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Petroleum and natural gas industries — Life-cycle costing —

Part 2: Guidance on application of methodology and calculation methods

Industries du pétrole et du gaz naturel — Estimation des coûts globaux de production et de traitement —

Partie 2: Lignes directrices relatives à l'application de la méthodologie et aux méthodes de calcul

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 15663 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 15663-2 was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum and natural gas industries*.

ISO 15663 consists of the following parts, under the general title *Petroleum and natural gas industries — Life-cycle costing*:

— *Part 1: Methodology*

— *Part 2: Guidance on application of methodology and calculation methods*

— *Part 3: Implementation guidelines*

Introduction

This part of ISO 15663 was developed in order to encourage the adoption of a common and consistent approach to life-cycle costing within the petroleum and natural gas industries. This will occur faster and more effectively if a common approach is agreed internationally.

This part of ISO 15663 has been prepared to provide guidance on the application of the methodology given in ISO 15663-1 [1] and on the calculations related to it.

It provides practical guidance towards the individual steps of the life-cycle costing process and aims to

— show how the potentials for added value can be achieved without life-cycle costing turning into a costly and time-consuming process;

— indicate how to structure the work within the process and define focus areas;

— transfer the experience of industry in applying the methodology, so that a common and consistent approach can be achieved.

It also promotes an understanding of the related methodologies and techniques and their application within the life-cycle costing framework.

Life-cycle costing is distinct from investment appraisal in that it is not concerned with determining the financial viability of a development. It is concerned only with determining the differences between competing options and establishing the options which best meet the owner's business objectives.

This part of ISO 15663 is based on the principles defined in IEC 60300-3-3, *Dependability management — Part 3: Application guide — Section 3: Life cycle costing*.

Petroleum and natural gas industries — Life-cycle costing —

Part 2:
Guidance on application of methodology and calculation methods

1 Scope

This part of ISO 15663 provides guidance on application of the methodology for life-cycle costing for the development and operation of facilities for drilling, production and pipeline transportation within the petroleum and natural gas industries.

This part of ISO 15663 also provides guidance on the application and calculations of the life-cycle costing process defined in ISO 15663-1.[1]

This part of ISO 15663 is not concerned with determining the life-cycle cost of individual items of equipment, but rather with life-cycle costing in order to estimate the cost differences between competing project options.

2 Terms, definitions and abbreviated terms

For the purposes of this part of ISO 15663, the following terms, definitions and abbreviated terms apply.

2.1 Terms and definitions

2.1.1
initial investment
investment outlay for a project

NOTE Also known as CAPEX.

2.1.2
present value
value of the project cash flow excluding the initial investment outlay

2.1.3
life-cycle costing
process of evaluating the difference between the life-cycle costs of two or more alternative options

2.2 Abbreviated terms

CAPEX	capital expenditure
FMECA	failure mode effect and criticality analysis
FV	future value
H,S&E	health, safety and environment
IRR	internal rate of return
NPV	net present value