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Postal Services - Parcel Delivery Environmental Footprint - Methodology for calculation and declaration of GHG emissions and air pollutants of parcel logistics delivery services

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. 12/23

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Postal Services - Parcel Delivery Environmental Footprint -
Methodology for calculation and declaration of GHG
emissions and air pollutants of parcel logistics delivery
services

Services postaux - Empreinte environnementale de la
livraison de colis - Méthodologie pour le calcul et la
déclaration des émissions de GES et polluants
atmosphériques des services logistiques de livraison
de colis

Postalische Dienstleistungen - Ökologischer
Fußabdruck der Paketzustellung - Methodik zur
Berechnung und Deklaration von THG-Emissionen und
Luftschadstoffen von Paketlogistik-Lieferdiensten

This European Standard was approved by CEN on 7 August 2023.

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

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

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European foreword

This document (EN 17837:2023) has been prepared by Technical Committee CEN/TC 331 “Postal services”, 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of an identical text or by endorsement, at the latest by March 2024, and conflicting national standards shall be withdrawn at the latest by March 2024.

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.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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EN 17837:2023 (E)**Introduction**

This document provides principles and rules for the quantification, allocation and reporting of environmental impacts from parcel logistics delivery services.

Background

As the consumer product and retail sectors continuously grow and e-commerce increases, logistics services are becoming ever more critical. Traditional logistics value chains and related business models are also disrupted by trends in digitalisation and new fulfilment technologies. General considerations to sustainability are growing in importance due to climate change, changing global supply chains and increased stakeholder consciousness. Measuring the environmental impacts - along the entire value chain from manufacturing to end of life treatment of retail goods - and implementing meaningful mitigation measures is key in combating climate change.

To understand the environmental impacts of the e-commerce and parcel logistics and delivery sectors, all activities in the parcel logistics and delivery service value chain should be looked at. To choose the most effective mitigation strategies and to fully disclose the environmental impacts of parcel logistics and delivery services, solid monitoring methodologies, data sets and standard accounting and reporting approaches are essential.

Purpose

This Parcel Delivery Environmental Footprint (PDEF) standard aims to describe a consistent and harmonized methodology for environmental footprinting across the supply chain of parcel logistics and delivery services. In the first instance, it will focus on the accounting of Greenhouse gas (GHG) emissions. At present there are a variety of standards and methodologies for emissions accounting publicly available, but these do not focus on parcel specific accounting.

The PDEF seeks to account for the emissions of the full logistics service supply chain for a delivery including all consequential transportation and operational activities. The standard allocates all emissions towards each specific parcel delivered. This is achieved through the description of a standard set of data points to be measured and a standard calculation and parcel specific allocation methodology.

The objective of this standard is to be consistent with ISO 14083 in its current working draft format¹. While the PDEF is built on the existing platform of EN 16258 and is consistent with the current working draft of EN ISO 14083², it provides an extended scope with its nuanced parcel specific approach, covering the entire parcel delivery value chain from collection to final delivery. Further, the PDEF also covers, as an option, other air pollutants as well as operational and energy provision GHG emissions other than fuel. This reflects the current need to provide more transparency about environmental impacts along complex supply chains.

Use

The PDEF is designed to be widely applicable by parcel transport service organizers and accessible to a diverse user group. Within this sector, it is recognized that parcel delivery service operations vary hugely, from multi-national organizations operating multiple transport modes through to a small local operators. Consequently, the standard balances the desire for absolute precision and scientific rigor with a degree of pragmatism to achieve ease of use. Nonetheless, the requirements set out and guidance given are aligned with existing standards³ and based on sound scientific methods.

¹ ISO 14083:2023 Greenhouse gases — Quantification and reporting of greenhouse gas emissions arising from transport chain operations

² EN 16258 provides the basis methodology for calculation and declaration of energy consumption and GHG emissions of transport services in the context of freight and passengers; ISO 14083 is building further on EN 16258 with inclusion of transport and hub operations

³ For example: EN 16258:2012, ISO 14064

Use of this standard will ensure that calculated emissions are fully accounted and allocated to a parcel. It enables disclosures of parcel specific emissions to have greater consistency and comparability as a foundation for more transparency enabling more sustainable parcel delivery services in the future.

Coverage

The normative part of this document covers GHG emissions associated with the transportation related activities as well as the operational activities for a parcel to be delivered. In more detail, it includes:

- the use of vehicles (for all transportation modes) during the delivery phase in terms of core trunking as well as first and last mile related transportation;
- all related operational and energy provision emissions from the use of and processes in logistics sites, namely sites and buildings where the physical handling operations of parcels are carried out.

When quantifying GHG emissions, account is also taken of the GHG emissions associated with energy processes for fuels and electricity used by vehicles and related operations infrastructure (including for example production and distribution of fuels). In addition, empty mileage shall be considered too. As a result, calculation results allow the consistent comparison of possible different energy sources by parcel service providers, users, and other interested parties.

The present document also covers optional guidance on quantifying emissions related to:

- air pollutants (carbon monoxide, nitrogen oxides, particulate matters 2.5 and 10, and sulfur oxides) associated with the use of vehicles for all transportation modes for exhaust and non-exhaust emissions.
- other operational activities needed to fulfil the parcel delivery service, e.g. required packaging materials (everything additional to the underlying parcel inherent packaging) provided by the parcel transport service organizers;
- waste management from the sites of the parcel transport service organizers; and
- all related operational and energy provision emissions from related virtual processing (data computing services).

It specifies general principles, definitions, system boundaries, calculation methods, parcel allocation rules and data requirements, with the objective to promote standardized, accurate, credible and verifiable declarations, regarding emissions quantified. It also includes examples on the application of the principles.

Potential users of this document are any person or organization quantifying emissions related to a parcel delivery service, especially parcel transport service organizers and parcel service users (e.g. consignors and consignees).

This document presents the below elements:

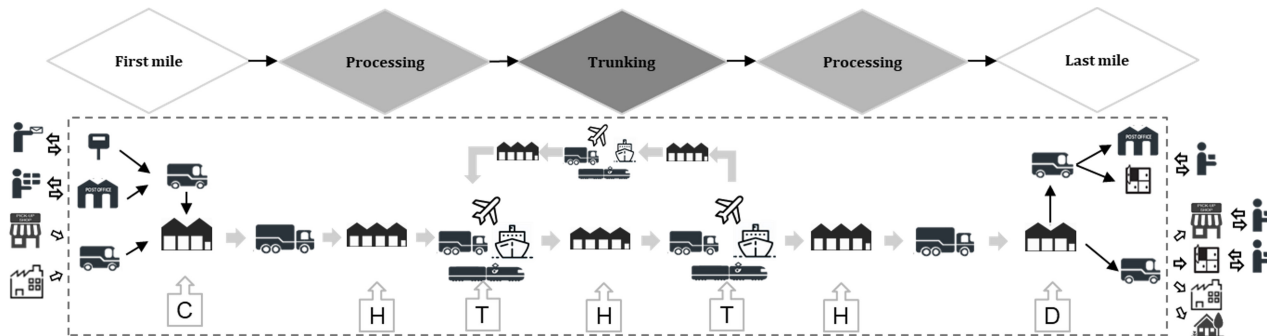
- step by step guidance for quantifying emissions of parcel logistics services;
- calculation methodology for GHG emissions;
- calculation methodology for air pollutants (carbon monoxide (CO), nitrogen oxides (NO_x), particulate matters (PM) 2.5 and 10, and sulfur oxides (SO_x);
- allocation rules per item (parcel); and
- reporting frameworks and data to be shared with business customers or consignees.

EN 17837:2023 (E)**1 Scope**

This document establishes a common methodology for the calculation, allocation and declaration of Greenhouse gases (GHGs) as well as air pollutant emissions related to any parcel delivery service.

It only covers a part of the entire retail value chain. The retail value chain usually consists of creating the product, storing the inventory, distributing the goods and making the product available for consumers.

This document includes only the distribution of goods but considers the entire value chain of the parcel transportation process flow, namely the collection and delivery rounds, the trunking and the operations due to processing and the physical handling of parcels. See Figure 1 below for a graphical illustration.

**Key**

- C Collection Depot (Aggregation)
- H Hub
- T Transport
- D Delivery Depot (Dis-aggregation/Distribution)

Figure 1 — Overview of parcel delivery operations

2 Normative references

There are no normative references in this document.

koniec náhľadu – text ďalej pokračuje v platenej verzii STN