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Environmental management - Material flow cost accounting - Guidance for practical implementation in a supply chain

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Table of Contents

foreword
Introduction
1 Scope
2 Normative references
3 Terms and Definitions

foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1.Structure and Drafting Rules of Standardization Documents"

Drafting.

This document is equivalent to ISO 14052.2017 "Guidelines for the Implementation of Environmental Management Material Flow Costing in Supply Chains".

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

The purpose of this document is to provide guidance on the practical application of Material Flow Costing (MFCA) in supply chains. MFCA is a ring

Environmental management accounting tools that help organizations better understand their material and energy usage, as well as losses and related costs due to material inefficiencies

cost. The application of MFCA within an organization is explained in ISO 14051.Extend the scope of MFCA to

Multiple organizations will allow them to develop integrated approaches to more efficient use of materials and energy. This can bring benefits to different organizations in the supply chain

Various economic and environmental benefits, including reductions in total material losses (primary, energy and auxiliary), thereby providing reduced

costs, improve environmental performance [eg. reduced greenhouse gases and higher material and/or energy efficiency] and increase trust, collaboration and wealth

A shared opportunity for a productive business relationship. Trusted relationships between different organizations in the supply chain and a more common understanding of their own situation promotes

In order to cooperate, long-term contractual relationships can also be incentivized through mutual MFCA cooperation.

In order to extend the benefits of the MFCA program to all organizations in the supply chain, it is premised that the partner organizations are committed to sharing process information and

Relevant material and energy flow information for a comprehensive understanding of the production system for effective MFCA implementation.

The application of MFCA in the supply chain can improve the existing supply chain management information sharing, information exchange between suppliers and the purchasing department of the organization.

Flow mechanisms and management practices, MCFA is the key link between suppliers and customers. MFCA complements existing environmental management and management accounting

practice.

In addition, a comprehensive assessment of material flows and energy use at all stages of the supply chain can also serve as a basis for comprehensive sustainability management.

For example. MFCA information can be used to monitor environmental parameters or help identify and mitigate risks in the supply chain.

This document provides guidance on the following topics.

--- the importance of inter-organizational integration of MFCA;

--- a common approach to improving material and energy efficiency in the supply chain;

--- Steps to implement MFCA in the supply chain.

Environmental Management Material Flow Costing

Implementation Guidelines in the Supply Chain

1 Scope

This document provides guidelines for the practical implementation of Material Flow Costing (MFCA) in supply chains. MFCA fundamentally tracks organizations

Flows and inventories of materials within, quantifying these flows in physical units (e.g. mass, volume) and assessing their correlation to material flow and energy use the cost of. MFCA applies to any organization that uses materials and energy, regardless of its products, services, size, structure, geography and existing management.

How about the management and accounting system? In principle, MFCA can be used as an environmental management accounting tool in the upstream and downstream of the supply chain, thereby helping to develop

An integrated approach to improving supply chain material and energy efficiency.

The development of this document is based on the principles and general framework of MFCA described in ISO 14051.

The MFCA framework proposed in this document includes scenarios for improving material efficiency and energy efficiency in supply chains, successful application in supply chains

Principles of MFCA, information sharing and practical steps to implement MFCA in the supply chain.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations

For reference documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to this document.

used in this document.

Note. GB/T 24050-2004 Environmental Management Terminology (ISO 14050.2002, IDT)

costaccounting-Generalframework)

Note. GB/T 24051-2020 General Framework for Environmental Management Material Flow Costing (ISO 14051.2011, IDT)

3 Terms and Definitions

Terms and definitions defined in ISO 14050 and ISO 14051 and the following terms and definitions apply to this document.

3.1

energyefficiency

The ratio or other quantitative relationship between output performance, services, goods or energy and input energy.

3.2

In order to achieve cooperation with the aim of reducing material and energy losses, the MFCA process is introduced into the supply chain as a part of its suppliers and/or customers.

an organization.

3.3

material efficiency

The ratio or other quantitative relationship between the output performance, product or service, and the input material.