Advanced Energy Auditing and ISO 50001 Compliance Training Course



14 - 18 Dec 2026

Vienna

5800 € (Per Person)

Ref: #ERE9903_94860

Course Introduction / Overview:

This comprehensive training course provides a deep dive into the interconnected disciplines of energy efficiency auditing and the implementation of ISO 50001 Energy Management Systems (EnMS). In an era where energy cost savings and sustainable energy management are paramount for corporate success, mastering these skills is no longer optional but essential. This program is meticulously designed to equip participants with the practical knowledge and tools needed to conduct thorough energy audits, identify energy-saving opportunities, and lead their organizations toward successful ISO 50001 compliance. We will explore the foundational principles outlined by leading experts like Albert Thumann in his seminal work, "Guide to Energy Management," to provide a robust academic and practical framework. Participants will learn to move beyond simple compliance, using the EnMS as a strategic tool for continual improvement in energy performance. BIG BEN Training Center has developed this course to bridge the gap between theoretical knowledge and real-world application, ensuring delegates can immediately implement effective energy management action plans and contribute significantly to their organization's financial and environmental goals.

Target Audience / This training course is suitable for:

- Energy Managers and Coordinators.
- Facility and Plant Managers.
- Internal and External Auditors.
- Sustainability and Environmental Officers.
- Consultants specializing in energy management systems.
- Operations and Maintenance Engineers.
- Quality Assurance and Compliance Managers.
- Procurement and Supply Chain Professionals involved in energy purchasing.
- Top management and decision-makers responsible for strategic planning.

Target Sectors and Industries:

- Heavy and Light Manufacturing Industries.
- Commercial and Residential Real Estate Management.
- Healthcare and Hospital Facilities.
- Hospitality, including hotels and resorts.
- Educational Institutions such as universities and schools.
- Governmental bodies and public sector agencies.
- Transportation and Logistics.
- Utilities and Energy Providers.
- Data Centers and Information Technology.

Target Organizations Departments:

- Operations and Production.
- Facilities Management and Maintenance.
- Environmental, Health, and Safety (EHS).
- Engineering and Technical Services.
- Corporate Sustainability and Social Responsibility.
- Procurement and Purchasing.
- Quality Management and Compliance.
- Strategic Planning and Finance.
- Internal Audit Departments.

Course Offerings:

By the end of this course, the participants will have able to:

- Develop a comprehensive understanding of the ISO 50001:2018 standard and its requirements.
- Master the techniques for conducting a detailed energy review and establishing an energy baseline (EnB).
- Establish and monitor effective Energy Performance Indicators (EnPIs) to track progress.
- Plan, conduct, and report on internal energy management system audits effectively.
- Identify and quantify significant energy uses (SEUs) within an organization.
- Develop and implement energy management action plans to achieve objectives and targets.
- Analyze energy data to identify and validate energy-saving opportunities.
- Understand the roles and responsibilities required for maintaining a compliant EnMS.
- Facilitate management reviews to ensure the EnMS's continuing suitability and effectiveness.
- Promote a culture of continual improvement in energy performance across all departments.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, engaging, and practical, ensuring participants gain skills they can apply immediately in their workplace. This course moves beyond traditional lectures by incorporating a blended learning approach. We utilize a mix of expert-led presentations, detailed case studies from various industries, and interactive group discussions to foster a collaborative learning environment. A significant portion of the course is dedicated to hands-on workshops and practical exercises, such as simulating an internal audit, developing an energy baseline from sample data, and creating Energy Performance Indicators. Participants will work in teams on real-world scenarios to analyze energy data, identify saving opportunities, and prepare audit reports. This active learning approach is supported by continuous feedback from the instructor, allowing for a deeper understanding of complex concepts. Our goal is to empower participants with both the knowledge and the confidence to implement and manage a world-class Energy Management System.

Course Agenda (Course Units):

Unit One: Foundations of Energy Management and ISO 50001

- Introduction to Global Energy Trends and Challenges.
- Core Principles of Energy Management and Efficiency.
- Overview of the ISO 50001:2018 Standard and its Structure.
- The Plan-Do-Check-Act (PDCA) Cycle in an EnMS Context.
- Benefits of Implementing an ISO 50001 Compliant EnMS.
- Understanding Key Terminology: EnB, EnPI, SEU.
- The Role of Top Management and the Energy Management Team.

Unit Two: Planning the Energy Management System (EnMS)

- Conducting a Comprehensive Energy Review.
- Methods for Collecting and Analyzing Energy Data.
- Establishing a Meaningful Energy Baseline (EnB).
- Developing and Implementing Effective Energy Performance Indicators (EnPIs).
- Identifying Significant Energy Uses (SEUs).
- Setting Strategic Energy Objectives, Targets, and Action Plans.
- Legal and Other Requirements for Energy Management.

Unit three: EnMS Implementation and Operation

- Defining Roles, Responsibilities, and Authorities.
- Ensuring Competence, Training, and Awareness.
- Communication Strategies for a Successful EnMS.
- ISO 50001 Documentation Requirements and Control.
- Establishing Operational Controls for SEUs.
- Integrating Energy Performance into Design and Procurement Processes.
- Managing Energy Efficiency Projects from Concept to Completion.

Unit Four: Performance Evaluation and Energy Auditing

- Monitoring, Measurement, and Analysis of Energy Performance.
- Techniques for Verification of Energy Performance Improvements.
- Planning and Scoping the Internal EnMS Audit.
- Conducting the Audit: Opening Meetings, Interviews, and Evidence Collection.
- Writing Effective Audit Reports with Nonconformity Statements.
- Preparing for and Conducting the Management Review.
- Evaluating Compliance with Legal and Other Requirements.

Unit Five: Improvement and Advanced EnMS Concepts

- Addressing Nonconformity and Implementing Corrective Actions.
- The Philosophy and Practice of Continual Improvement.
- Integrating ISO 50001 with other Management Systems (ISO 9001, ISO 14001).
- Advanced Energy Data Analysis Techniques.
- Financial Analysis and Investment Appraisal for Energy Projects.
- Future Trends in Energy Management and Technology.
- Preparing for Third-Party Certification Audits.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

Beyond compliance and cost savings, how can an effectively implemented ISO 50001 EnMS fundamentally reshape an organization's corporate culture and brand identity in an era of heightened environmental awareness?

What unique qualities does this course offer compared to other courses?

This training course distinguishes itself by offering a uniquely integrated perspective that seamlessly merges the technical rigor of energy auditing with the strategic framework of ISO 50001 management. While many courses focus on either the "how-to" of auditing or the "what" of the standard, this program focuses on the "why" and "how" of creating a synergistic system where auditing is not just a compliance check but a powerful driver for continual improvement. We move beyond theoretical recitations of clauses to immerse participants in practical, real-world scenarios that mirror the challenges they face in their own organizations. The curriculum is built on a foundation of strategic thinking, teaching participants how to use the EnMS to influence corporate culture, drive innovation in operational efficiency, and create a compelling business case for sustainability initiatives. The emphasis is on developing analytical and critical thinking skills, enabling delegates to interpret data, identify underlying performance issues, and formulate robust, data-driven action plans that deliver measurable financial and environmental returns.