

# TECHNICAL SPECIFICATION

**Electric energy supply networks – General aspects and methods for the maintenance of installations and equipment**



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# TECHNICAL SPECIFICATION

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**Electric energy supply networks – General aspects and methods for the maintenance of installations and equipment**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**ELECTRIC ENERGY SUPPLY NETWORKS – GENERAL ASPECTS  
AND METHODS FOR THE MAINTENANCE OF INSTALLATIONS  
AND EQUIPMENT**

## FOREWORD

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- the subject is still under technical development or where, for any other reason, there is the future but no immediate possibility of an agreement on an International Standard.

Technical Specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC TS 63060, which is a Technical Specification, has been prepared by IEC technical committee 8: System aspects of electrical energy supply.

The text of this Technical Specification is based on the following documents:

Enquiry draft	Report on voting
8/1470/DTS	8/1488/RVDTS

Full information on the voting for the approval of this Technical Specification can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- transformed into an International Standard,
- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

## INTRODUCTION

Maintenance (MA) and maintenance support provide an important contribution to ensure the reliability of components and electric installations throughout their operating life cycle. The correct functionality, performance, and reliability will be achieved by providing the necessary maintenance in conjunction with adequate design, construction, maintainability and installation quality, and by their proper usage. Other parameters besides maintenance affect the safe, secure, and reliable operation of electricity networks. For example: network topology, spare parts, new investment, technology, network conditions, know-how, staff, etc. The option(s) used is/are the responsibility of the company.

The extent and type of maintenance and maintenance support correspond to the type of equipment and installations, their constitution and required availability, as well as other factors such as operational and environmental condition, and operating experience.

Inappropriate, irregular or missing maintenance could lead to premature functional failures which reduce the availability of equipment and installations, could lead to consequential damage, and shorter asset life cycles. Functional failures can lead to operational consequences and need to be assessed accordingly. Safety aspects have to be considered at all times.

The purpose of this document is to describe, in general terms, the management methods, processes, and techniques with regard to the maintenance of installations and equipment, which are necessary to achieve public safety, reliable operation, and acceptable reliability for installations and equipment.

In this document, the term “network operator” and “system operator” are used for the network owner, asset manager, and maintenance provider.



# ELECTRIC ENERGY SUPPLY NETWORKS – GENERAL ASPECTS AND METHODS FOR THE MAINTENANCE OF INSTALLATIONS AND EQUIPMENT

## 1 Scope

This document provides guidance to develop maintenance requirements of installations and equipment in electric power networks. It is primarily meant for the operators of electric power networks, particularly those of public power supplies, including High-Voltage DC transmission (HVDC). This scope does not include:

- railway networks,
- installations of end consumer networks,
- installations for electric power generation.

Crises handling, e.g. in emergency situations, is not within the scope of this document.

NOTE Consumer networks (e.g. networks of chemical companies, traffic lights and street lighting) are installations which are not used to distribute electric energy to further consumers. The main scope covers public networks, but the general recommendations can be applied to other networks.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

For the purposes of this document the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

### 3.1

#### **maintenance**

combination of all technical and managerial actions intended to retain an object in, or restore it to, a state in which it can perform as required

[SOURCE: IEC 60050-192:2015, 192-06-01, modified – In the definition, "item" has been replaced with "object".] [1] <sup>1</sup>

### 3.2

#### **maintenance concept**

#### **maintenance policy**

definition of the maintenance objectives, line of maintenance, indenture levels, maintenance levels, maintenance support, and their interrelationships

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<sup>1</sup> Numbers in square brackets refer to the Bibliography.