SLOVENSKI STANDARD
kSIST-TS FprCEN/TS 16628:2014

01-marec-2014

[Not translated]

Energy Performance of Buildings - Basic Principles for the set of EPBD standards

Energieeffizienz von Gebäuden - Grundlagen für das EPBD-Normenpaket

Performance énergétique des bâtiments - Principes de base pour l'ensemble des normes PEB

Ta slovenski standard je istoveten z: **FprCEN/TS 16628**

ICS:

91.010.30	Tehnični vidiki	Technical aspects
91.140.01	Napeljave v stavbah na splošno	Installations in buildings in general

kSIST-TS FprCEN/TS 16628:2014 **en,fr,de**

TECHNICAL SPECIFICATION

SPÉCIFICATION TECHNIQUE

TECHNISCHE SPEZIFIKATION

FINAL DRAFT FprCEN/TS 16628

January 2014

ICS 91.140.99

English Version

Energy Performance of Buildings - Basic Principles for the set of EPBD standards

Performance énergétique des bâtiments - Principes de base pour l'ensemble des normes PEB

Energieeffizienz von Gebäuden - Grundlagen für das EPBD-Normenpaket

This draft Technical Specification is submitted to CEN members for formal vote. It has been drawn up by the Technical Committee CEN/TC 371.

CEN members are the national standards bodies 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.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a Technical Specification. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a Technical Specification.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

Contents

Page

Foreword

This document (FprCEN/TS 16628:2014) has been prepared by Technical Committee CEN/TC 371 “Energy Performance of Buildings Project Group” (the secretariat of which is held by NEN).

This document is currently submitted to the Formal Vote.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association (Mandate M/480, [2]).

This document supports essential requirements of EU Directive 2010/31/EC on the energy performance of buildings (EPBD). It forms part of a series of standards aimed at European harmonisation of the methodology for the calculation of the energy performance of buildings.

Directive 2010/31/EU recasting the Directive 2002/91/EC on energy performance of buildings (EPBD) [1] promotes the improvement of the energy performance of buildings within the European Union, taking into account all types of energy uses (heating, lighting, cooling, air conditioning, ventilation) and outdoor climatic and local conditions, as well as indoor climate requirements and cost effectiveness (Article 1).

The Directive requires Member States to adopt measures and tools to achieve the prudent and rational use of energy resources. In order to achieve those goals, the EPBD requires increasing energy efficiency and the enhanced use of renewable energies in both new and existing buildings. One tool for this is the application by Member States of minimum requirements on the energy performance of new buildings and for existing buildings that are subject to major renovation, as well as for minimum performance requirements for the building envelope if energy-relevant parts are replaced or retrofitted. Other tools are energy certification of buildings, inspection of boilers and air-conditioning systems.

NOTE The use of European Standards increases the accessibility, transparency and objectivity of the energy performance assessment in the Member States facilitating the comparison of best practices and supporting the internal market for construction products. The use of EPB-standards for calculating energy performance, as well as for energy performance certification and the inspection of heating systems and boilers, ventilation and air-conditioning systems will reduce costs compared to developing different standards at national level.

The first mandate to CEN to develop a set of standards to support the EPBD (M/343) resulted in the successful publication of several EPBD related CEN standards in 2007-2008. The second mandate to CEN (M/480, [2]) was issued to review the Mandate M/343 as the recast of the EPBD raises the need to revisit the standards and reformulate and add standards so that they become on the one hand unambiguous and compatible, and on the other hand a clear and explicit overview of the choices, boundary conditions and input data that need to be defined at national or regional level. Such national or regional choices remain necessary, due to differences in climate, culture & building tradition, policy and legal frameworks. Consequently, the current set of EPBD related standards had to be improved and expanded on the basis of the recast of the EPBD. EPB-standards should be flexible enough to allow for necessary national and regional differentiation and facilitate Member States implementation and the setting of requirements by the Member States.

The set of EBP-standards should consist of a comprehensive package of Technical Specifications and European Standards that are manageable and user-friendly for regulators, product Technical Specification drafters, drafters of European Assessment Documents (EAD), producers, notified bodies and users.

The setup of a coherent set EPB-standards under Mandate M/480 was split into two phases:

— the development of (and agreement on) the underlying basic principles and detailed technical rules for drafting EPB-standards providing a coherent modular structure and an overarching EPB-standard following these rules and principles;

— on the basis of the results of phase 1: the preparation/revision of the complete set of EPB- standards.

The basic principles and technical rules were developed to ensure the necessary overall consistency in terminology, approach, input/output relations and formats in all EPB-standards. In these rules and specifications, requirements from competent national legal authorities of EU and EFTA Member States (aggregated by the CAP-EDMC liaison committee) were taken into account.

It is anticipated that during phase 2 additions or modifications of the overarching EPB-standard and/or basic principles and technical rules might be needed.

Introduction

This Technical Specification has been developed to guide the revisions under M/480 phase 2 as well as all future work on EPB-standards. In order to facilitate coordination, consistency and coherence of EPB-standards the following tools are available:

a) a Technical Specification on the basic principles to be followed in drafting EPB-standards (this document);

b) a Technical Specification on the detailed technical rules to be followed in drafting EPB-standards;

c) in addition, the following TC/371 documents are available:

   1) a template for the EPB-standards, including reminders of applicable rules in the relevant clauses;

   2) a template for the EPBD Technical Reports that will accompany each EPBD standard;

   3) a spread sheet template to be used to demonstrate the correctness of the standardized calculation procedures.

All work on (intended) EPB-standards will follow the basic principles and the detailed technical rules and relate to the overarching EPB-standard, prEN 15603.

1 Scope

This Technical Specification describes the basic principles to be followed in the development of standards intended to support the assessment of the energy performance of buildings using a holistic approach. The main goal is to obtain a set of EPB-standards that are a systematic, clear and comprehensive package for the benefit of professionals and government entities.

This Technical Specification gives general, qualitative guidance on the required quality, accuracy, usability and consistency of EPB-standards in order to provide a balance between:

— the accuracy and level of detail, and

— the simplicity and availability of input data.

Hidden complexities are also taken into account, such as the impact of differences in the overall legal frameworks on the national choices and national input data.

The basic principles are the basis for detailed technical rules and for a common overarching structure for the set of EPB-standards.

The basic principles for EPB-standards cover the following aspects:

— the standardization process, including collaborations and consultations;

— the application range of the standards;

— common general organisation of each standard and the national implementation;

— the overarching structure for the energy performance assessment;

— common model(s) and editorial rules for each standard;

— common quality aspects for each standard.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

prEN 15603:2013, *Energy Performance of Buildings – Overarching standard EPBD*

FprCEN/TS 16629, *Energy Performance of Buildings – Detailed technical rules for the set of EPB-standards*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in prEN 15603:2013 and the following apply.

3.1
EPB-standard
standard being part of a set of standards providing a coherent methodology for assessing the energy performance of buildings using a holistic approach

Note 1 to entry: EPB-standards are developed and/or revised in accordance with and have to comply with the basic principles and detailed technical rules developed by CEN/TC 371 under Mandate M/480 following the Energy Performance of Buildings Directive (2010/31/EU, EPBD recast). The term EPB-standard may apply to either EN standards or to EN ISO standards.

EPB-standards are drafted on the basis of relevant existing International, European and National standards and the work of the CEN-CENELEC Product TCs. They have to take into account EU Directives (other than the EPBD), such as the Construction Products Directive (89/106/EEC), the revised Labelling Directive 2010/30/EU, the Energy related Products Directive 2009/125/EC, the Energy End Use Efficiency & Energy Services Directive (2006/32/EC), the INSPIRE Directive (2007/2/EC) and Mandate M324 and the Boiler Efficiency Directive (92/42/EC).

4 Symbols, units and subscripts

For the purposes of this document, all symbols, units and subscripts provided in the overarching EPB-standard prEN 15603:2013 apply.

NOTE No specific symbols are used in this Technical Specification.

5 General

EPB-standards shall be drafted according to the basic principles (the "Why") given in this document and the actual detailed technical rules (the "How") which are given in FprCEN/TS 16629.

NOTE Where relevant, this Technical Specification indicates whether the principle of the item considered is dealt with in the overarching EPB-standard (prEN 15603), in FprCEN/TS 16629, and/or might need to be elaborated within National Annexes by the competent national standardization body.

It is important to position the set of standards in the whole of the assessment process. This requires an outline of the assessment processes in practice: the objective of the assessment, the crucial steps and an illustration of how the standards support these activities.

The characteristics of data acquisition also have to be addressed since this is crucial for the accuracy, sensitivity, reproducibility, practical feasibility and cost of the assessment. This is further dealt with in Clause 11. Special attention is needed for difficulties in assessing existing buildings. This relates to the availability, accessibility and quality of data, unclear partitioning, intended change in use of the building, etc.

To deal with such issues in a 'measurable' way, a set of common example cases is expected to be very useful. This is further introduced in Clause 11.

6 Central coordination during the development of EPB-standards

6.1 Set up and maintenance of EPB-standards

This CEN Technical Specification deals with aspects of the standardization process that are specific for EPB-standards. The assessment of the overall energy performance of a building is based on the holistic approach: integration and aggregation of all elements and energy services, as illustrated by the pyramid shown in Figure 1.

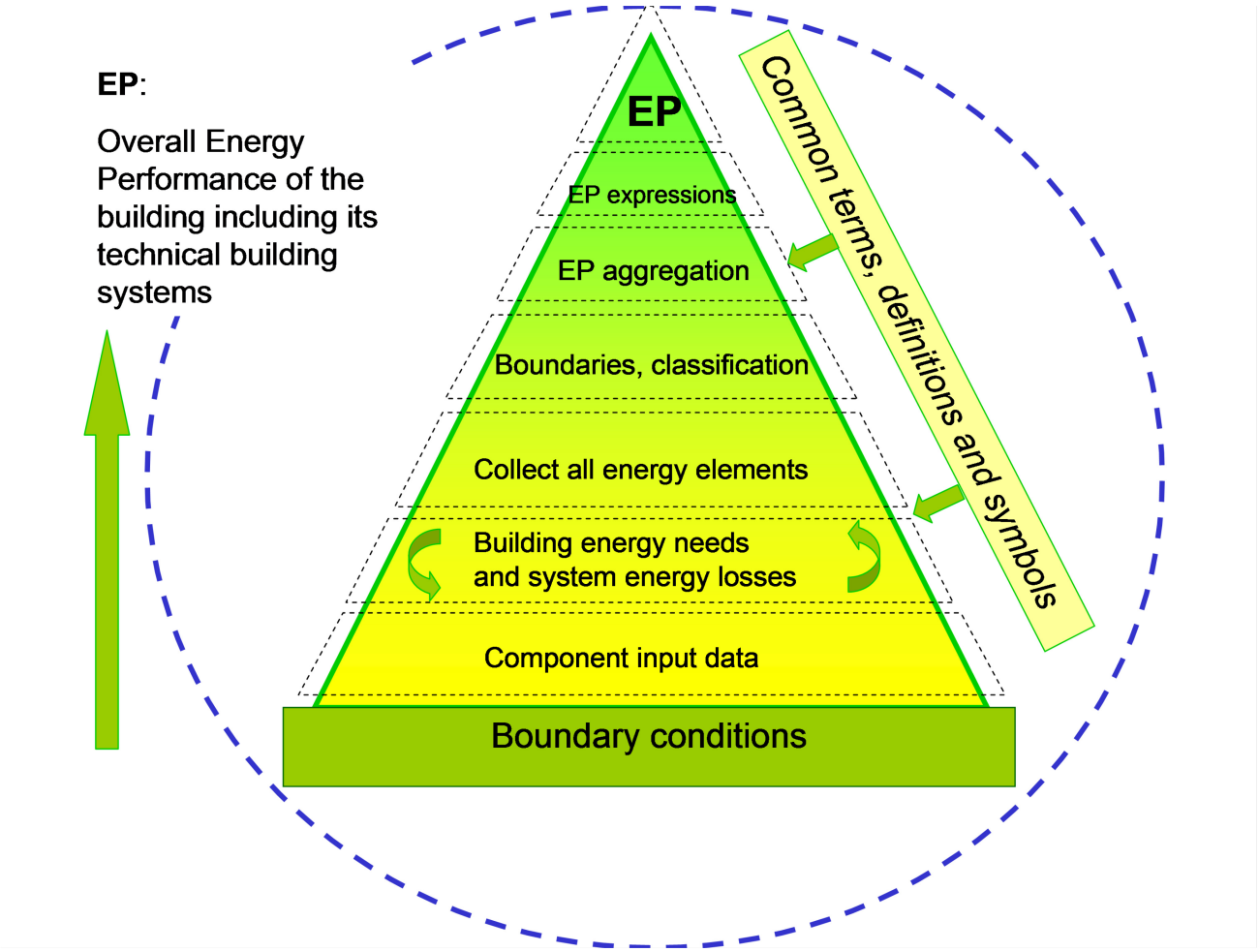

Figure 1 – Pyramid, illustrating the holistic approach of the set of EPB-standards

All EPB-standards are developed in a coordinated manner and (for the assessment of the energy performance of buildings) none of these standards is to be used stand-alone: any practical calculation or application requires that a number of these standards are used in combination.

All EPB-standards (either revised, existing or new) share common technical rules, a common format and a common structure to be part of an integrated standardization and assessment package.

To guard the coherency of EPB-standards, central coordination by CEN/TC 371 is required combined with active involvement and commitment of the five parallel CEN/TCs who have the technical expertise and competence regarding specific technological fields under the holistic approach (TC 89, TC 156, TC 169, TC 228 and TC 247).

The modular structure for EPB-standards, the overarching EPB-standard (prEN 15603), as well as the basic principles and detailed technical rules for the development of other EPB-standards, is developed by CEN/TC 371.

Parallel CEN and/or ISO TCs are responsible for the (technical) content of these EPB-standards. Consequently the revision/drafting of standards considered relevant within the modular structure of EPB-standards shall be supervised by the competent CEN and/or ISO TCs.

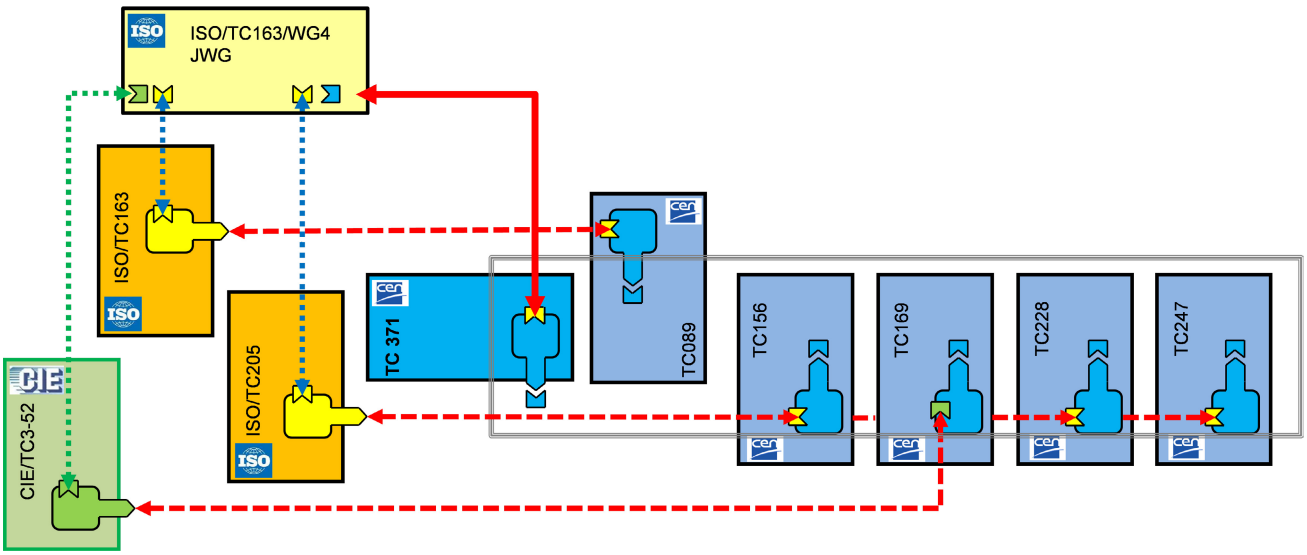

Figure 2 – Cooperation between CEN and ISO TCs dealing with EPB-standards

NOTE 1 The role of CIE in relation to ISO/TC 163 may require an update.

CEN/TC 371 is the overall responsible coordinating committee for checking whether EPB-standards comply with the guidelines for EPB-standards.

Both CEN/TC 371 and the parallel TCs competent with respect to the technical content of standards share responsibility on coherence of standards within the set of EPB-standards. They shall ensure that the same or similar standardization procedures (as adopted during the development) are agreed upon after completion of the set, to be in force for review and/or future updating of the standards.

In order to ensure that work on (possible) EBP-standards complies with EPB requirements set by CEN/TC 371 and the technical requirements set by the competent TCs, team leaders of groups of experts revising or drafting EPB-standards are preferably appointed as formal liaison experts by the associated "parallel" TC to CEN/TC 371. Their task is to ensure that the contribution from the competent TC complies with the EPB requirements and to report on any differences and considerations and by encompassing the respective decisions to the competent TC and CEN/TC 371.

Where relevant, for the revision and/or set up of EN ISO standards relevant to the modular structure of EPB-standards, co-operation will be sought with the competent ISO/TCs.

NOTE 2 The ISO/TC 163/WG 4, Joint Working Group TC 163 and TC 205, since 2009 co-ordinating the work on the energy performance of buildings under the responsibility of the two ISO parent TC's, adopted in its draft strategy document (2010) the major recommendations for improvement of the set of EPB- standards. The members of this coordinating group are also aware of the current discussions in the EU on the requirements for a second generation and in this context they have confirmed that it is important to take these requirements into account very seriously, because common EN ISO standards are the goal.

Specific practical modes of operation also seem appropriate for the co-operation between CEN and ISO on these standards, based on the Vienna Agreement ([10]) between CEN and ISO on co-operation in the development of standards.

NOTE 3 According to the Vienna Agreement, the revision of EN ISO standards is under ISO lead. If agreed by the CEN and ISO technical bodies, and specifically by the non-European members of the ISO technical body, the lead can however be assigned to CEN. Whenever feasible, combined EN ISO EPB-standards should be published.

The preparation of a set of international standards on the energy performance of buildings at the ISO level is assigned to ISO /TC 163/WG 4, Joint Working Group of ISO TC 163 and TC 205 on energy performance of buildings using a holistic approach. This co-operation aims to avoid serious duplication of work, to avoid incompatibilities in (input) product data, procedures and (output) energy performance data.