SLOVENSKI STANDARD
SIST EN 15900:2011

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Energijsko učinkovite storitve - Definicije in bistvene zahteve

Energy efficiency services - Definitions and essential requirements

Energieeffizienz-Dienstleistungen - Definitionen und wesentliche Anforderungen

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03.080.10	Industrijske storitve	Industrial services
27.010	Prenos energije in toplote na splošno	Energy and heat transfer engineering in general

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English version

Energy efficiency services - Definitions and requirements

Services d'efficacité énergétique - Définitions et exigences

Energieeffizienz-Dienstleistungen - Definitionen und Anforderungen

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Contents

Page

Foreword

This document (EN 15900:2010) has been prepared by Working Group CEN/CENELEC/JWG 3 “Energy Management and related services - General requirements and qualification procedures”, 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of an identical text or by endorsement, at the latest by November 2010, and conflicting national standards shall be withdrawn at the latest by November 2010.

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Introduction

Energy efficiency services play a very important role in the control of energy consumption and the improvement of energy efficiency. They are applicable in all sectors.

Improved energy efficiency can be achieved by, in particular, increasing the availability and use of energy efficiency services.

This standard may be used as a reference document for appropriate qualification, accreditation and/or certification schemes for providers of energy efficiency services, as mentioned in Article 8 of Directive 2006/32/EC.

This standard is written to provide guidance to both customers and providers of energy efficiency services, as mentioned in Article 1 of Directive 2006/32/EC, and to contribute to the development of a market for energy efficiency services.

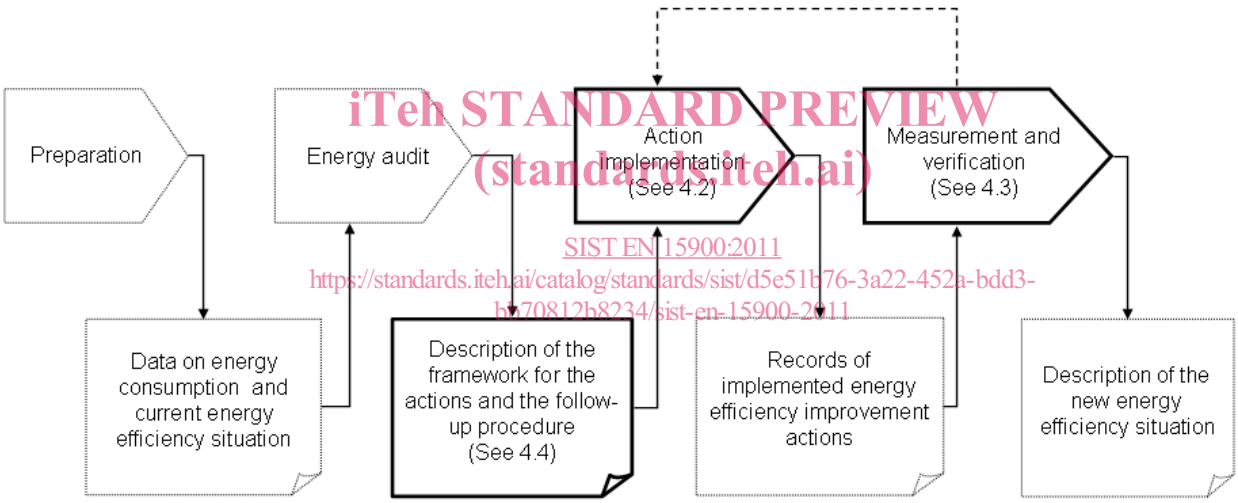

Figure 1 — Diagram illustrating a typical energy efficiency service provision process

A diagram illustrating a typical energy efficiency service provision process is shown in Figure 1, where upper shapes represent "activities" and lower shapes represent "deliverables", according with Table A.1 in Annex A.

The process steps may be performed by different parties although the responsibility for the energy efficiency improvement is generally taken by one single party.

The service provider(s) and the customer should strive to implement a continuous improvement in energy efficiency.

1 Scope

This European Standard specifies the definitions and minimum requirements for an energy efficiency service.

2 Normative references

The following referenced documents are indispensable for the application 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.

CEN/CLC TR 16103:2010, *Energy management and energy efficiency — Glossary of terms*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in CEN/CLC TR 16103:2010 and the following apply.

3.1
adjustment factor
quantifiable parameter affecting energy consumption

EXAMPLES Weather conditions, behaviour related parameters (indoor temperature, light level), working hours, production throughput, etc.

3.2
baseline
energy consumption calculated or measured over a period of time normalized by adjustment factors

3.3
energy audit
systematic inspection and analysis of energy use and energy consumption of a system or organisation with the object of identifying energy flows and the potential for energy efficiency improvements

NOTE "Energy audit" is the normal expression in English but can cause confusion when translated due to the word "audit" having multiple meanings. Suitable expressions can be used when translating into other languages, for example: "diagnosi" in Italian, "diagnostic" in French.

3.4
energy consumption
amount of energy used

NOTE Energy consumption is a widely used term, although technically incorrect, because energy is transformed or converted but cannot be consumed.

3.5
energy efficiency
ratio between an output of performance, service, goods or energy, and an input of energy

3.6
energy efficiency improvement
increase in energy efficiency as a result of technological, behavioural and/or economic changes

3.7
energy efficiency service
agreed task or set of tasks designed to lead to an energy efficiency improvement and other agreed performance criteria

NOTE The agreement can relate to the task and/or to the improvement.

3.8
guarantee of energy efficiency improvement
commitment of the service provider to achieve a quantified energy efficiency improvement

NOTE The commitment is generally expressed through a compensation for customer in case of improvement lower than the one guaranteed.

4 Requirements of energy efficiency services

4.1 General requirements

An energy efficiency service shall:

a) be designed to achieve an energy efficiency improvement and meet other agreed performance criteria, such as comfort level, production throughput, safety, etc.;

b) be based on collected data related to energy consumption;

c) include an energy audit as well as identification, selection and implementation of actions (see 4.2) and verification (see 4.3).

A documented description (see 4.4) of the proposed or agreed framework for the actions and the follow-up procedure shall be provided.

The improvement of energy efficiency shall be measured and verified over a contractually defined period of time through contractually agreed methods.

NOTE An example of an energy efficiency service provision process is given in Annex A.

4.2 Energy efficiency improvement actions

Energy efficiency improvement actions shall include one or more of the following:

a) measures in order to reduce the energy consumption;

EXAMPLES Installing building insulation, reduction of leakage of compressed air.

b) replacement, modification or addition of equipment;

EXAMPLES Combined heat and power generation, high efficiency boilers, variable speed motors, energy efficient lighting.

c) more efficient operation;

EXAMPLES Building automation, logistic and layout optimisation, control parameter adjustment.

d) continuous optimization of operation of technical installations;

EXAMPLE Maintaining the installed equipment to its best performance.

e) improved maintenance;

EXAMPLES Maintenance planning, instruction of the operation and maintenance staff.

f) deployment of behavioural change programmes;

EXAMPLES Training, energy awareness campaigns.

g) implementation of an energy management system.

EXAMPLE System compliant with EN 16001.

4.3 Verification of energy efficiency improvement

Verification of energy efficiency improvement shall include, as a minimum, the following steps:

a) definition of the baseline with its related adjustment factors;

b) definition of procedures (including contractually agreed calculation or estimation methods) that will ensure valid comparisons of energy consumption;

c) development and implementation of the measurement and verification plan for the assessment of the energy efficiency improvement achieved;

d) reporting to the customer at agreed intervals. The report shall include details of implemented actions, achieved energy efficiency improvement and if applicable comparison with contractually agreed levels.

4.4 Description of the framework for the actions and the follow-up procedure

The description of the framework for the actions and the follow-up procedure shall include:

a) the baseline definition;

b) the proposed or agreed actions;

c) the energy efficiency improvement expected;

d) a statement on whether a contractual guarantee of energy efficiency improvement is provided or not, and, if provided, the guaranteed level of energy efficiency improvement;

e) the other proposed or agreed performance criteria;

f) the commitment and responsibilities of all parties;

EXAMPLE **How** and **when** operation, maintenance and information on changes in adjustment factors, should be provided, and by **whom**.

g) the verification method;

h) the timeframe of the above items.

The energy efficiency improvement shall be characterized by the reduction in energy consumption in comparison with the baseline.

The reduction in energy consumption shall be determined by measuring and/or estimating consumption, before and after the implementation of the actions, taking into account all agreed adjustment factors.