



## Engineering Recommendation G76

Issue 2 2014 + Amendment 1 2016

Guide to the practical aspects of quality management associated with assessment of power system plant & products

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First published, 1996

### Amendments since publication

Issue	Date	Amendment
Amendment 1	2016	<p>Minor amendment to 'Foreword', 'Introduction' and 'Normative references' to include reference to BS EN 9001:2015. Clarified that this document generally follows BS EN 9001:2008 (which remains valid up to 2018), but reference to BS EN 9001:2015 is also relevant.</p> <p>Clause 5.5, Purchasing: Insertion of paragraph 2 relating to requirement for selection criteria and evaluation of third-party suppliers.</p> <p>Annex A: New item inserted for the checking of third-party supplier selection and evaluation criteria (related to Clause 5.5).</p> <p>Addition of Annex B to capture specific requirements for protection relays.</p> <p>Addition of Annex C to capture specific requirements for cables and cable accessories.</p> <p>Addition of Annex D to capture specific requirements for transformers.</p>
Issue 2	2014	<p>Major revision of ER G76 Issue 1, 1996.</p> <p>This issue constitutes a major technical revision, where the structure and technical content of this EREC has been completely rewritten to provide guidance on practical aspects of quality assessment as opposed to the certification of suppliers' quality management systems.</p> <p>Addition of Annex A to capture specific requirements for HV switchgear.</p>

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## Foreword

This Engineering Recommendation (EREC) is published by the Energy Networks Association (ENA) and comes into effect from date of publication. It has been prepared under the authority of the ENA Engineering Policy and Standards Manager and has been approved for publication by the ENA Electricity Networks and Futures Group (ENFG). The approved abbreviated title of this engineering document is “EREC G76”, which replaces the previously used abbreviation “ER G76”.

This issue cancels and replaces ER G76 Part 1 Issue 1 1996.

Annex A captures specific requirements and guidance for quality aspects of HV switchgear formerly in ER G76 Part 2(a) Issue 1 1996, which is now to be withdrawn.

Annex B captures specific requirements for quality aspects of protection relays.

Annex C captures specific requirements and guidance for quality aspects of cables and cable accessories formerly in ER G76 Part 2(b) Issue 1 1996, which is now to be withdrawn.

Annex D captures specific requirements and guidance for quality aspects of transformers formerly in ER G76 Part 2(c) Issue 1 1996, which is now to be withdrawn.

This EREC has been revised with direction from the ENA Standards Leaders Group to ensure it meets the requirements of the various ENA Panels and ENA Member Companies.

ENA ER G79 [N1] defines the procedure for the conformity assessment of plant and products for use by ENA Member Companies. It includes an assessment of quality of manufacture and initial assessment of the manufacturer’s quality management system. EREC G76 is complementary and is intended to provide detailed guidance on the practical aspects of carrying out these quality related assessments.

EREC G76 captures common requirements for quality assessment of all plant and products, where similar guidance for the quality assessment of specific plant and products is contained within annexes.

This EREC references a number of National and International Standard publications related to quality management systems. It is recognised that adherence to BS EN ISO 9001:2008 and/or BS EN ISO 9001:2015 is acceptable, given that certification to the 2008 version remains valid up to 2018.

This EREC is based on BS EN ISO 9001:2008 and the structure generally follows the Level 1 headings in Clause 7 of BS EN ISO 9001:2008, associated with the product realisation process. The content of this document is based on the guidelines for quality plans stated in BS ISO 10005. Although this EREC does not necessarily need to be read in conjunction with these Standards, they are useful references.

This issue constitutes a major technical revision, where the structure and technical content of this EREC has been completely rewritten to provide guidance on practical aspects of quality assessment as opposed to the certification of suppliers’ quality management systems.

This document is intended to be used by ENA Panel assessors and ENA Member Company representatives, who carry out quality assessment/surveillance visits to manufacturers/suppliers. It is also intended to assist those manufacturers/suppliers of power system plant and products to understand the practical aspects of implementing quality management systems that ENA Member Companies are particularly concerned with.

Where the term “shall” or “must” is used in this document it means the requirement is mandatory. Where the term “should” is used in this document it means the provision is a recommendation. The term “may” is used to express permission.

NOTE: Commentary, explanation and general informative material is presented in smaller type, and does not constitute a requirement.

## **Introduction**

ER G76 was first published in the infancy of ISO 9000 certification, where there was little experience and uptake by manufacturers/suppliers of accredited third party certification. ER G76 was in part produced to promote accredited 'Second Party' certification of quality management systems and to provide guidance to assessors, who carried out audit and certification of suppliers' quality management systems on behalf of ENA Member Companies, where no third party certification was available.

BS EN ISO 9001 has now been widely adopted by manufacturers/suppliers as the framework for quality management, where most companies seek to obtain and maintain third party certification. Confidence in and mutual recognition of accredited third party certification means ENA no longer carries out audit or certification (third party or second party) of suppliers' quality management systems.

NOTE: Certification to BS EN ISO 9001:2008 or BS EN ISO 9001:2015 is acceptable, within the relevant time constraints of the appropriate Standard (certification to the 2008 Standard remains valid up to 2018).

Given these developments the scope and objective of ER G76 has been fundamentally changed and is now concerned with assessment of practical aspects of quality management arrangements as opposed to auditing of quality management systems.

## **1 Scope**

This document provides guidance on the practical aspects of quality management that should be assessed as part of plant and product conformity assessment.

This document concerns how to assess the adequacy of practical arrangements, which are intended to assure the quality of manufactured/supplied plant and products, as opposed to assessing conformance against technical requirements.

The guidance in this document is intended to supplement the basic requirements for quality assessment stated in ENA ER G79 (all parts).

This document covers both initial assessment and on-going surveillance of manufacturer/supplier quality management arrangements.

This document does not cover auditing or certification of suppliers' quality management systems, which is the responsibility of the manufacturer/supplier.

## **2 Normative references**

The following referenced documents, in whole or part, are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

### **Standards publications**

BS EN ISO 9000:2005, *Quality management systems. Fundamentals and vocabulary*

BS EN ISO 9000:2015, *Quality management systems. Fundamentals and vocabulary*

BS EN ISO 9001:2008, *Quality management systems. Requirements*

BS EN ISO 9001:2015, *Quality management systems. Requirements*

BS ISO 10005:2005, *Quality management systems — Guidelines for quality plans*

ISO 10006:2003, *Quality management systems — Guidelines for quality management in projects*

### **Other publications**

[N1] ENA Engineering Recommendation G79, Part 1: *Guide to the assessment of power system plant & products for use by the Energy Networks Association*

## **3 Terms and definitions**

For the purposes of this document, the following terms and definitions apply in addition to those described in BS EN ISO 9000:2008 and BS EN ISO 9000:2015.

### **3.1**

#### **assessment**

comprehensive and systematic review of quality related aspects against the requirements in this EREC and the quality plan of the manufacturer/supplier

### **3.2**

#### **assessor**

technical representative nominated by an ENA Panel or ENA Member Company to conduct assessment/surveillance visits

### **3.3**

#### **customer**

ENA Panel that assesses or ENA Member Company that purchases plant and products

### **3.4**

#### **ENA**

Energy Networks Association

### **3.5**

#### **ENA Member Company**

company within the electricity industry, who is a member of ENA