# STN

# Plán organizácie na meranie a monitorovanie energie Návrh a implementácia Princípy na zber údajov o energii

STN EN 17267

38 0011

Energy measurement and monitoring plan - Design and implementation - Principles for energy data collection

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/20

Obsahuje: EN 17267:2019

STN EN 17267: 2020

# **EUROPEAN STANDARD**

# EN 17267

# NORME EUROPÉENNE **EUROPÄISCHE NORM**

August 2019

ICS 27.010

#### **English version**

# Energy measurement and monitoring plan - Design and implementation - Principles for energy data collection

Plan de mesure et de surveillance de l'énergie -Conception et mise en oeuvre - Principes pour la collecte des données énergétiques

Plan für die Energiemessung und -überwachung für Organisationen - Gestaltung und Umsetzung

This European Standard was approved by CEN on 12 May 2019.

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, 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, Turkey and United Kingdom.





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

Contents  European foreword  Introduction		Page	
		3	
		4	
1	Scope		
2	Normative references		
3	Terms and definitions		
3.1	Definitions related to energy management systems		
3.2	Definitions related to energy measurement and monitoring		
3.3	Symbols and abbreviations		
4	General characteristics of a measurement and monitoring planplan	10	
4.1	Purpose of a measurement and monitoring plan		
4.2	Relation between the measurement and monitoring plan and the measurement	t	
4.3	systemProcess to maintain the measurement and monitoring planplan system	11 11	
5	The stages of a measurement and monitoring planplan	12	
5.1	General		
5.2	Stage 1: Define context, objectives and constraints		
5.3 5.4	Stage 2: Assess the existing situation		
5.4 5.5	Stage 3: Prioritize the actions to improve the measurement system  Stage 4: Implement the measurement system		
5.6	Stage 5: Use the measurements data		
5.7	Stage 6: Maintain the measurement system		
	ex A (informative) Example of the scope of a measurement plan: organization, site zones, energy uses	es,	
Anne	ex B (informative) Levels of the measurement system	34	
	ex C (informative) Examples of levels for various sectors		
Anne	ex D (informative) Example of synthesis per type of energy and use (case of a boiled	er 42	
Anne	x E (informative) Topological and functional graph	44	
Anne	x F (informative) Notions of accuracy, precision and stability	47	
Anne	ex G (informative) Example of an information architecture of the measurement system	49	
Anne	ex H (informative) Metrological maintenance recommendations, applicable to electrical and fluid measurements	51	
Biblio	ography		
	U 1 V		

EN 17267:2019(E)

# **European foreword**

This document (EN 17267:2019) has been prepared by CEN/CLC/JTC 15 "Energy measurement plan for organizations", the secretariat of which is held by AFNOR.

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 January 2020, and conflicting national standards shall be withdrawn at the latest by January 2020.

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

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

### Introduction

Existing energy management standards often refer to the measurement of energy as an important improvement of energy performance, but do not detail how a measurement and monitoring plan should be designed and implemented:

- EN 16247-1:2012, Energy audits: in specific cases an energy audit requires to get specific data measurement (§ 5-2 b) 5-3, 5-5). An energy measurement plan has to be set up in order to collect this data. But there are no guidelines given on how to design or implement an energy measurement plan: The future standard will help to fulfil this step;
- EN 15900:2010, Energy Efficiency Services: the energy efficiency service has to be based on collected data (4-1 b). If there is not available or reliable data an energy measurement plan is needed;
- ISO EN 50001:2018 states in 6-6: "The organization shall define and implement an energy data collection plan appropriate to its size, its complexity, its resources and its measurement and monitoring equipment. The plan shall specify the data necessary to monitor the key characteristics and state how and at what frequency the data shall be collected and retained." EN 17267 provides principles for the design and implementation of an energy data collection plan;
- ISO 50006:2014, "Energy management systems Measuring energy performance using energy baselines (EnB) and energy performance indicators (EnPI) — General principles and guidance", provides some recommendation related to measurement (§ 4.2.6.2);
- ISO EN 50015:2014, describes the process of "Measurement and verification" (M & V) to help organizations determine and validate in a systematic way the improvement of its energy performance, within specified boundaries. As can be seen in Clause 5.2 [h) k) l) m)], the M&V process relies upon a number of measurements, without giving the methodology on how to organize the measurement. To ensure the quality of these measurements (reliability, accuracy as well as appropriateness) a "measurement plan" is needed.

The measurement and monitoring plan should be considered as a tool to facilitate the operational implementation of those cited standards.

## 1 Scope

This document specifies the requirements and principles for the design and implementation of an energy measurement and monitoring plan for an organization in order to improve its energy performance. The measurement and monitoring plan defines a measurement system for monitoring and analysing the energy performance of an organization, taking into account its influencing factors.

This document applies to all forms of energy, to all energy uses and to all types of organizations. It does not apply to domestic dwellings.

### 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.

ISO 50001:2018, Energy management systems — Requirements with guidance for use

ISO 50006:2014, Energy management systems — Measuring energy performance using energy baselines (EnB) and energy performance indicators (EnPI) — General principles and guidance

koniec náhľadu – text ďalej pokračuje v platenej verzii STN