ISO/TR 14049:2012-06 (E)

Environmental management - Life cycle assessment - Illustrative examples on how to apply ISO 14044 to goal and scope definition and inventory analysis

Contents

Page

Foreword v

Introduction vi

1 Scope 1

2 General 1

3 Examples of developing functions, functional units and reference flows 3
3.1 Context of ISO 14044 3
3.2 Overview 3
3.3 Identification of functions 5
3.4 Selection of functions and definition of functional unit 5
3.5 Identification of performance of the product and determination of the reference flow 6
3.6 Additional examples 6

4 Examples of distinguishing functions of comparative systems 6
4.1 Context of ISO 14044 6
4.2 Overview 7
4.3 Identification and selection of functions 8
4.4 Equivalence of reference flows 9
4.5 Adjusting for performance differences 10

5 Examples of establishing inputs and outputs of unit processes and system boundaries 11
5.1 Context of ISO 14044 11
5.2 Overview 12
5.3 Determining the product system's unit processes and their boundaries 12
5.4 Initial collection of data at each unit processes 15
5.5 Initial estimate of material and energy flows 16
5.6 Applying decision rules 18
5.7 Inputs, outputs and system boundaries established 19

6 Examples of avoiding allocation 19
6.1 Context of ISO 14044 19
6.2 Overview 20
6.3 Example of allocation avoidance by dividing the unit process to be allocated into two or more processes 21
6.4 Example of allocation avoidance by expanding the boundaries for comparison of systems with different outputs 21

7 Examples of allocation 23
7.1 Context of ISO 14044 23
7.2 Overview 24
7.3 Description of the examples 24

8 Example of applying allocation procedures for recycling 27
8.1 Context of ISO 14044 27
8.2 Overview 28
8.3 Description of the examples 29

9 Examples of conducting data quality assessment 38

9.1 Context of ISO 14044 38
9.2 Overview 39
9.3 Data requirements to establish the specific listing of sites 40
9.4 Requirements to characterize the quality of the data 41

10 Examples of performing sensitivity analysis 43
10.1 Context of ISO 14044 43
10.2 Overview 43
10.3 Description of the examples 44

Bibliography 48