ISO 50001 Lead Auditor for Energy Management Systems Training Course



23 - 27 Nov 2026

Lisbon

4500 € (Per Person)

Ref: #ISO1444_117230

Course Introduction / Overview:

This intensive training course provides a comprehensive framework for mastering the principles and practices of auditing Energy Management Systems (EnMS) in line with ISO 50001:2018. In an era where industrial sustainability and energy efficiency are paramount, the ability to effectively audit an EnMS is a critical skill for professionals dedicated to driving organizational improvement and environmental responsibility. This program, offered by BIG BEN Training Center, is meticulously designed to equip participants with the knowledge and skills required to plan, conduct, report, and follow up on an EnMS audit. The curriculum delves into the intricacies of the standard, from understanding energy performance indicators (EnPIs) and energy baselines (EnBs) to applying risk-based auditing techniques. As discussed by experts like Barney L. Capehart in works such as "Energy Management Principles and Practice," a systematic approach is key to unlocking significant energy savings and operational enhancements. Participants will not only learn the requirements of ISO 50001 but will also master the auditing guidelines of ISO 19011, preparing them to lead audit teams with confidence and contribute meaningfully to their organization's energy and sustainability objectives.

Target Audience / This training course is suitable for:

- Energy Managers and Officers.
- Sustainability and Environmental Managers.
- Quality Assurance and Control Professionals.
- Facilities and Operations Managers.
- Internal and External Auditors.
- Management System Consultants.
- Individuals responsible for implementing or maintaining an ISO 50001 EnMS.
- Professionals aspiring to become certified EnMS lead auditors.

Target Sectors and Industries:

- Heavy and Light Manufacturing.
- Oil, Gas, and Petrochemical Industries.
- Power Generation and Utilities.
- Construction and Real Estate Management.
- Transportation and Logistics.
- Food and Beverage Processing.
- Pharmaceutical and Chemical Industries.
- Governmental bodies and public sector organizations.

Target Organizations Departments:

- Sustainability and Corporate Social Responsibility.
- Operations and Production.
- Facilities Management and Maintenance.
- Quality Assurance and Control.
- Environmental, Health, and Safety (EHS).
- Procurement and Supply Chain.
- Engineering and Technical Services.
- Internal Audit and Compliance.

Course Offerings:

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

- Interpret the requirements of ISO 50001:2018 within the context of an audit.
- Understand the application of energy management principles, including EnPIs and EnBs.
- Master the roles and responsibilities of a lead auditor in planning and executing an EnMS audit.
- Apply the guidelines of ISO 19011 to the audit of an Energy Management System.
- Plan, conduct, report, and follow up on an audit in accordance with international standards.
- Develop effective communication and interviewing skills for gathering audit evidence.
- Generate clear and concise audit reports and manage non-conformity processes.
- Lead an audit team and manage the entire audit process from start to finish.
- Evaluate the effectiveness of corrective actions and contribute to continual improvement.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive and participant-centered, ensuring a deep and practical understanding of the subject matter. This course moves beyond traditional lectures by incorporating a blend of learning techniques. We utilize detailed presentations, real-world case studies from various industrial sectors, and interactive group workshops where participants can apply theoretical knowledge to practical scenarios. Role-playing exercises simulating key audit stages, such as opening meetings, auditor interviews, and closing meetings, are a core component of the training. These simulations provide a safe environment to practice and refine auditing skills. Participants will engage in team-based activities to develop audit plans, create audit checklists, and analyze evidence to identify non-conformities. Continuous feedback is provided by our expert instructors, who bring extensive industry and auditing experience. The learning environment encourages open discussion and knowledge sharing, allowing participants to learn from both the instructor and their peers, ensuring they leave with the confidence and competence to lead an ISO 50001 audit effectively.

Course Agenda (Course Units):

Unit One: Foundations of Energy Management and ISO 50001

- Introduction to Energy Management Systems (EnMS).
- Benefits of implementing an ISO 50001 EnMS.
- Overview of the ISO 50001:2018 standard and its structure.
- Understanding key terms and definitions in energy management.
- The Plan-Do-Check-Act (PDCA) cycle in the context of EnMS.
- Analysis of clauses 4-10 of ISO 50001:2018.
- The link between energy management and industrial sustainability.

Unit Two: Audit Principles and Planning the EnMS Audit

- Introduction to auditing principles based on ISO 19011.
- Roles, responsibilities, and competencies of an auditor and lead auditor.
- Managing an audit program and initiating the audit.
- Conducting the Stage 1 audit (documentation review and readiness).
- Developing a comprehensive on-site audit plan (Stage 2).
- Preparing audit checklists and work documents.
- Risk-based thinking in the audit planning process.

Unit Three: Conducting the On-Site Audit

- Conducting the opening meeting with the auditee.
- Effective communication and interpersonal skills for auditors.
- Audit methodologies, including interviewing, observation, and sampling.
- Gathering and verifying objective audit evidence.
- Auditing energy review, energy baseline (EnB), and energy performance indicators (EnPIs).
- Evaluating operational controls and energy performance.
- Generating audit findings based on evidence.

Unit Four: Audit Reporting and Non-conformity Management

- Classifying audit findings as non-conformities, observations, or opportunities for improvement.
- Writing clear and concise non-conformity reports.
- Preparing the audit report and its key components.
- Conducting the closing meeting and presenting audit findings.
- Understanding the auditee's role in addressing non-conformities.
- Techniques for effective reporting and communication.
- Managing potential conflicts during the audit process.

Unit Five: Corrective Actions, Follow-up, and Continual Improvement

- The process for corrective action and root cause analysis.
- Evaluating the effectiveness of implemented corrective actions.
- Conducting follow-up audits to verify closure of non-conformities.
- The role of the EnMS audit in the management review process.
- Promoting continual improvement of the Energy Management System.
- The lead auditor's role in ensuring audit program success.
- Course summary, final review, and open forum for questions.

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, how can a lead auditor leverage the ISO 50001 framework to drive genuine innovation in an organization's energy culture and contribute to broader industrial sustainability goals?

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

This course distinguishes itself by focusing intensely on the practical application of auditing skills within the specific context of industrial sustainability. While many courses cover the clauses of ISO 50001, our program emphasizes the lead auditor's role as a catalyst for meaningful change. We go beyond mere compliance checking, teaching participants how to use the audit process to identify strategic opportunities for energy performance improvement that align with broader corporate objectives like carbon footprint reduction and operational excellence. The curriculum is enriched with case studies drawn from complex industrial environments, challenging participants to think critically and apply risk-based auditing techniques to real-world scenarios. Our methodology, which heavily features role-playing and simulated audit exercises, ensures that participants build not just knowledge but also the confidence and interpersonal skills necessary to lead an audit team effectively. The focus is less on the tools and more on the strategic mindset required to transform an audit from a procedural requirement into a value-adding business improvement process, making our graduates highly effective agents of continual improvement.