



Engineering Recommendation G79 Part 1

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PROCEDURE FOR THE CONFORMITY ASSESSMENT OF PLANT & PRODUCTS FOR USE BY ENERGY NETWORKS ASSOCIATION MEMBER COMPANIES

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1 FOREWORD

This Guide explains the operation of the Energy Networks Association Conformity Assessment scheme for electricity transmission and distribution plant & products.

Part 1 of this guide outlines the general procedure for the conformity assessment of plant and products. Parts 2 of the guide relate to the detailed assessment process for the following products:

G79 part 2a	Switchgear
G79 part 2d	Protection

For the procedure for the assessment of any of the above products, Part 1 of the guide should be read in conjunction with the relevant Part 2.

The purpose of the scheme is to assess equipment, on behalf of Energy Networks Association (ENA) member companies, for use in UK transmission and distribution networks. This does not preclude individual companies, if they so wish, performing their own assessment.

The scheme is intended to ensure a consistent and robust approach to the assessment process, which will benefit ENA member companies and equipment manufacturers.

The Energy Networks Association Engineering team is responsible for operation and maintenance of the scheme.

2 INTRODUCTION

The Electricity at Work Regulations 1989 (the Regulations), made under the Health and Safety at Work etc Act 1974, apply to all electrical systems and equipment whenever manufactured, purchased or installed.

The regulations impose requirements with regard to the construction and maintenance of electrical systems and the putting into use of electrical equipment.

Regulation 4(1) of the Regulations states that, "All systems shall at all times be of such construction as to prevent, so far as is reasonably practicable, danger". The guidance notes on this regulation states that, "The safety of a system depends upon the proper selection of all the electrical equipment in the system and the proper consideration of the inter-relationship between the individual items of equipment".

Regulation 5 of the Regulations states that, "No electrical equipment shall be put into use where its strength and capability may be exceeded in such a way as may give rise to danger". The guidance notes on this regulation states that, "A knowledge of the electrical specification and the tests, usually based on the requirements of national or international standards, which have been carried out either by the manufacturer or by an accredited testing organization will assist the user in identifying the withstand properties of the equipment so that it may be selected and installed in order to comply with this regulation".

The emphasis of both these regulations is to put the responsibility on the user for proper selection based on an acquired knowledge of the equipment's strength and capability.

The Energy Networks Association conformity assessment scheme is intended to assist ENA member companies in meeting UK legislation on the selection of electrical plant and products, by ensuring that such equipment meets pre-determined functional and operational criteria.

The scheme includes the 'risk assessment' of non-conformance of the product, to relevant standards and/or specifications, to demonstrate that they may be acceptable. Individual ENA member companies have a duty to carry out 'Risk Assessment' in relation to the use of the product on their own system.

3 SCOPE AND TERMS OF REFERENCE

Assessments are managed by the relevant ENA Assessment Panel and undertaken by nominated assessment teams, consisting of specialist Engineers who assess the products on behalf of the ENA.

The procedure relies initially on self-certification by the manufacturer, however, site/works visits and witnessing of tests by ENA representatives may be conducted if considered necessary.

The terms of reference of the Assessment Panels are:

To assess, on behalf of the UK Network Operators, products of real interest to ENA member companies offered by manufacturers.

To advise on the conformance of the products offered for assessment against the relevant standards applicable to equipment for use on the UK Electricity Networks.

To periodically review the list of existing conforming products giving due regard to their age, their performance in service, changes in design and whether they are still in use on the networks.

Relevant products for assessment shall be suitable for general use in networks of ENA Member companies.

A major criterion for acceptance of a product for assessment is the interest and support of ENA Member Companies.

The relevant Assessment Panel will not consider applications unless the product has reached a point in its development where:

- Design meets most of the requirements of ENA member companies.
- Majority of type testing has been performed.
- Majority of documentation is available.

Assessments will include the following:

- Quality of manufacture (if appropriate);
- Review of type tests to relevant standards;
- Verification of conformance with standards and technical specifications;
- Performance or functional tests to agreed criteria;
- Usability and ergonomics;
- Site tests and/or field trials (if appropriate).

On satisfactory completion of the assessment process the Secretary of the respective panel shall recommend to the ENA to register satisfactory conformity assessment by the issue of an ENA Notice of Conformity Certificate for the product.

4 PROCEDURES FOR APPLICATION FOR ASSESSMENT AND FOR PROCESSING ASSESSMENT

The following procedures are summarized in a process flow chart shown in Appendix A.

4.1. Application

An application by electronic means, for assessment of conformity of equipment, should be made to the Secretary of the relevant Assessment Panel. Evidence of support from two ENA Member Companies should accompany the application, with confirmation that they have a positive and genuine commercial and technical