



BSI Standards Publication

Guidelines for performance evaluation of treatment technologies for water reuse systems

Part 8: Evaluation of treatment systems based on Life Cycle Cost

National foreword

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The UK participation in its preparation was entrusted to Technical Committee B/505/50, Water reuse.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Guidelines for performance evaluation of treatment technologies for water reuse systems —

Part 8: Evaluation of treatment systems based on life cycle cost

*Lignes directrices pour l'évaluation des performances des techniques
de traitement des systèmes de réutilisation de l'eau —*

*Partie 8: Évaluation des systèmes de traitement fondée sur
le coût global*



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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 282, *Water reuse*, Subcommittee SC 3, *Risk and performance evaluation of water reuse systems*.

A list of all parts in the [ISO 20468](#) series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The purpose of this document is to more specifically define a methodology for evaluating the economic performance of treatment systems, which is covered in [ISO 20468-1:2018](#), Clause 7. The background to this document is the need to promote water reuse projects with cost-effective treatment systems in communities and industrial facilities in order to achieve sustainable water supply. A variety of stakeholders, including managers of water reuse projects and owners of water infrastructure and facilities, can select appropriate treatment systems through comprehensive performance evaluations using this document and the [ISO 20468](#) series.

The concept of the economic performance evaluation methodology has already been established based on life-cycle cost (LCC), comprising capital, operation and maintenance (O&M), and disposal costs in [IEC 60300-3-3](#). The economic performance evaluation methodologies of the petroleum and natural gas industries and building and constructed assets are defined in [ISO 15663](#) and [ISO 15686-5](#), respectively, based on the general standard of [IEC 60300-3-3](#). The importance of the economic evaluation, based on LCC considering the environmental impact, is also described in guidelines for selecting high-quality water infrastructure and facilities.^[14] With reference to these existing standards, this document provides a customized evaluation methodology for treatment systems in water reuse projects based on LCC, taking environmental impact into consideration. In this document there are no restrictions on applicable treatment systems, such as biological, physical or membrane separation.

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