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English Version

Energy Performance of Buildings - Detailed Technical Rules for the set of EPB-standards

Performance énergétique des bâtiments - Règles techniques détaillées pour la série de normes sur la performance énergétique des bâtiments

Energieeffizienz von Gebäuden - Detaillierte technische Regeln für das EPB-Normenpaket

This Technical Specification (CEN/TS) was approved by CEN on 10 May 2014 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This document (CEN/TS 16629:2014) has been prepared by Technical Committee CEN/TC 371 “Energy Performance of Buildings Project Group”, the secretariat of which is held by NEN.

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 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 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 harmonization 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 and 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 Technical Approval Guidelines/Common Understanding Assessment Procedures (ETAGs/CUAPs), producers, notified bodies and users.

The set-up 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 detailed technical rules might be needed.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: 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.

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;

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

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 EPB Technical Reports that shall accompany each EPB 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, (FprEN 15603).

1 Scope

This Technical Specification provides guidance in the form of detailed technical rules based on the basic principles, both for the overarching standard and for each standard within the set of EPB-standards.

These detailed technical rules give practical rules on the following subjects for EPB-standards:

— the standardization process, including collaborations and consultations;

— the application range of the standards;

— common general organization 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.

FprEN 15603:2014, *Energy Performance of Buildings – Overarching standard EPB*

CEN/TS 16628, *Energy Performance of Buildings – Basic Principles for the set of EPB-standards*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in FprEN 15603:2014 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.

Note 2 to entry: 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 and 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 FprEN 15603:2014 apply.

NOTE No specific symbols are used in this Technical Specification.