

# ISO 50001 LEAD AUDITOR

## **Candidate Handbook**

www.pecb.com

## **Table of Contents**

| SECTION I: INTRODUCTION   | 3  |
|---|----|
| About PECB  | 3  |
| The Value of PECB Certification                                     | 4  |
| PECB Code of Ethics   | 5  |
| Introduction to ISO 50001 Lead Auditor                              | 6  |
| SECTION II: EXAMINATION PREPARATION, RULES, AND POLICIES            | 7  |
| Preparing for and scheduling the exam                               | 7  |
| Competency domains  | 8  |
| Taking the exam   | 17 |
| Exam Security Policy  | 20 |
| Exam results  | 21 |
| Exam Retake Policy  | 21 |
| SECTION III: CERTIFICATION PROCESS AND REQUIREMENTS                 | 22 |
| PECB ISO 50001 credentials  | 22 |
| Applying for certification  | 22 |
| Professional experience   | 23 |
| Professional references   | 23 |
| EnMS audit experience   | 23 |
| Evaluation of certification applications                            | 23 |
| SECTION IV: CERTIFICATION POLICIES                                  | 24 |
| Denial of certification   | 24 |
| Certification status options  | 24 |
| Upgrade and downgrade of credentials                                | 25 |
| Renewing the certification  | 25 |
| Closing a case  | 25 |
| Complaint and Appeal Policy   | 25 |
| SECTION V: GENERAL POLICIES   | 26 |
| Exams and certifications from other accredited certification bodies | 26 |
| Non-discrimination and special accommodations                       | 26 |
| Behavior Policy   | 26 |
| Refund Policy   | 26 |

## **SECTION I: INTRODUCTION**

### About PECB

PECB is a certification body that provides education<sup>1</sup>, certification, and certificate programs for individuals on a wide range of disciplines.

Through our presence in more than 150 countries, we help professionals demonstrate their competence in various areas of expertise by providing valuable evaluation, certification, and certificate programs against internationally recognized standards.

#### Our key objectives are:

- 1. Establishing the minimum requirements necessary to certify professionals and to grant designations
- 2. Reviewing and verifying the qualifications of individuals to ensure they are eligible for certification
- 3. Maintaining and continually improving the evaluation process for certifying individuals
- 4. Certifying qualified individuals, granting designations and maintaining respective directories
- 5. Establishing requirements for the periodic renewal of certifications and ensuring that the certified individuals are complying with those requirements
- 6. Ascertaining that PECB professionals meet ethical standards in their professional practice
- 7. Representing our stakeholders in matters of common interest
- 8. Promoting the benefits of certification and certificate programs to professionals, businesses, governments, and the public

#### **Our mission**

Provide our clients with comprehensive examination, certification, and certificate program services that inspire trust and benefit the society as a whole.

#### Our vision

Become the global benchmark for the provision of professional certification services and certificate programs.

#### Our values

Integrity, Professionalism, Fairness

<sup>&</sup>lt;sup>1</sup> Education refers to training courses developed by PECB and offered globally through our partners.

### The Value of PECB Certification

#### **Global recognition**

PECB credentials are internationally recognized and endorsed by many accreditation bodies, so professionals who pursue them will benefit from our recognition in domestic and international markets.

The value of PECB certifications is validated by the accreditation from the International Accreditation Service (IAS-PCB-111), the United Kingdom Accreditation Service (UKAS-No. 21923) and the Korean Accreditation Board (KAB-PC-08) under ISO/IEC 17024 – General requirements for bodies operating certification of persons. The value of PECB certificate programs is validated by the accreditation from the ANSI National Accreditation Board (ANAB-Accreditation ID 1003) under ANSI/ASTM E2659-18, Standard Practice for Certificate Programs.

PECB is an associate member of The Independent Association of Accredited Registrars (IAAR), a full member of the International Personnel Certification Association (IPC), a signatory member of IPC MLA, and a member of Club EBIOS, CPD Certification Service, CLUSIF, Credential Engine, and ITCC. In addition, PECB is an approved Licensed Partner Publisher (LPP) from the Cybersecurity Maturity Model Certification Accreditation Body (CMMC-AB) for the Cybersecurity Maturity Model Certification standard (CMMC), is approved by Club EBIOS to offer the EBIOS Risk Manager Skills certification, and is approved by CNIL (Commission Nationale de l'Informatique et des Libertés) to offer DPO certification. For more detailed information, click <u>here</u>.

#### High-quality products and services

We are proud to provide our clients with high-quality products and services that match their needs and demands. All of our products are carefully prepared by a team of experts and professionals based on the best practices and methodologies.

#### **Compliance with standards**

Our certifications and certificate programs are a demonstration of compliance with ISO/IEC 17024 and ASTM E2659. They ensure that the standard requirements have been fulfilled and validated with adequate consistency, professionalism, and impartiality.

#### **Customer-oriented service**

We are a customer-oriented company and treat all our clients with value, importance, professionalism, and honesty. PECB has a team of experts who are responsible for addressing requests, questions, and needs. We do our best to maintain a 24-hour maximum response time without compromising the quality of the services.

#### Flexibility and convenience

Online learning opportunities make your professional journey more convenient as you can schedule your learning sessions according to your lifestyle. Such flexibility gives you more free time, offers more career advancement opportunities, and reduces costs.

### **PECB Code of Ethics**

The Code of Ethics represents the highest values and ethics that PECB is fully committed to follow, as it recognizes the importance of them when providing services and attracting clients.

The Compliance Division makes sure that PECB employees, trainers, examiners, invigilators, partners, distributors, members of different advisory boards and committees, certified individuals, and certificate holders (hereinafter "PECB professionals") adhere to this Code of Ethics. In addition, the Compliance Division consistently emphasizes the need to behave professionally and with full responsibility, competence, and fairness in service provision with internal and external stakeholders, such as applicants, candidates, certified individuals, certificate holders, accreditation authorities, and government authorities.

It is PECB's belief that to achieve organizational success, it has to fully understand the clients and stakeholders' needs and expectations. To do this, PECB fosters a culture based on the highest levels of integrity, professionalism, and fairness, which are also its values. These values are integral to the organization, and have characterized the global presence and growth over the years and established the reputation that PECB enjoys today.

PECB believes that strong ethical values are essential in having healthy and strong relationships. Therefore, it is PECB's primary responsibility to ensure that PECB professionals are displaying behavior that is in full compliance with PECB principles and values.

PECB professionals are responsible for:

- 1. Displaying professional behavior in service provision with honesty, accuracy, fairness, and independence
- 2. Acting at all times in their service provision solely in the best interest of their employer, clients, the public, and the profession in accordance with this Code of Ethics and other professional standards
- 3. Demonstrating and developing competence in their respective fields and striving to continually improve their skills and knowledge
- 4. Providing services only for those that they are qualified and competent and adequately informing clients and customers about the nature of proposed services, including any relevant concerns or risks
- 5. Informing their employer or client of any business interests or affiliations which might influence or impair their judgment
- 6. Preserving the confidentiality of information of any present or former employer or client during service provision
- 7. Complying with all the applicable laws and regulations of the jurisdictions in the country where the service provisions were conducted
- 8. Respecting the intellectual property and contributions of others
- 9. Not communicating intentionally false or falsified information that may compromise the integrity of the evaluation process of a candidate for a PECB certification or a PECB certificate program
- 10. Not falsely or wrongly presenting themselves as PECB representatives without a proper license or misusing PECB logo, certifications or certificates
- 11. Not acting in ways that could damage PECB's reputation, certifications or certificate programs
- 12. Cooperating in a full manner on the inquiry following a claimed infringement of this Code of Ethics

To read the complete version of PECB's Code of Ethics, go to Code of Ethics | PECB.

### Introduction to ISO 50001 Lead Auditor

ISO 50001 defines the requirements for establishing, implementing, maintaining, and continually improving an energy management system (EnMS). Energy sector today faces massive challenges to secure a sustainable future.

Energy is a vital part of our lives, thus spending it efficiently is necessary for the future. As energy cost increase, the need for a way to manage the energy system arises. In regard to that, organizations can benefit from establishing, implementing, and maintaining an energy management system based on the requirements of ISO 50001.

An energy management system based on ISO 50001 involves developing and implementing an energy policy, setting objectives and energy targets, planning how to achieve them, and measuring the progress. All of these combined help the organization focus on continually improving energy performance, thus maximizing the use of energy-related assets.

Considering that auditing is one of the most in-demand professions, an internationally recognized certification can help you achieve your professional goals. The "ISO 50001 Lead Auditor" credential is a professional certification for individuals aiming to demonstrate the competence to audit an energy management system based on ISO 50001 and lead an audit team.

PECB certifications are not a license or simply a membership. They attest the candidates' knowledge and skills gained through our training courses and are issued to candidates that have the required experience and have passed the exam.

This document specifies the PECB ISO 50001 Lead Auditor certification scheme in compliance with ISO/IEC 17024:2012. It also outlines the steps that candidates should take to obtain and maintain their credentials. As such, it is very important to carefully read all the information included in this document before completing and submitting your application. If you have questions or need further information after reading it, please contact the PECB international office at <u>certification.team@pecb.com</u>.

## SECTION II: EXAMINATION PREPARATION, RULES, AND POLICIES

#### Preparing for and scheduling the exam

All candidates are responsible for their own study and preparation for certification exams. Although candidates are not required to attend the training course to be eligible for taking the exam, attending it can significantly increase their chances of successfully passing the exam.

To schedule the exam, candidates have two options:

- 1. Contact one of our authorized partners. To find an authorized partner in your region, please go to <u>Active</u> <u>Partners</u>. The training course schedule is also available online and can be accessed on <u>Training Events</u>.
- 2. Take a PECB exam remotely through the <u>PECB Exams application</u>. To schedule a remote exam, please go to the following link: <u>Exam Events</u>.

To learn more about exams, competency domains, and knowledge statements, please refer to Section III of this document.

#### Rescheduling the exam

For any changes with regard to the exam date, time, location, or other details, please contact <u>online.exams@pecb.com</u>.

#### Application fees for examination and certification

Candidates may take the exam without attending the training course. The applicable prices are as follows:

- Lead Exam: \$1000<sup>2</sup>
- Manager Exam: \$700
- Foundation Exam: \$500
- Transition Exam: \$500

The application fee for certification is \$500.

For the candidates that have attended the training course via one of PECB's partners, the application fee covers the costs of the exam (first attempt and first retake), the application for certification, and the first year of Annual Maintenance Fee (AMF).

<sup>&</sup>lt;sup>2</sup> All prices listed in this document are in US dollars.

#### **Competency domains**

The "ISO 50001 Lead Auditor" credential is a professional certification for individuals aiming to demonstrate the competence to audit an energy management system and lead an audit team.

The most important skills required in the market are the ability to effectively plan and perform audits in conformity to the certification process, apply audit techniques and practices, and manage (or be part of) audit teams and audit programs.

The ISO 50001 Lead Auditor certification is intended for:

- Auditors wanting to perform and lead an energy management system (EnMS) audit, responsible of an audit team
- Project managers or consultants wanting to master the EnMS audit process
- Persons responsible for the energy management or compliance to ISO 50001 requirements in an organization
- Members of energy management teams
- Expert advisors in energy management
- Professionals seeking a career in EnMS auditing

The content of the exam is divided as follows:

- Domain 1: Fundamental principles and concepts in energy management
- **Domain 2:** Energy management system (EnMS)
- Domain 3: Fundamental audit concepts and principles
- Domain 4: Preparation of an ISO 50001 audit
- Domain 5: Conduct of an ISO 50001 audit
- Domain 6: Conclusion and follow-up of an ISO 50001 audit
- Domain 7: Managing an ISO 50001 audit program

### Domain 1: Fundamental principles and concepts in energy management

**Main objective:** Ensure that the candidate can interpret and illustrate the main energy management concepts related to an energy management system (EnMS).

|    | Competencies   |    | Knowledge statements   |
|----|--|----|--|
| 1. | Understand and explain the operations of the ISO organization and the development of | 1. | Knowledge of the application of the eight ISO management principles to energy                    |
|    | energy management standards  |    | management   |
| 2. | Ability to identify, analyze and evaluate the  | 2. | Knowledge of the main standards in energy  |
|    | energy management compliance requirements for an organization                        | 3. | management<br>Knowledge of the different sources of energy                                       |
| 3. | Ability to explain and illustrate the main<br>concepts in energy management system   |    | management requirement for an organization:<br>laws, regulations, international and industry     |
| 4. | Ability to understand relationship between<br>different standards                    |    | standards, contracts, market practices, internal policies  |
|    |  | 4. | Knowledge of the main energy management<br>concepts and terminology as described in ISO<br>50001 |

### Domain 2: Energy management system (EnMS)

**Main objective:** Ensure that the candidate can interpret and illustrate the main concepts and components of an energy management system based on ISO 50001.

|    | Competencies   |          | Knowledge statements   |
|----|--|----------|--|
| 1. | Understand and explain the components of an<br>energy management system based on ISO<br>50001 and its principal processes          | 1.<br>2. | Knowledge of the concepts, principles and<br>terminology related to management systems<br>Knowledge of the principal characteristics of  |
| 2. | Ability to interpret and analyze ISO 50001 requirements  | 3.       | an integrated management system<br>Knowledge of the main advantages of a   |
| 3. | Understand, explain and illustrate the main<br>steps to establish, implement, operate,<br>monitor, review, maintain and improve an | 4.<br>5. | certification for an organization<br>Knowledge of the ISO 50001 requirements<br>Knowledge of the main steps to establish the   |
|    | organization's EnMS  |          | EnMS objectives, processes and procedures<br>relevant to managing and improving energy<br>management to deliver results in accordance<br>with an organization's overall policies and<br>objectives (Awareness level) |
|    |  | 6.       | Knowledge of the concept of continual<br>improvement and its application to an EnMS  |

### **Domain 3: Fundamental audit concepts and principles**

**Main objective:** Ensure that the candidate is able to interpret and apply the main concepts and principles related to an EnMS audit.

|    | Competencies                                       |     | Knowledge statements                             |
|----|--|-----|--|
| 1. | Understand, explain and illustrate the             | 1.  | Knowledge of the main audit concepts and         |
|    | application of the audit principles in the         |     | terminology as described in ISO 19011            |
|    | context of an ISO 50001 audit                      | 2.  | Knowledge of the differences between first       |
| 2. | Ability to identify and judge situations that      |     | party, second party and third party audit        |
|    | would discredit the professionalism of the         | 3.  | Knowledge of the following audit principles:     |
|    | auditor and the PECB code of ethics                |     | integrity, fair presentation, due professional   |
| 3. | Ability to identify and evaluate ethical           |     | care, professional judgment, professional        |
|    | problems taking into account the obligations       |     | skepticism, confidentiality and independence     |
|    | related to sponsors, auditee and law               | 4.  | Knowledge of professional responsibility of an   |
|    | enforcement or regulatory authorities              |     | auditor and the PECB code of ethics              |
| 4. | Ability to explain, illustrate and apply the audit | 5.  | Knowledge of evidence based approach in an       |
|    | evidence approach in the context of an ISO         |     | audit  |
|    | 50001 audit  | 6.  | Knowledge of the different types of evidences:   |
| 5. | Ability to explain and compare the types and       |     | physical, mathematical, confirmative,            |
|    | characteristics of evidence                        |     | technical, analytical, documentary and verbal    |
| 6. | Ability to determine and justify what type of      | 7.  | Knowledge of quality of audit evidences          |
|    | evidence and how much evidence will be             |     | (competent, appropriate, reliable and            |
|    | required in the context of a specific EnMS         |     | sufficient) and the factors that will influence  |
|    | audit mission                                      |     | them.  |
| 7. | Ability to determine and evaluate the level of     | 8.  | Knowledge of the risk based approach in an       |
|    | materiality and apply the risk based approach      |     | audit and the different types of risk related to |
|    | during the different phases of an ISO 50001        |     | audit activities                                 |
|    | audit  | 9.  | Knowledge of the concept of materiality and      |
| 8. | Ability to judge the appropriate level of          |     | its application in an audit                      |
|    | reasonable assurance needed for a specific         | 10. | Knowledge of the concept of reasonable           |
|    | ISO 50001 audit mission                            |     | assurance and its applicable in an audit         |
|    |  |     |  |

### Domain 4: Preparation of an ISO 50001 audit

Main objective: Ensure that the candidate is able to prepare an energy management system audit.

|    | Competencies  |          | Knowledge statements  |
|----|---|----------|---|
| 1. | Understand and explain the steps and<br>activities to do to prepare an EnMS audit<br>taking in consideration the specific context<br>and conditions of the mission  | 1.<br>2. | Knowledge of the main responsibilities of the<br>audit team leader and audit team members<br>Knowledge of the roles and responsibilities of<br>technical experts used for an audit                                    |
| 2. | Understand and explain the roles and responsibilities of the audit team leader, audit team members and technical experts  | 3.<br>4. | Knowledge of the definition of audit objectives,<br>audit scope and audit criteria<br>Knowledge of the difference between the   |
| 3. | Ability to determine, evaluate and confirm the audit objectives, the audit criteria and the audit scope for a specific ISO 50001 audit mission  | 5.       | EnMS scope and the audit scope<br>Knowledge of the elements to review during<br>the feasibility study of an audit   |
| 4. | Ability to do a feasibility study of an audit in<br>the context of a specific ISO 50001 audit<br>mission  | 6.<br>7. | Knowledge of the cultural aspects to consider<br>in an audit<br>Knowledge of the characteristics of audit   |
| 5. | Ability to explain, illustrate and define the<br>characteristics of the audit terms of<br>engagement and apply the best practices to<br>establish a first contact with an auditee in the<br>context of a specific ISO 50001 audit mission | 8.<br>9. | terms of engagement and the best practices to<br>establish a first contact with an auditee<br>Knowledge of the preparation of an audit plan<br>Knowledge of the preparation and<br>development of audit working paper |
| 6. | Ability to develop audit working papers and to<br>elaborate appropriate audit test plans in the<br>context of a specific ISO 50001 audit mission  |          | Knowledge of advantages and disadvantages<br>of using audit checklists<br>Knowledge of the best practices to creation<br>audit test plans   |

### Domain 5: Conduct of an ISO 50001 audit

Main objective: Ensure that the candidate is able to conduct an EnMS audit.

|    | Competencies   |     | Knowledge statements   |
|----|--|-----|--|
| 1. | Ability to organize and conduct the opening meeting in the context of a specific ISO 50001 | 1.  | Knowledge of the objectives and the content of the opening meeting of an audit |
|    | audit mission  | 2.  | Knowledge of the difference of the stage 1                                     |
| 2. | Ability to conduct a stage 1 audit in the context  | Ζ.  | audit and the stage 2 audit  |
|    | of a specific ISO 50001 audit mission and  | 3.  | Knowledge of stage 1 audit requirements,                                       |
|    | taking into account the documentation review   |     | steps and activities   |
|    | conditions and criteria  | 4.  | Knowledge of the documentation review  |
| 3. | Ability to conduct a stage 2 audit in the context  |     | criteria   |
|    | of a specific ISO 50001 audit mission by   | 5.  | Knowledge of the documentation   |
|    | applying the best practices of communication   |     | requirements stated in ISO 50001   |
|    | to collect the appropriate evidence and taking   | 6.  | Knowledge of stage 2 audit requirements,                                       |
|    | into account the roles and responsibilities of   |     | steps and activities   |
|    | all people involved  | 7.  | Knowledge of best practices of   |
| 4. | Ability to explain, illustrate and apply statistical                                       |     | communication during an audit  |
| -  | techniques and main audit sampling methods   | 8.  | Knowledge of the roles and responsibilities of                                 |
| 5. | Ability to gather appropriate evidences  | 9.  | guides and observers during an audit   |
|    | objectively from the available information in an audit and to evaluate them objectively    | 9.  | Knowledge of the conflict resolution techniques                                |
|    | addit and to evaluate them objectively   | 10  | Knowledge of evidence collection procedures:                                   |
|    |  | 10. | observation, documentation review, interviews,                                 |
|    |  |     | analysis and technical verification  |
|    |  | 11. | Knowledge of evidence analysis procedures:                                     |
|    |  |     | corroboration and evaluation   |
|    |  | 12. | Knowledge of main concepts, principles and                                     |
|    |  |     | statistical techniques used in an audit  |
|    |  | 13. | Knowledge of the main audit sampling   |
|    |  |     | methods and their characteristics  |
|    |  |     |  |

### Domain 6: Conclusion and follow-up of an ISO 50001 audit

Main objective: Ensure that the candidate is able to conclude an EnMS audit and conduct audit follow-up activities.

|    | Competencies  |     | Knowledge statements  |
|----|---|-----|---|
| 1. | Ability to explain and apply the evaluation<br>process of evidences to draft audit findings<br>and prepare audit conclusions                        | 1.  | Knowledge of the evaluation process of<br>evidences to draft audit findings and prepare<br>audit conclusions  |
| 2. | Understand, explain and illustrate the different<br>levels of conformity and the concept of<br>benefits of doubt                                    | 2.  | Knowledge of the differences and the characteristics between the concepts of conformity, minor nonconformity, major   |
| 3. | Ability to report appropriate audit observations<br>in order to help an organization to improve an<br>EnMS in respect of audit rules and principles | 3.  | nonconformity, anomaly and observation<br>Knowledge of the guidelines and best<br>practices to write nonconformity report                                   |
| 4. | Ability to complete audit working documents<br>and do a quality review of an ISO 50001 audit  | 4.  | Knowledge of the guidelines and best<br>practices to draft and report audit observation   |
| 5. | Ability to draft audit conclusions and present these to the management of the audited   | 5.  | Knowledge of the principle of benefits of doubt<br>and his application in the context of an audit   |
| 6. | organization<br>Ability to organize and conduct an audit<br>closing meeting   | 6.  | Knowledge of the guidelines and best<br>practices to complete audit working<br>documents and do a quality review of an audit                                |
| 7. | Ability to write an ISO 50001 audit report and justify a certification recommendation   | 7.  | Knowledge of the guidelines and best practices to present audit findings and  |
| 8. | Ability to conduct the activities following an<br>initial audit including the evaluation of action  |     | conclusions to management of an audited organization  |
|    | plans, follow up audits, surveillance audits and recertification audits   | 8.  | Knowledge of the possible recommendations<br>that an auditor can issue in the context of a<br>certification audit and the certification<br>decision process |
|    |   | 9.  | Knowledge of the guidelines and best<br>practices to evaluate action plans  |
|    |   | 10. | Knowledge of follow-up audit, surveillance<br>audits and recertification audit requirements,<br>steps and activities  |
|    |   | 11. | Knowledge of the conditions for modification,<br>extension, suspension or withdrawal of a<br>certification for an organization                              |

### Domain 7: Management of an ISO 50001 audit program

Main objective: Ensure that the candidate is able to establish and manage an EnMS audit program.

|    | Competencies                                   |    | Knowledge statements                            |
|----|--|----|---|
| 1. | Understand and explain the establishment of    | 1. | Knowledge of the management of an audit         |
| ~  | an audit program                               |    | program   |
| 2. | Understand and explain the implementation of   | 2. | Knowledge of requirements, guidelines and       |
|    | an ISO 50001 audit program (first party,       |    | best practices regarding audit resources,       |
|    | second party and third party)                  |    | procedures and policies                         |
| 3. | Understand and explain the responsibilities to | 3. | Knowledge of the types of tools used by         |
|    | protect the integrity, availability and        |    | professional auditors                           |
|    | confidentiality of audit records               | 4. | Knowledge of requirements, guidelines and       |
| 4. | Understand the requirements related to the     |    | best practices regarding the management of      |
|    | components of the management system of an      |    | audit records                                   |
|    | audit program as energy management, record     | 5. | Knowledge of the application of the concept of  |
|    | management, complaint management               |    | continual improvement to the management of      |
| 5. | Understand the evaluation of the efficiency of |    | an audit program                                |
|    | the audit program by monitoring the            | 6. | Knowledge of the particularities to implement   |
|    | performance of each auditor, each team and     |    | and manage a first, second or third party audit |
|    | the entire certification body                  |    | program   |
| 6. | Understand and explain the way combined        | 7. | Knowledge of the management of combined         |
|    | audits are handled in an audit program         |    | audit activities                                |
| 7. | Ability to demonstrate the application of the  | 8. | Knowledge of the concept of competency and      |
|    | personal attributes and behaviors associated   |    | its application to auditors                     |
|    | to professional auditors                       | 9. | Knowledge of the personal attributes and        |
|    |  |    | behavior of a professional auditor              |
|    |  | 1  |   |

Based on the abovementioned domains and their relevance, 12 questions are included in the exam, as summarized in the table below:

|                    |   |                             | Level of und<br>(Cognitive/Taxo   |   |  |   |   |  |
|--------------------|---|-----------------------------|---|---|--|---|---|--|
|                    |   | Points per<br>question      | Questions that<br>measure<br>comprehension,<br>application, and<br>analysis | Questions that<br>measure<br>evaluation | Number of<br>questions per<br>competency<br>domain | % of the exam<br>devoted to<br>each<br>competency<br>domain | Number of<br>points per<br>competency<br>domain | % of points<br>per<br>competency<br>domain |
|                    | Fundamental principles and<br>concepts in Energy        | 5                           | Х   |   | 2  | 16.67   | 15  | 20   |
|                    | Management  | 10                          | х   |   |  |   |   | 20   |
|                    | Energy Management System                                | 5                           | х   |   | 2  | 16.67   | 10  | 13.34                                      |
|                    | (EnMS)  | 5                           | х   |   | Z  | 10.07   |   |  |
| Competency domains | Fundamental audit concepts<br>and principles            | 5                           | х   |   | 1  | 8.33  | 5   | 6.67                                       |
| sy dor             | Preparation of an ISO 50001<br>audit                    | 5                           | х   |   | 2  | 16.67   | 10  | 13.34                                      |
| etenc              |   | 5                           | х   |   | Ζ  |   |   |  |
| Comp               | Conduct of an ISO 50001<br>audit                        | 10                          |   | х                                       |  |   |   |  |
|                    |   | 5                           |   | х                                       | 3  | 25  | 20  | 26.68                                      |
|                    |   | 5                           |   | х                                       |  |   |   |  |
|                    | Conclusion and follow-up of<br>an ISO 50001 audit       | 10                          |   | х                                       | 1  | 8.33  | 10  | 13.34                                      |
|                    | Management of an ISO<br>50001 audit program             | 5                           |   | х                                       | 1  | 8.33  | 5   | 6.67                                       |
|                    | Total points  | 75                          |   |   |  |   |   |  |
|                    | Number of questions<br>unc                              | per level of<br>derstanding | 7   | 5                                       |  |   |   |  |
|                    | % of the exam devoted to e<br>understanding (cognitive, |                             | 58.33   | 41.67                                   | ]  |   |   |  |

The passing score of the exam is **70%**.

After successfully passing the exam, candidates will be able to apply for obtaining the "PECB Certified ISO 50001 Lead Auditor" credential.

### Taking the exam

#### General information about the exam

Candidates are required to arrive/be present at least 30 minutes before the exam starts.

Candidates who arrive late will not be given additional time to compensate for the late arrival and may not be allowed to sit for the exam.

Candidates are required to bring a valid identity card (a national ID card, driver's license, or passport) and show it to the invigilator.

If requested on the day of the exam (paper-based exams), additional time can be provided to candidates taking the exam in a non-native language, as follows:

- 10 additional minutes for Foundation exams
- 20 additional minutes for Manager exams
- 30 additional minutes for Lead exams

#### PECB exam format and type

- 1. **Paper-based:** Exams are provided on paper, where candidates are not allowed to use anything but the exam paper and a pen. The use of electronic devices, such as laptops, tablets, or phones, is not allowed. The exam session is supervised by a PECB approved Invigilator at the location where the Partner has organized the training course.
- 2. Online: Exams are provided electronically via the PECB Exams application. The use of electronic devices, such as tablets and cell phones, is not allowed. The exam session is supervised remotely by a PECB Invigilator via the PECB Exams application and an external/integrated camera.

For more information about online exams, go to the PECB Online Exam Guide.

PECB exams are available in two types:

- 1. Essay-type question exam
- 2. Multiple-choice question exam

**This exam comprises essay-type questions.** Essay-type questions are used to determine and evaluate whether a candidate can clearly answer questions related to the defined competency domains. Additionally, problem-solving techniques and arguments that are supported with reasoning and evidence will also be evaluated. The exam aims to evaluate candidates' comprehension, analytical skills, and applied knowledge. Therefore, candidates are required to provide logical and convincing answers and explanations in order to demonstrate that they have understood the content and the main concepts of the competency domains.

This is an open-book exam. The candidate is allowed to use the following reference materials:

- A hard copy of the ISO 50001 standard
- Training course materials (accessed through the PECB Exams app and/or printed)
- Any personal notes taken during the training course (accessed through the PECB Exams app and/or printed)
- A hard copy dictionary



A sample of exam questions will be provided below.

**Note:** PECB will progressively transition to multiple-choice exams. They will also be open book and comprise scenario-based questions that will allow PECB to evaluate candidates' knowledge, abilities, and skills to use information in new situations (apply), draw connections among ideas (analyze), and justify a stand or decision (evaluate).

For specific information about exam types, languages available, and other details, please contact <u>examination.team@pecb.com</u> or go to the <u>List of PECB Exams</u>.

#### Sample exam questions

#### Question 1: Evidence in an audit

For each of the following clauses of the ISO 50001, please provide at least two different evidences that would be acceptable to ensure conformity to the clause.

#### 1. Nonconformity, corrective action and preventive action

#### **Possible answers:**

- Documented procedure defining how to identify nonconformities and how to treat them.
- List of corrective actions showing the responsible person, the status and the deadline for each corrective action.

#### **Question 2: Evaluation of corrective actions**

You have received a plan for corrective actions. Evaluate the adequacy of the proposed corrective actions. If you agree with the corrective actions, explain why. If you disagree, explain why and propose what you think would be some adequate corrective actions.

- **Nonconformity:** The auditor has indicated a non-conformity because the energy objectives and targets are not being measured.
- **Corrective action plan:** At the next management review, the management will redefine metrics to evaluate the energy objectives and targets.

#### Possible answers:

*I agree. This solves the problem that was ignorance of the procedure. As auditor, a sampling will be performed during the surveillance audit to find out if the procedure is followed.* 

#### Question 3: Identification and management of environmental aspects

Determine the energy aspects associated with the following activities, indicate their impact and select at least two mitigation measures to treat the energy aspects.

#### Possible answers:

| Activity                                     | Aspect(s)                                 | Impact(s)               | Mitigation measures       |  |
|--|---|-------------------------|---------------------------|--|
| <b>Example:</b> Temperature Improper working |   | Excessive use of energy | Use of alternative energy |  |
| maintenance at conditions                    |   | for heating/cooling     | for heating/cooling       |  |
| appropriate level                            | propriate level Increased possibility for |                         | Use of thermo isolation   |  |
|  | errors                                    |                         | materials                 |  |

### **Exam Security Policy**

PECB is committed to protect the integrity of its exams and the overall examination process, and relies upon the ethical behavior of applicants, potential applicants, candidates and partners to maintain the confidentiality of PECB exams. This Policy aims to address unacceptable behavior and ensure fair treatment of all candidates.

Any disclosure of information about the content of PECB exams is a direct violation of this Policy and PECB's Code of Ethics. Consequently, candidates taking a PECB exam are required to sign an Exam Confidentiality and Non-Disclosure Agreement and must comply with the following:

- 1. The questions and answers of the exam materials are the exclusive and confidential property of PECB. Once candidates complete the submission of the exam to PECB, they will no longer have any access to the original exam or a copy of it.
- 2. Candidates are prohibited from revealing any information regarding the questions and answers of the exam or discuss such details with any other candidate or person.
- 3. Candidates are not allowed to take with themselves any materials related to the exam, out of the exam room.
- 4. Candidates are not allowed to copy or attempt to make copies (whether written, photocopied, or otherwise) of any exam materials, including, without limitation, any questions, answers, or screen images.
- 5. Candidates must not participate nor promote fraudulent exam-taking activities, such as:
  - Looking at another candidate's exam material or answer sheet
  - Giving or receiving any assistance from the invigilator, candidate, or anyone else
  - Using unauthorized reference guides, manuals, tools, etc., including using "brain dump" sites as they are not authorized by PECB

Once a candidate becomes aware or is already aware of the irregularities or violations of the points mentioned above, they are responsible for complying with those, otherwise if such irregularities were to happen, candidates will be reported directly to PECB or if they see such irregularities, they should immediately report to PECB.

Candidates are solely responsible for understanding and complying with PECB Exam Rules and Policies, Confidentiality and Non-Disclosure Agreement and Code of Ethics. Therefore, should a breach of one or more rules be identified, candidates will not receive any refunds. In addition, PECB has the right to deny the right to enter a PECB exam or to invite candidates for an exam retake if irregularities are identified during and after the grading process, depending on the severity of the case.

Any violation of the points mentioned above will cause PECB irreparable damage for which no monetary remedy can make up. Therefore, PECB can take the appropriate actions to remedy or prevent any unauthorized disclosure or misuse of exam materials, including obtaining an immediate injunction. PECB will take action against individuals that violate the rules and policies, including permanently banning them from pursuing PECB credentials and revoking any previous ones. PECB will also pursue legal action against individuals or organizations who infringe upon its copyrights, proprietary rights, and intellectual property.



#### **Exam results**

Exam results will be communicated via email.

- The time span for the communication starts from the exam date and lasts three to eight weeks for essay type exams and two to four weeks for multiple-choice paper-based exams.
- For online multiple-choice exams, candidates receive their results instantly.

Candidates who successfully complete the exam will be able to apply for one of the credentials of the respective certification scheme.

For candidates who fail the exam, a list of the domains where they have performed poorly will be added to the email to help them prepare better for a retake.

Candidates that disagree with the results may request a re-evaluation by writing to <u>examination.team@pecb.com</u> within 30 days of receiving the results. Re-evaluation requests received after 30 days will not be processed. If candidates do not agree with the results of the reevaluation, they have 30 days from the date they received the reevaluated exam results to file a complaint through the <u>PECB Ticketing</u> <u>System</u>. Any complaint received after 30 days will not be processed.

#### **Exam Retake Policy**

There is no limit to the number of times a candidate can retake an exam. However, there are certain limitations in terms of the time span between exam retakes.

If a candidate does not pass the exam on the 1st attempt, they must wait 15 days after the initial date of the exam for the next attempt (1st retake).

**Note:** Candidates who have completed the training course with one of our partners, and failed the first exam attempt, are eligible to retake for free the exam within a 12-month period from the date the coupon code is received (the fee paid for the training course, includes a first exam attempt and one retake). Otherwise, retake fees apply.

For candidates that fail the exam retake, PECB recommends they attend a training course in order to be better prepared for the exam.

To arrange exam retakes, based on exam format, candidates that have completed a training course, must follow the steps below:

- 1. Online Exam: when scheduling the exam retake, use initial coupon code to waive the fee
- 2. Paper-Based Exam: candidates need to contact the PECB Partner/Distributor who has initially organized the session for exam retake arrangement (date, time, place, costs).

Candidates that have not completed a training course with a partner, but sat for the online exam directly with PECB, do not fall under this Policy. The process to schedule the exam retake is the same as for the initial exam.

## SECTION III: CERTIFICATION PROCESS AND REQUIREMENTS

### PECB ISO 50001 credentials

All PECB certifications have specific requirements regarding education and professional experience. To determine which credential is right for you, take into account your professional needs and analyze the criteria for the certifications.

The credentials in the PECB ISO 50001 scheme have the following requirements:

| Credential  | Education              | Exam   | Professional experience   | MS<br>audit/assessment<br>experience           | Other<br>requirements  |
|---|------------------------|--|---|--|------------------------|
| PECB Certified<br>ISO 50001<br>Provisional<br>Auditor | 01<br>nal              | None   | None  |  |                        |
| PECB Certified<br>ISO 50001<br>Auditor                | At least               | PECB Certified<br>ISO 50001<br>Lead Auditor<br>exam or<br>equivalent | Two years:<br>One year of work<br>experience in energy<br>management    | Audit activities: a total of 200 hours         | Signing the            |
| PECB Certified<br>ISO 50001<br>Lead Auditor           | secondary<br>education |  | Five years:<br>Two years of work<br>experience in energy<br>management  | Audit activities: a total of 300 hours         | PECB Code of<br>Ethics |
| PECB Certified<br>ISO 50001 Senior<br>Lead Auditor    | 1 Senior               |  | Ten years:<br>Seven years of work<br>experience in energy<br>management | Audit activities: a<br>total of 1,000<br>hours |                        |

To be considered valid, the audit activities should follow best audit practices and include the following:

- 1. Planning an audit
- 2. Managing an audit program
- 3. Drafting audit reports
- 4. Drafting nonconformity reports
- 5. Drafting audit working documents
- 6. Reviewing and managing documented information related to the audit
- 7. Conducting on-site audits
- 8. Following up on nonconformities
- 9. Leading an audit team

#### Applying for certification

All candidates who successfully pass the exam (or an equivalent accepted by PECB) are entitled to apply for the PECB credential they were assessed for. Specific educational and professional requirements need to be fulfilled in order to obtain a PECB certification. Candidates are required to fill out the online certification application form (that can be accessed via their PECB account), including contact details of individuals who will be contacted to validate the candidates' professional experience. Candidates can submit their

application in English, French, German, Spanish or Korean languages. They can choose to either pay online or be billed. For additional information, please contact <u>certification.team@pecb.com</u>.

The online certification application process is very simple and takes only a few minutes:

- Register your account
- Check your email for the confirmation link
- Log in to apply for certification

For more information on how to apply for certification, click here.

The Certification Department validates that the candidate fulfills all the certification requirements regarding the respective credential. The candidate will receive an email about the application status, including the certification decision.

Following the approval of the application by the Certification Department, the candidate will be able to download the certificate and claim the corresponding Digital Badge. For more information about downloading the certificate, click <u>here</u>, and for more information about claiming the Digital Badge, click <u>here</u>.

PECB provides support both in English and French.

#### **Professional experience**

Candidates must provide complete and correct information regarding their professional experience, including job title(s), start and end date(s), job description(s), and more. Candidates are advised to summarize their previous or current assignments, providing sufficient details to describe the nature of the responsibilities for each job. More detailed information can be included in the résumé.

#### **Professional references**

For each application, two professional references are required. They must be from individuals who have worked with the candidate in a professional environment and can validate their energy management experience, as well as their current and previous work history. Professional references of persons who fall under the candidate's supervision or are their relatives are not valid.

#### **EnMS audit experience**

The candidate's audit log will be checked to ensure that they have completed the required number of audit hours. The following audit types constitute valid audit experience: pre-audit, internal audits, second party audits, or third party audits.

#### **Evaluation of certification applications**

The Certification Department will evaluate each application to validate the candidates' eligibility for certification or certificate program. A candidate whose application is being reviewed will be notified in writing and, if necessary, given a reasonable time frame to provide any additional documentation. If a candidate does not respond by the deadline or does not provide the required documentation within the given time frame, the Certification Department will validate the application based on the initial information provided, which may lead to the candidates' credential downgrade.

## SECTION IV: CERTIFICATION POLICIES

### **Denial of certification**

PECB can deny certification/certificate program if candidates:

- Falsify the application
- Violate the exam procedures
- Violate the PECB Code of Ethics

Candidates whose certification/certificate program has been denied can file a complaint through the complaints and appeals procedure. For more detailed information, refer to <u>Complaint and Appeal Policy</u> section.

The application payment for the certification/certificate program is nonrefundable.

### **Certification status options**

#### Active

Means that your certification is in good standing and valid, and it is being maintained by fulfilling the PECB requirements regarding the CPD and AMF.

#### Suspended

PECB can temporarily suspend candidates' certification if they fail to meet the requirements. Other reasons for suspending certification include:

- PECB receives excessive or serious complaints by interested parties (suspension will be applied until the investigation has been completed.)
- The logos of PECB or accreditation bodies are willfully misused.
- The candidate fails to correct the misuse of a certification mark within the determined time by PECB.
- The certified individual has voluntarily requested a suspension.
- PECB deems appropriate other conditions for suspension of certification.

#### Revoked

PECB can revoke (that is, to withdraw) the certification if the candidate fails to satisfy its requirements. In such cases, candidates are no longer allowed to represent themselves as PECB Certified Professionals. Additional reasons for revoking certification can be if the candidates:

- Violate the PECB Code of Ethics
- Misrepresent and provide false information of the scope of certification
- Break any other PECB rules
- Any other reasons that PECB deems appropriate

Candidates whose certification has been revoked can file a complaint through the complaints and appeals procedure. For more detailed information, refer to <u>Complaint and Appeal Policy</u> section.



#### **Other statuses**

Besides being active, suspended, or revoked, a certification can be voluntarily withdrawn or designated as Emeritus. To learn more about these statuses and the permanent cessation status, go to <u>Certification Status</u> <u>Options</u>.

#### Upgrade and downgrade of credentials

#### **Upgrade of credentials**

Professionals can upgrade their credentials as soon as they can demonstrate that they fulfill the requirements.

To apply for an upgrade, candidates need to log into their PECB account, visit the "My Certifications" tab, and click on "Upgrade." The upgrade application fee is \$100.

#### **Downgrade of credentials**

A PECB Certification can be downgraded to a lower credential due to the following reasons:

- The AMF has not been paid.
- The CPD hours have not been submitted.
- Insufficient CPD hours have been submitted.
- Evidence on CPD hours has not been submitted upon request.

**Note:** PECB certified professionals who hold Lead certifications and fail to provide evidence of certification maintenance requirements will have their credentials downgraded. The holders of Master Certifications who fail to submit CPDs and pay AMFs will have their certifications revoked.

#### **Renewing the certification**

PECB certifications are valid for three years. To maintain them, PECB certified professionals must meet the requirements related to the designated credential, e.g., they must fulfill the required number of continual professional development (CPD) hours. In addition, they need to pay the annual maintenance fee (\$120). For more information, go to the <u>Certification Maintenance</u> page on the PECB website.

#### **Closing a case**

If candidates do not apply for certification within one year, their case will be closed. Even though the certification period expires, candidates have the right to reopen their case. However, PECB will no longer be responsible for any changes regarding the conditions, standards, policies, and candidate handbook that were applicable before the case was closed. A candidate requesting their case to reopen must do so in writing to <u>certification.team@pecb.com</u> and pay the required fee.

#### **Complaint and Appeal Policy**

Any complaints must be made no later than 30 days after receiving the certification decision. PECB will provide a written response to the candidate within 30 working days after receiving the complaint. If candidates do not find the response satisfactory, they have the right to file an appeal.

For more information about the Complaint and Appeal Policy, click here.

## **SECTION V: GENERAL POLICIES**

#### Exams and certifications from other accredited certification bodies

PECB accepts certifications and exams from other recognized accredited certification bodies. PECB will evaluate the requests through its equivalence process to decide whether the respective certification(s) or exam(s) can be accepted as equivalent to the respective PECB certification (e.g., ISO 50001 Lead Auditor certification).

#### Non-discrimination and special accommodations

All candidate applications will be evaluated objectively, regardless of the candidates' age, gender, race, religion, nationality, or marital status.

To ensure equal opportunities for all qualified persons, PECB will make reasonable accommodations<sup>3</sup> for candidates, when appropriate. If candidates need special accommodations because of a disability or a specific physical condition, they should inform the partner/distributor in order for them to make proper arrangements<sup>4</sup>. Any information that candidates provide regarding their disability/special needs will be treated with confidentiality. To download the Candidates with Disabilities Form, click <u>here</u>.

#### **Behavior Policy**

PECB aims to provide top-quality, consistent, and accessible services for the benefit of its external stakeholders: distributors, partners, trainers, invigilators, examiners, members of different committees and advisory boards, and clients (trainees, examinees, certified individuals, and certificate holders), as well as creating and maintaining a positive work environment which ensures safety and well-being of its staff, and holds the dignity, respect and human rights of its staff in high regard.

The purpose of this Policy is to ensure that PECB is managing unacceptable behavior of external stakeholders towards PECB staff in an impartial, confidential, fair, and timely manner. To read the Behavior Policy, click <u>here</u>.

### **Refund Policy**

PECB will refund your payment, if the requirements of the Refund Policy are met. To read the Refund Policy, click <u>here</u>.

<sup>&</sup>lt;sup>3</sup> According to ADA, the term "reasonable accommodation" may include: (A) making existing facilities used by employees readily accessible to and usable by individuals with disabilities; and (B) job restructuring, part-time or modified work schedules, reassignment to a vacant position, acquisition or modification of equipment or devices, appropriate adjustment or modifications of examinations, training materials or policies, the provision of qualified readers or interpreters, and other similar accommodations for individuals with disabilities.

<sup>&</sup>lt;sup>4</sup> ADA Amendments Act of 2008 (P.L. 110–325) Sec. 12189. Examinations and courses. [Section 309]: Any person that offers examinations or courses related to applications, licensing, certification, or credentialing for secondary or post-secondary education, professional, or trade purposes shall offer such examinations or courses in a place and manner accessible to persons with disabilities or offer alternative accessible arrangements for such individuals.



### Address:

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Certification: certification.team@pecb.com

> Customer Service: customer@pecb.com

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### **PECB Help Center**

Visit our Help Center to browse Frequently Asked Questions (FAQ), view manuals for using PECB website and applications, read documents related to PECB processes, or to contact us via Support Center's online tracking system.

www.pecb.com

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