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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

January 2020

ICS 03.120.10; 27.015; 55.020

Will supersede EN 16247-4:2014

English version

Energy audits - Part 4: Transport

Audits énergétiques - Partie 4: Transport

Energieaudits - Teil 4: Transport

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/CLC/JTC 14.

If this draft becomes a European Standard, 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.

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European foreword

This document (EN 16247-4:2xxx) has been prepared by Technical Committee CEN/CLC/JTC14 WG 1 “Energy audits”, the secretariat of which is held by BSI.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 16247-4:2014.

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

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

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

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.

This document is intended for the energy auditing of mobile assets e.g. vehicles, railways, marine vessels, aircraft, as well as mobile plant.

Due to the mobility of the assets in transport, energy auditing in this area is especially challenging. For example, the meetings are harder to organize, the activities involved are harder to inspect.

The first part of this document harmonizes the procedures for energy auditing in transport systems. On the other hand, there are certain aspects which are particular to every transport mode. For example, whereas the mobile assets in road transport are numerous, similar and replaced frequently, the assets for marine and air transport are large and long-lived.

In order to state the energy auditing features of every transport mode, there is a specific section for each of them at the end of this document.

Finally, the possibility of planning and selecting the mode of transport (and, sometimes, using different modes for a unique transport service) is also a specific aspect of the transport activity. Therefore, this standard will place special attention to this topic.

NOTE An energy audit is not a fiscal method, the term and the nature of an energy audit are defined in EN 16247-1 Energy Audits.

1 Scope

This document is used in conjunction with and is supplementary to EN 16247-1, Energy audits — Part 1: General requirements. It provides additional requirements to EN 16247-1 and is applied simultaneously.

The procedures described here apply to the different modes of transport (road, rail, marine and aviation), as well as the different ranges (local- to long-distance) and what is transported (i.e. goods and people).

This document specifies the requirements, methodology and deliverables specific to energy audits in the transport sector, every situation in which a displacement is made, no matter who the operator is (a public or private company or whether the operator is exclusively dedicated to transport or not), is also addressed in this document.

This document advises on both the optimization of energy within each mode of transport, as well as selecting the best mode of transport in each situation; the conclusions drawn by the energy audit can influence decisions on infrastructure and investment e.g. in teleconferencing or web meetings.

Energy audits of buildings and processes associated with transport can be conducted respectively with the EN 16247-2 Buildings and EN 16247-3 Processes e.g. pipelines, depots and escalators/travelators. This part of the standard does not include the infrastructure which supplies energy e.g. the electricity generation of energy for railways.

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.

EN 16247-1:2012, *Energy audits - Part 1: General requirements*

UIC/UNIFE, TEC REC 100 001, Specification and verification of energy consumption for railway rolling stock, 2010

3 Terms and definitions

For the purposes of this document the terms and definitions given in EN 16247-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

transport

activity that implies the movement of people, livestock or goods from one place to another

3.2 vehicle

object used to perform the transport, may include the container, trailer or carriage where energy is consumed

Note 1 to entry: This document will use this term, instead of the more general one (audited object), from part 1 of this standard.

3.3 energy

includes fuels, inclusive of biofuels, electricity inclusive of regenerated/recovered energy from braking etc

Note 1 to entry: Excludes feedstock energy sources such as Aqueous Urea Solution (for example 'Adblue™' ISO 22241-1)

3.4 fleet

group of vehicles

3.5 train set

number of carriages, cars, or trucks which are all connected together and which are pulled by an engine along a railway

Note 1 to entry: Trains carry people and goods from one place to another.

3.6 operator

person that governs the vehicle operation with his/her own hands, e.g. driver, pilot, helmsman, etc.(not the organization being audited)

3.7 organization

owner or operator of the fleet of vehicles subject to the audit

3.8 transport service

service provided to a beneficiary for the transport of goods, livestock or of a person from a departure point to a destination point

3.9 segment

group of vehicles performing the same type of transport; i.e. subset of a fleet having a certain common feature

Note 1 to entry: The criteria for segment definition depend on the kind of transport the audited organization performs and the kind of vehicles used. An example might be differentiating the vehicles performing local distribution as opposed to long distance shipment in two different segments.

3.10 operators' representative

group of workers in charge of communicating the interest of the operators to the management of the organization