



## Engineering Recommendation G97

Issue 1 2016

Process for the connection of non-linear and resonant plant and equipment in accordance with EREC G5

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## **Foreword**

This Engineering Recommendation (EREC) is published by the Energy Networks Association (ENA). 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 G97".

## Introduction

Engineering Recommendation (EREC) G5 defines the good engineering practices applicable to the management of harmonic voltage distortion on Transmission Systems and Distribution Networks in the UK. It defines the technical process for the assessment of the connection of non-linear and resonant plant and equipment to the Transmission Systems and Distribution Networks in the United Kingdom.

This document, EREC G97, complements EREC G5 by providing guidance on aspects of the connection process that are beyond the scope of EREC G5. It provides a framework for the assessment of harmonic voltage distortion from non-linear and resonant plant and equipment as part of the connection process thus facilitating a consistent approach to connection across all Network Owners and Network Operators.

Where this Engineering Recommendation conflicts with the requirements of EREC G5 then the requirements of EREC G5 shall take precedence.

## 1 Scope

This Engineering Recommendation provides guidance on the connection application process for the connection of non-linear or resonant plant and equipment in accordance with EREC G5. In particular it provides guidance on the:

- Roles and responsibilities of the stakeholders involved in the application and connection process
- Harmonic data exchange
- Scope and timing of harmonic assessments
- Energisation and verification of harmonic compliance.

EREC G5 identifies three stages of assessment; this EREC considers only the third most rigorous stage of assessment.

## 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.

[N1] ENA Engineering Recommendation G5, Harmonic Voltage Distortion and the Connection of Non-Linear and Resonant Plant and Equipment to Transmission and Distribution Networks in the United Kingdom

## 3 Terms and definitions

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

### 3.1

#### Customer

A person, company or organisation connected to, or entitled to be connected to, a transmission or distribution network by a Network Owner.