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Energy audits - Part 2: Buildings



## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

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Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
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ICS 03.120.10, 27.015, 91.120.10

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EUROPEAN STANDARD

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NORME EUROPÉENNE

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English version

## Energy audits - Part 2: Buildings

Audits énergétiques - Partie 2 : Bâtiments

Energieaudits - Teil 2: Gebäude

This European Standard was approved by CEN on 3 July 2022.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN and CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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**CEN-CENELEC Management Centre:  
Rue de la Science 23, B-1040 Brussels**

<b>Contents</b>	Page
<b>European foreword</b> .....	4
<b>Introduction</b> .....	5
<b>1 Scope</b> .....	6
<b>2 Normative references</b> .....	6
<b>3 Terms and definitions</b> .....	6
<b>4 Quality requirements</b> .....	8
<b>4.1 Energy auditor</b> .....	8
<b>4.1.1 Competency</b> .....	8
<b>4.1.2 Confidentiality</b> .....	8
<b>4.1.3 Objectivity</b> .....	8
<b>4.1.4 Transparency</b> .....	8
<b>4.2 Energy audit process</b> .....	8
<b>5 Elements of the energy audit process</b> .....	9
<b>5.1 Preliminary contact</b> .....	9
<b>5.2 Start-up meeting</b> .....	10
<b>5.3 Collecting data</b> .....	10
<b>5.3.1 General</b> .....	10
<b>5.3.2 Information request</b> .....	10
<b>5.3.3 Review of the available data</b> .....	12
<b>5.3.4 Preliminary data analysis</b> .....	12
<b>5.4 Measurement plan</b> .....	12
<b>5.5 Sampling methods</b> .....	12
<b>5.6 Field work</b> .....	13
<b>5.6.1 Aim of field work</b> .....	13
<b>5.6.2 Conduct</b> .....	13
<b>5.6.3 Site visits</b> .....	13
<b>5.7 Analysis</b> .....	13
<b>5.7.1 General</b> .....	13
<b>5.7.2 Energy breakdown</b> .....	14
<b>5.7.3 Energy performance indicators</b> .....	14
<b>5.7.4 Energy Performance Improvement Actions (EPIA)</b> .....	15
<b>5.8 Report</b> .....	15
<b>5.8.1 General</b> .....	15
<b>5.8.2 Content of report</b> .....	15
<b>5.9 Final meeting</b> .....	15
<b>Annex A (informative) Examples of parties of an energy audit in buildings</b> .....	16
<b>Annex B (informative) Examples of checklists for energy audit field work in buildings</b> .....	17
<b>B.1 General</b> .....	17
<b>B.2 Checklist</b> .....	17
<b>B.3 Building visit checklist</b> .....	18
<b>B.4 The building envelope</b> .....	19

<b>B.5</b>	<b>Useful documents .....</b>	<b>20</b>
<b>Annex C</b>	<b>(informative) Examples of the analysis of energy use in buildings.....</b>	<b>22</b>
<b>C.1</b>	<b>Overview of the energy use in a building.....</b>	<b>22</b>
<b>C.2</b>	<b>Analysis of the energy use in a building.....</b>	<b>23</b>
<b>C.3</b>	<b>Energy breakdown examples.....</b>	<b>23</b>
<b>Annex D</b>	<b>(informative) Examples of analysis checklists for energy audits in buildings .....</b>	<b>26</b>
<b>D.1</b>	<b>General.....</b>	<b>26</b>
<b>D.2</b>	<b>Checklist.....</b>	<b>26</b>
<b>Annex E</b>	<b>(informative) Examples of energy performance indicators in buildings.....</b>	<b>30</b>
<b>E.1</b>	<b>General.....</b>	<b>30</b>
<b>E.2</b>	<b>Global indicators.....</b>	<b>30</b>
<b>E.3</b>	<b>Detailed indicators.....</b>	<b>30</b>
<b>Annex F</b>	<b>(informative) Examples of EPIA opportunities in buildings.....</b>	<b>31</b>
<b>Annex G</b>	<b>(informative) Examples of analysis and savings calculations in energy audits in buildings .....</b>	<b>32</b>
<b>G.1</b>	<b>Roof insulation .....</b>	<b>32</b>
<b>G.2</b>	<b>Ventilation system.....</b>	<b>35</b>
<b>Annex H</b>	<b>(informative) Examples of the reporting of an energy audit in buildings.....</b>	<b>39</b>
<b>H.1</b>	<b>General .....</b>	<b>39</b>
<b>H.2</b>	<b>Table of contents.....</b>	<b>39</b>
<b>Annex I</b>	<b>(informative) Example of energy performance verification method in buildings.....</b>	<b>41</b>
<b>I.1</b>	<b>General .....</b>	<b>41</b>
<b>I.2</b>	<b>Energy signature.....</b>	<b>41</b>
<b>Bibliography</b>	<b>.....</b>	<b>43</b>

## European foreword

This document (EN 16247-2:2022) has been prepared by the Joint Technical Committee CEN-CENELEC/JTC 14 “Energy management and energy efficiency in the framework of energy transition”, the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2023, and conflicting national standards shall be withdrawn at the latest by February 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN-CENELEC shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 16247-2:2014.

Significant changes compared to the previous edition are:

- a) terms and definition updated;
- b) structure aligned with EN 16247-1.

This document is part of series EN 16247 “Energy audits”, which comprises the following:

- *Part 1: General requirements;*
- *Part 2: Buildings;*
- *Part 3: Processes;*
- *Part 4: Transport;*
- *Part 5: Competence of energy auditors.*

This Part provides additional material to Part 1 for the Buildings sector and is intended to be used in conjunction with Part 1.

This document has been prepared under a mandate given to CEN and CENELEC by the European Commission and the European Free Trade Association.

Any feedback and questions on this document should be directed to the users’ national standards body/national committee. A complete listing of these bodies can be found on the CEN and CENELEC websites.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

## Introduction

An energy audit can help an organization to identify opportunities to improve energy performance. It can be part of a site wide energy management system.

The use and operation of buildings requires the provision of services such as heating, cooling, humidification, dehumidification, ventilation, lighting, domestic hot water, transportation systems (e.g. elevators, escalators and moving walkways) in buildings, information systems, including building automation and control systems, and processes. In addition, energy is used by appliances within the building.

The energy consumption depends on:

- local climatic conditions;
- the characteristics of the building envelope;
- the designed indoor environment conditions;
- the characteristics and settings of the technical building systems;
- activities and processes in the building;
- occupant behaviour and operational regime.

Dealing with buildings, the audited objects are sometimes similar, technically simple and numerous (as in the residential sector) but can also be unique, complex and highly technical (such as hospitals, swimming pools and spas, etc.).

Energy audits in buildings may include the whole building or parts of the building or some technical system.

Energy performance indicators (benchmark values, if available) or average statistical specific energy consumption data are usually published nationally for different building types and ages. This information can be used in the analysis to provide comparative energy performance evaluation.

**NOTE** The energy audits covered under this standard might be independent from building energy performance certification and other legislative requirements.

## 1 Scope

This document is applicable to specific energy audit requirements in buildings. It specifies the requirements, methodology and deliverables of an energy audit in a building or group of buildings. It is applied in conjunction with, and is supplementary to, EN 16247-1, *Energy audits — Part 1: General requirements*. It provides additional requirements to EN 16247-1 and is applied simultaneously.

If processes are included in the scope of the energy audit, the energy auditor can choose to apply EN 16247-3, *Energy audits — Part 3: Processes*. If on-site transport on a site is included in the scope of the energy audit, the energy auditor can choose to apply EN 16247-4, *Energy audits — Part 4: Transport*.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 16247-1:2022, *Energy audits — Part 1: General requirements*

EN ISO 52000-1:2017, *Energy performance of buildings — Overarching EPB assessment — Part 1: General framework and procedures (ISO 52000-1:2017)*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 16247-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

### 3.1

#### **building**

construction as a whole, including the fabric and all technical building systems, where energy may be used to condition the indoor environment, to provide domestic hot water and illumination and other services related to the use of the building

Note 1 to entry: The term refers to the physical building as a whole, or to all parts thereof, that at least include the spaces and technical building systems that are relevant for the energy performance assessment.

Note 2 to entry: Parts of a building can be physically detached but are on the same building site. For example: a canteen or a guard house or one or more classrooms of a school in a detached part of a building, or an essential space in a dwelling (e.g. bedroom).

[SOURCE: EN ISO 52000-1:2017]