

საქართველოს სტანდარტი

ენერგოაუდიტი-ნაწილი 3: ტექნოლოგიური პროცესები

საქართველოს სტანდარტებისა და მეტროლოგიის
ეროვნული სააგენტო
თბილისი

საინფორმაციო მონაცემები

1 დამტკიცებულია და შემოღებულია სამოქმედოდ საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს 2016 წლის 21 ნოემბერი № 83 და 2016 წლის 25 ივლისის № 52 განკარგულებებით

2 მიღებულია თავფურცლის თარგმნის მეთოდით სტანდარტიზაციის ევროპული კომიტეტის სტანდარტი ენ 16247-3:2014 „ენერგოაუდიტი-ნაწილი 3:ტექნოლოგიური პროცესები“

3 პირველად

4 რეგისტრირებულია საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს რეესტრში: 2016 წლის 21 ნოემბრის №268-1.3-010395

აკრძალულია ამ სტანდარტის გადაცემა მესამე პირებისათვის ან/და მისი სხვა ფორმით გავრცელება

English version

Energy audits - Part 3: Processes

Audits énergétiques - Partie 3 : Procédés

Energieaudits - Teil 3: Prozesse

This European Standard was approved by CEN on 27 May 2014.

CEN and CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN and CENELEC member.

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.

CEN and CENELEC members are the national standards bodies and national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



**CEN-CENELEC Management Centre:
Avenue Marnix 17, B-1000 Brussels**

Contents

Page

Foreword	3
0 Introduction	4
1 Scope.....	5
2 Normative references	5
3 Terms and definitions.....	5
4 Quality requirements	6
4.1 Energy auditor	6
4.2 Energy audit process.....	7
5 Elements of the energy audit process	7
5.1 Preliminary contact.....	7
5.2 Start-up meeting.....	7
5.3 Collecting data	7
5.3.1 General.....	7
5.3.2 Information request	8
5.3.3 Review of the available data	8
5.3.4 Preliminary data analysis	8
5.4 Field work	9
5.4.1 Aim of field work	9
5.4.2 Conduct.....	9
5.4.3 Site visits	9
5.5 Analysis	9
5.5.1 General.....	9
5.5.2 Energy balance and breakdown	10
5.5.3 Energy performance indicators	10
5.5.4 Identify and evaluate energy efficiency improvement opportunities	10
5.6 Report.....	11
5.6.1 General.....	11
5.6.2 Content of report.....	11
5.7 Final meeting	12
Annex A (informative) Example of energy audit process	13
Annex B (informative) Example list of data to be collected	14
Annex C (informative) Quality of data measurement plan.....	22
Bibliography	24

Foreword

This document (EN 16247-3:2014) has been prepared by Technical Committee CEN/CLC/JWG 1 “Energy audits”, the secretariat of which is held by BSI.

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 November 2014 and conflicting national standards shall be withdrawn at the latest by November 2014.

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

This Part provides additional material to Part 1 for the Process sector and should be used in conjunction with Part 1.

This European Standard is part of the series EN 16247 “*Energy audits*” which comprises the following:

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

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

0 Introduction

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

There are various sectors with important differences in processes and utilities. It should be emphasized that there are many types of processes in industry and commerce. In general, energy is used:

- directly by a process, e.g. furnaces, direct fired dryers, etc;
- indirectly by a process (e.g. heat exchange, distillation, extrusion, etc.) including the specific conditions of production (e.g. start-up, shut-down, product change over, cleaning, maintenance, laboratory and product transfer);
- utility processes (e.g. motor driven systems (fans, pumps, motors, compressors, etc.), steam, hot water), including on site power plants;
- other processes (e.g. sterilization in hospitals, fume cupboards, laboratories etc.).

This standard defines the attributes of a good quality energy audit on a site in addition to EN 16247-1, which gives the general requirements for energy audits.