

**Methodology for calculation and declaration of energy consumption and GHG emissions of transport services (freight and passengers)**

## EESTI STANDARDI EESSÕNA

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See Eesti standard EVS-EN 16258:2012 sisaldab Euroopa standardi EN 16258:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 16258:2012 consists of the English text of the European standard EN 16258:2012.
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English Version

**Methodology for calculation and declaration of energy  
consumption and GHG emissions of transport services (freight  
and passengers)**

Méthodologie pour le calcul et la déclaration de la  
consommation d'énergie et des émissions de gaz à effet de  
serre (GES) des prestations de transport (passagers et fret)

Methode zur Berechnung und Deklaration des  
Energieverbrauchs und der Treibhausgasemissionen bei  
Transportdienstleistungen (Güter- und Personenverkehr)

This European Standard was approved by CEN on 8 September 2012.

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## Foreword

This document (EN 16258:2012) has been prepared by Technical Committee CEN/TC 320 "Transport - Logistics and services", the secretariat of which is held by NEN.

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of an identical text or by endorsement, at the latest by May 2013, and conflicting national standards shall be withdrawn at the latest by May 2013.

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.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## Introduction

This standard sets out the methodology and requirements for calculating and reporting energy consumption and greenhouse gas (GHG) emissions in transport services. This first edition of the standard is primarily focused on energy consumption and GHG emissions associated with vehicles (used on land, water and in the air) during the operational phase of the lifecycle. However, when calculating the energy consumption and emissions associated with vehicles, account is also taken of the energy consumption and emissions associated with energy processes for fuels and/or electricity used by vehicles (including for example production and distribution of transport fuels). This ensures the standard takes a "well-to-wheel" approach when undertaking calculations, and when making declarations to transport service users.

The philosophy, contents, and structure adopted in this standard seek to make it widely applicable across the transport sector (encompassing all modes impartially) and accessible to a very diverse user group. Within this sector, it is recognised that transport operations vary hugely, from multi-national organisations operating multiple transport modes to deliver transport services across the globe, through to a small local operator delivering a simple service to one user. In addition, the potential user group for this standard is similarly diverse, and the monitoring of transport energy and emissions within organisations can be at different levels of maturity and sophistication. Consequently, this first edition of the standard balances the desire for absolute precision and scientific rigour with a degree of pragmatism in order to achieve ease of use, accessibility and encourage widespread use.

Use of this standard will provide a common approach and frameworks for the calculation and declaration of energy consumption and emissions for transport services irrespective of the level of complexity (e.g. a simple transport service can provide one customer with a single journey, whereas a complex system can involve several legs, multiple vehicle types, different transport modes and several companies within the transport supply chain). The standard ensures declarations have greater consistency and transparency, and that the energy and emissions are fully allocated to a vehicle's load (passengers and/or cargo).

It is anticipated that future editions of the standard will have broader quantification boundaries, to include additional aspects such as, transport terminals, transshipment activities, and other phases of the lifecycle. Users of the standard that would now like to use broader quantification boundaries, without waiting for a new edition of the standard are advised to communicate such results separately from the ones calculated according to this standard, and to give a transparent description of the methodology applied.

## 1 Scope

This European Standard establishes a common methodology for the calculation and declaration of energy consumption and greenhouse gas (GHG) emissions related to any transport service (of freight, passengers or both).

It specifies general principles, definitions, system boundaries, calculation methods, apportionment rules (allocation) and data recommendations, with the objective to promote standardised, accurate, credible and verifiable declarations, regarding energy consumption and GHG emissions related to any transport service quantified. It also includes examples on the application of the principles.

Potential users of this standard are any person or organisation who needs to refer to a standardised methodology when communicating the results of the quantification of energy consumption and GHG emissions related to a transport service, especially:

- transport service operators (freight or passengers carriers);
- transport service organisers (carriers subcontracting transport operations, freight forwarders and travel agencies);
- transport service users (shippers and passengers).

## 2 Terms, definitions and abbreviations

For the purposes of this document, the following terms and definitions apply.

### 2.1 General terms

#### 2.1.1

##### **carbon dioxide equivalent**

**CO<sub>2</sub>e**

unit for comparing the radiative forcing of a GHG to carbon dioxide

Note 1 to entry: The carbon dioxide equivalent is calculated using the mass of a given GHG multiplied by its global warming potential

[SOURCE: ISO 14064-1:2006]

#### 2.1.2

##### **carbon offsetting**

mechanism for compensating for carbon emissions of a process through the prevention of the release of, reduction in, or removal of, an equivalent amount of GHG emissions outside the boundary of that process, provided such prevention, removal or reduction are quantified, permanent and additional to a business-as-usual scenario

[SOURCE: adapted from ISO 14021:2010]

#### 2.1.3

##### **cargo**

collection / quantity of goods (carried on a means of transport) transported from one place to another

Note 1 to entry: Cargo can consist of either liquid or solid materials or substances, without any packaging (e.g. bulk cargo), or of loose items of unpacked goods, packages, unitised goods (on pallets or in containers) or goods loaded on transport units and carried on active means of transport.

[SOURCE: EN 14943:2005]