENERGY EFFICIENCY AND PRIORITIES+



- Potential pitfalls include missed identification or evaluation of energy improvements, overestimation of savings, owners not implementing improvements, improper installation of products, improper commissioning of improvements, and improper operation or maintenance of equipment.
- The main goal of the energy auditor is to evaluate and prioritize energy improvements, while the energy manager aims to deliver energy savings.

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Energy audit methodology flowchart





DEFINITION AND PURPOSES OF ENERGY AUDIT.....



- Energy improvements are changes to a building that reduce energy use. Other terms used include energy conservation measures (also called measures or ECMs), and energy conservation opportunities (ECOs).
- Interacting improvements, or interactive improvements, refer to two or more improvements that affect each other's savings.
- Deep energy retrofits are packages of improvements that substantially and measurably reduce energy use in a building.

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ENERGY ASSESSMENT OR AUDIT IMPORTANCE



- Identifies energy-saving opportunities.
- Helps understand energy usage and improve efficiency.
- Identifies safety concerns with electrical systems, wiring, and ventilation.
- Increases a home's resale value.
- Helps reduce carbon monoxide production.

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Beyond Smart Cities is the world's 1st Green Technology Marketplace, connecting millions of Sustainability Specialists, Green Building Specialists, Energy Specialists, Commissioning Specialists, Environment Specialists, Health & Safety Specialists, Fire Safety Specialists, Climate Change Specialists & Green Products/Technology Manufacturers with independent talent around the globe.

Our mission is to build and support a global community of experts with the highest professional standards in sustainability, green building, energy, commissioning, environment, health & safety, fire safety, climate change, GHG accounting, carbon auditing, and GHG emissions management.

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