



Engineering Recommendation G59

Issue 3 Amendment 7

01 September 2019

Recommendations for the Connection of
Generating Plant to the Distribution Systems of
Licensed Distribution Network Operators

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Amendments since publication

Issue	Date	Amendment
G59/1	1991	Revised incorporating Amendment 1 (1992) and Amendment 2 (1995)
G59/2	Aug 2010	Revised - replaced two previous Engineering Recommendations, ER G59/1 and its associated Engineering Technical Report ETR 113, and ER G75/1.
G59/2-1	March 2011	Revised Amendment 1 – Appendix A13.1 - Change to DC injection current limits
G59/3	Sept 2011	Major revision to the document to align with G83/2 and to cater for type tested equipment upto 50kW. Other areas revised included: <ul style="list-style-type: none"> • <i>Connection application and commissioning procedures</i> • <i>Connection and Commissioning Procedure for Power Stations above EREC G83/2 limits but less than 50kW or 17kW per phase using Type Tested Generating Units only</i> • <i>Connection and Commissioning Procedure for Power Stations above 50kW which use Type Tested Generating Units only</i> • <i>Voltage Unbalance</i> • <i>Generation capacity for single and split phase supplies</i> • <i>Generating Unit performance requirements for Type Tested Units</i> • <i>Over and Under Voltage Stability Tests</i> • <i>Frequency Drift and Step Change Stability Test.</i> • <i>Protection Settings</i> • <i>Revised Forms</i> • <i>Simplified application form</i>

G59/3	Nov 2013	<p>Correction of error.</p> <p>The error relates to the British Standard which is to be used to determine the 'flicker' contribution from small wind turbines.</p> <p>References to this standard are found at 9.6.2.1 and 13.8.5.5 of ER G59/3. The standard that should be referred to is BS EN 61400-12. However, the standard that was referred BS EN 61400-21 was incorrect. Therefore, to correct this error, the two references (i.e. at 9.6.2.1 and 13.8.5.5) have been changed and the description of the standard corrected at 3.2 (page 9) of ER G59/3. This will now read:</p> <p>BS EN 61400-12-1:2006 <i>Wind turbines. Power performance measurements of electricity producing wind turbines.</i></p>
G59/3-1	Aug 2014	Revised RoCoF settings in Section 10.5.7
G59/3-2	Sept 2015	<p>Revocation of Section 12.4 (f) – It is no longer a requirement to undertake an additional functional check of the LoM protection by removing one phase of the supply to the Generating Unit.</p> <p>Revision to section 12.3.1 (g) to include the provision of two options to carry out a functional test confirming that the Interface Protection has operated.</p> <p>Testing of RoCoF elements in Appendix 13.3. A discrepancy has been corrected between the wording contained in Section 12.4 and the testing requirements contained in Appendix 13.3 on how to undertake the test .</p> <p>Section 13.8.3.2 is repeated on page 130. Change to 13.8.3.3 and revise subsequent numbering.</p>
G59/3-3	Feb 2018	<p>Modifications to prevent the use of vector shift protection on all new installations from 01/02/2018, and setting out the requirements for RoCoF settings, again for installations commissioned on or after 01/02/2018. Consequential changes to the following clauses.</p> <p>Foreword; 2.10; 10.3.12-14; 10.5.1; 10.5.2; 10.5.7; 10.5.8; 12.4.1; 13.1; 13.3; 13.7.1; 13.7.3; 13.11 (13.11 deleted)</p>
G59/3-4	Jul 2018	<p>Modification to disallow the future use of VS protection and to provide new RoCoF requirements for type tested generation. Changes to the following clauses:</p> <p>Foreword; 1.1, 2.10, 9.3.7, 10.3.13, 13.1 Protection (b), 13.8.3.6</p>
G59/3-5	May 2019	<p>Modification to make reference to updated requirements in ENA Engineering Recommendation P28. Changes to the following clauses:</p> <p>3.2, 7.3.4d, 9.5.7, 9.5.9, 9.5.10, 13.6.3</p>
G59/3-6	Jun 2019	<p>Note added to the foreword and to 2.11 to make it clear that generation connected on or after 27 April 2019 must comply with G99.</p> <p>Modifications to Section 4 to remove unnecessary dated references.</p> <p>Modification to 12.4.1(b)(ii) to harmonize text with requirements of Section 13.3.</p>
G59/3-7	September 2019	<p>Modification to 10.5.7.1 to apply 1Hzs-1 RoCoF setting retrospectively to all generation <50MW. Consequential amendments to: 1.1, 2.1, 2.10, 6.1.1, 6.1.4, 10.3.6, 10.3.8, 10.3.12, 10.3.13, 10.3.14, 10.5.7, 10.5.8, 10.5.10, 10.5.11, 12.4.1, 13.7.1, 13.7.3</p>

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Foreword

This Engineering Recommendation (EREC) is published by the Energy Networks Association (ENA) and comes into effect from 01 September 2019. It has been prepared and approved for publication under the authority of the Great Britain Distribution Code Review Panel. The approved abbreviated title of this engineering document is “EREC G59”, which replaces the previously used abbreviation “ER G59”.

Generation commissioned on after 27 April 2019 must comply with EREC G99. EREC G59 is not applicable to generation commissioned on or after that date.