Course Overview

Energy and carbon management have become essential components of effective organizational management. Efficient use of energy resources is crucial for achieving desired operational outcomes while minimizing environmental impacts. However, despite the increasing pressures to reduce costs and environmental footprints, energy management and control are often underemphasized. This **ISO 50001 Energy Management System** course is designed to provide participants with the knowledge and tools needed to implement effective energy management systems, following the ISO 50001 standard.

ISO 50001 is the international standard for energy management systems, and this course will focus on the key elements and benefits of achieving certification. Participants will learn how to integrate sustainable energy management practices within their organizations, providing a pathway to energy systems maintenance and certification. The course will also emphasize the life-cycle perspective of building energy management systems, especially for organizations interested in Siemens energy management systems or other sustainable solutions.

ISO 50001 Energy Management System Standard

The **ISO 50001** standard serves as the backbone of this course. Participants will gain a thorough understanding of the structure and requirements of an energy management system (EnMS) as defined by ISO 50001. By exploring the benefits of implementing this standard, they will learn how to create a system that improves energy performance, reduces operational costs, and minimizes environmental impact. This course is ideal for organizations looking to establish or refine their energy management system, ensuring compliance with ISO 50001 guidelines.

Targeted Groups

This course is beneficial for:

- **Operational Managers**
- **Design Managers** responsible for new facilities
- **Project Managers**
- **Facilities Managers**
- Individuals seeking to improve their organization’s environmental performance

Course Objectives

By the end of this **ISO 50001 and BS EN 16001 Energy Management System** course, participants will be able to:

- Comprehend the origins and significance of energy resources.
- Identify and eliminate energy waste within operations.
- Manage energy resources efficiently on-site.
- Engage organizational staff in energy management practices.

- Showcase best practices in energy management to stakeholders, including customers and suppliers.

Targeted Competencies

Upon completion of this course, participants will be equipped with the following competencies:

- Understanding of energy management processes.
- Familiarity with the **ISO 50001** energy management standard and related international standards.
- Capability to reduce operational costs, carbon footprint, and environmental impact.
- Networking opportunities with peers and energy management professionals globally.
- Insights from experienced professionals in the energy management sector.

Course Content

Unit 1: Energy Overview

- Overview of energy and its impact on the environment.
- Relevant laws, regulations, and guidelines pertaining to energy.
- Key energy-related terminology and concepts.
- The effects of carbon emissions and methods of mitigation.
- Understanding energy standards, including **ISO 50001** and **BS EN 16001**.
- Application of energy management best practices in various sectors.

Unit 2: Energy Data and Management

- Understanding energy invoices and their role in energy management.
- The importance of **metering** in energy conservation efforts.
- Techniques for manipulating, interpreting, and managing energy data.
- How to use energy data for informed management decision-making.
- Evaluating the competency of energy resource management within an organization.

Unit 3: Energy Auditing / Review

- The energy auditing process and its significance in energy management.
- Methods of simple energy auditing and when to use them.
- Conducting detailed energy audits, including equipment and activity assessments.
- Identifying inefficiencies and opportunities for energy optimization in operations.

Unit 4: Monitoring and Targeting

- Analyzing raw energy data to uncover insights and patterns.
- Correlating energy usage with activity levels to identify optimization opportunities.
- Setting **benchmarks** and **Key Performance Indicators (KPIs)** for energy

consumption.
- Implementing advanced techniques such as regression analysis and **CuSum**.
- Establishing **budgets** and energy consumption targets.
- Leveraging **automatic monitoring** and **targeting systems** for improved reporting.

Unit 5: People Power

- Identifying resources and support for energy management initiatives.
- Motivating and enrolling staff in energy-saving initiatives and projects.
- Developing effective energy policies and strategies for organization-wide adoption.
- Building partnerships for sustainable energy management across teams.
- Communicating essential energy management and conservation information to stakeholders.

This course will equip participants with the necessary skills to design, implement, and manage an effective energy management system in compliance with ISO 50001, positioning their organizations for long-term sustainability and cost savings.