



Technical Specification

ISO/TS 14076

Environmental management — Environmental techno-economic assessment — Principles, requirements and guidance

*Management environnemental — Évaluation technico-
économique environnementale — Principes, exigences et
recommandations*

**First edition
2025-06**

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Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principles of eTEAs	3
4.1 General	3
4.2 Two focuses, two perspectives	3
4.3 Basis of production, functional unit and reference flows	3
4.4 Iterative approach	3
4.5 Transparency	3
4.6 Comprehensiveness	4
4.7 Priority of scientific and economic approach	4
5 General description of an eTEA	4
5.1 Framework for TEA	4
5.1.1 General	4
5.1.2 Phases of TEA	5
5.1.3 Phases of LCA	5
5.2 Key features of an eTEA	5
5.3 General concepts of techno-economic and environmental boundaries	5
6 Methodological framework of an eTEA	6
6.1 General requirements	6
6.2 Goal and scope definition	6
6.2.1 General	6
6.2.2 Goal definition	6
6.2.3 Scope definition	7
6.3 Technical analysis	10
6.3.1 General	10
6.3.2 Collecting data	12
6.3.3 Computing metrics	12
6.4 Economic analysis	13
6.4.1 General	13
6.4.2 Defining parameters	13
6.4.3 Computing metrics	13
6.4.4 Incorporating economic influences outside the process system boundary	14
6.5 Life cycle assessment	15
6.6 Sensitivity analysis	15
6.7 eTEA interpretation: Performing analyses that combine TEA with LCA	15
6.7.1 General	15
6.7.2 Baselines of comparison	15
6.7.3 Metrics and analyses as defined in ISO documents	16
7 Documentation requirements	16
7.1 General requirements	16
7.2 Best practices	17
7.3 Digital files	17
Annex A (informative) Example eTEA	18
Annex B (informative) Selecting the basis of production	25
Bibliography	27

Foreword

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This document was prepared by Technical Committee ISO/TC 207, *Environmental management*, Subcommittee SC 5, *Life cycle assessment*.

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Introduction

During the process of researching, designing, developing and commercializing process systems, many decisions must be made concerning details such as the selection of unit operations, equipment types and sizes, operating conditions and procedures, mass and energy flows, financing contracts, sales prices and environmental releases. These decisions are made based on many indicators, especially technical indicators (e.g. product yield, process efficiency, quality), economic indicators (e.g. cost, profitability, returns on investment) and environmental indicators (e.g. greenhouse gas (GHG) emissions, resource depletion, freshwater consumption). These ultimately affect the total value of the process system to companies, clients, consumers, government and society.

An environmental techno-economic assessment (eTEA) characterizes process systems in terms of key environmental, technical (“techno”) and economic factors. These characteristics are represented by a collection of commonly understood metrics that can then be interpreted for decision-making purposes. Many assumptions must be made as a part of an eTEA can have a major impact on the results, with financial and environmental consequences throughout the life cycle of the process and its products. These assumptions can include the values of key parameters, analysis boundaries and the methods themselves. Because of its importance and the wide variability in methods for eTEAs, there is a need for practical guidance on their performance. Organizations can benefit significantly by providing clear and consistent guidance on how to conduct an eTEA.

Therefore, this document:

- establishes terminology and key definitions of common metrics used in eTEAs;
- provides requirements and guidance on how to conduct eTEAs;
- provides a framework for clearly documenting the results and the underlying assumptions used in an eTEA so that others can effectively interpret the results.

This document is intended for eTEA practitioners (i.e. people who conduct eTEAs, such as data gathering, making calculations or assessing and interpreting the results). Practitioners can include industry, government or academia.

An illustrative example of an eTEA is given in [Annex A](#).

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