ISSUE 2.2

MICROGENERATION PRODUCT STANDARD: MCS 006

MCS Product Certification Scheme Requirements:

Small Wind Turbines

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This Standard has been approved by the Steering Group of the Microgeneration Certification Scheme.

This document was prepared by the MCS Working Group 3 'Small Wind Systems'.

REVISION OF MICROGENERATION STANDARDS

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Technical or other changes which affect the requirements for the approval or certification of the product or service will result in a new issue. Minor or administrative changes (e.g. corrections of spelling and typographical errors, changes to address and copyright details, the addition of notes for clarification etc.) may be made as amendments.

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1. FOREWORD

The following document contains provisions, which, through reference in this text, constitute normative or informative provisions of this document MCS 006. At the time of publication, the editions indicated were valid. All documents are subject to revision, and parties applying this document MCS 006 are encouraged to investigate the possibility of applying the most recent editions of the documents referenced.

The following document MCS 006 issue 2.1 is a minor update to issue 2.0 which was a major update to MCS 006 issue 1.5. It is available for reference from the date of publication 15 January 2014. Manufacturers or importers of microgeneration systems who have certificated a microgeneration product in accordance with MCS 006 may commence working in accordance with this update from 15 January 2014. Manufacturers or importers of microgeneration systems who have certificated a microgeneration product in accordance with MCS 006 prior to 15 January 2014 must comply with this update from 15 January 2019. Manufacturers or importers of microgeneration systems who certificate a microgeneration product in accordance with MCS 006 after 15 January 2014 must comply with this update from 15 January 2017.

The exception to the above paragraph is that section 8.2 must be complied with in its entirety from 15 January 2014.

For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

2. INTRODUCTION

This document identifies the evaluation and assessment requirements and practices for the purposes of certification and listing of Small Wind Turbines. Certification, listing and approval of products is based on evidence acceptable to the certification body:

- that the product meets this standard;
- that the manufacturer has staff, processes and systems in place to ensure that the product delivered meets this standard.

and on:

- periodic audits of the manufacturer including testing as appropriate;

- compliance with the contract with the certification body for listing and approval including agreement to rectify faults as appropriate.

3. SCOPE

This scheme provides ongoing independent, third party assessment and approval of companies who wish to demonstrate that their small wind turbines with rated electrical power outputs up to 50 kW (measured at a wind speed of 11.0 m/s) and:

a) with a rotor swept area smaller than or equal to 200m^2 meet and continue to meet the requirements of the RenewableUK Small Wind Turbine Standard (15 January 2014)[1]; or,

b) meet and continue to meet the requirements of the most recent edition of IEC 61400-1 Wind Turbines – Design Requirements and selected requirements of the RenewableUK Small Wind Turbine Standard (15 January 2014).

For information purposes please note:

1. The RenewableUK Small Wind Turbine Standard (15 January 2014) requires conformity with almost all of the IEC 61400-2 edition 3 Small Wind Turbine Standard.

2. The IEC 61400-2 edition 3 Small Wind Turbine Standard applies to all wind turbines with a rotor swept area smaller than or equal to 200m^2, generating electricity at a voltage below 1000 V AC or 1500 V DC for both on-grid and off-grid applications.

3. The definition of a small wind turbine is fully described in IEC 61400-2, but includes all subsystems such as protection mechanisms, internal electrical systems, mechanical systems, support structures, foundations and the electrical interconnection with the load. A small wind turbine system includes the wind turbine itself including support structures, the turbine controller, the charge controller / inverter (if required), wiring and disconnects, the installation and operation manual(s) and other documentation.

[1] Previously the RenewableUK Small Wind Turbine Standard was published as the BWEA Small Wind Turbine Performance and Safety Standard.

4. The MCS scheme limits the scope of MCS 006 to small wind turbines with rated electrical power outputs up to 50 kW (measured at a wind speed of 11.0 m/s). To allow the MCS scheme to cater for wind turbines of more than 200m^2 swept area but less than 50kW rated electrical power the IEC 61400-1 Wind Turbines – Design Requirements standard is also available.

4. APPLICATIONS TO JOIN THE SCHEME

Applications should be made to an accredited certification body operating this scheme, who will provide the appropriate application form and details of the applicable fees.

5. MANAGEMENT SYSTEMS CERTIFICATION

Manufacturers shall operate a documented manufacturing quality control system, in accordance with the requirements of MCS 010 "Generic Factory Production Control Requirements".

6. CERTIFICATION AND APPROVAL

Certification and approval are based on the following:

Evidence of compliance with:

a) the requirements of the RenewableUK Small Wind Turbine Standard (15 January 2014); or,

b) the requirements of the most recent edition of IEC 61400-1 Wind Turbines – Design Requirements and the following requirements of the RenewableUK Small Wind Turbine Standard (15 January 2014):

Foreword
Section 1: General Information, excepting 2.3 Scope
Section 2: Acoustic Noise Measurement
Section 3: Power Performance Testing
Section 4: Compliance with IEC 61400-2 is not required except for: 11 (Documentation Requirements, insofar as required by the RenewableUK Small Wind Turbine Standard); 12 (Wind Turbine Markings))
Section 5: Reporting
Section 6: Certification, except substituting IEC 61400-1 for IEC 61400-2
Section 7: Variants and Modifications
Section 8: Ongoing Obligations
Section 9: References

Evidence of compliance is accepted in accordance with MCS 011 'Testing acceptance criteria'.

c) Verification of the establishment and maintenance of the manufacturing company's quality management system in accordance with the Factory Production Control requirements (FPC).

Applications for a range of common products (product families) will be dealt with on a case by case basis generally in accordance with the guidance given in Section 7 of the RenewableUK Small Wind Turbine Standard (15 January 2014) on the basis that a product family can be considered to be conceptually similar to changes to a product.

A certificate is awarded following demonstration of satisfactory compliance with this standard and this scheme document, taking into account any limitations imposed by this standard and other appropriate guidelines and satisfactory verification/assessment of the manufacturer's Factory Production Control and technical documentation.

Certificates contain the name and address of the manufacturer, model and reference number of the wind turbine, this test standard, a unique certificate reference number and the issue number and date.

Certificates are valid from the date of issue and are maintained and held in force subject to satisfactory completion of the requirements for maintenance of certification (see item 7) but remain the property of the issuing certification body.

Details of the manufacturer and the certificated product(s) are listed on the website at www.mcscertified.com

7. TECHNICAL DOCUMENTATION

A full set of documentation for the product as described in the RenewableUK Small Wind Turbine Standard (15 January 2014) Section 6 (or if applying para 6.b. of this MCS standard then substituting IEC 61400-1 for IEC 61400-2) must be submitted for review. This documentation shall be presented in English and shall be such that it can be assured that the products submitted for test are equivalent to those that are to be manufactured for normal production.

8. MAINTENANCE OF CERTIFICATION AND LISTING

Certificates and listing are maintained and held in force subject to satisfactory completion of the following requirements for maintenance of certification:

8.1 FACTORY AUDITS

Certification is maintained through annual FPC quality system audits, which shall include a detailed check that the product being manufactured is to the same specification as the product tested.

8.2 PRODUCT AUDITS AND OTHER ONGOING OBLIGATIONS

Product audits will be conducted as follows:

8.2.1 review of the product technical data files including materials.

8.2.2 review of end of line tests in accordance with the manufacturer's quality plan.

8.2.3 repeat testing of elements from the product standard as appropriate to confirm that the product continues to meet the requirements for certification and listing.

8.2.4 certification is otherwise maintained as described in section 8 of the RenewableUK Small Wind Turbine Standard (15 January 2014) which includes provision for changes to the product or processes to be notified to the Certification Body in advance of implementation, unless otherwise agreed with the Certification Body.

9. CERTIFICATION MARK AND LABELLING

All approved products listed under this Scheme shall be traceable to identify that they have been tested and certificated in accordance with the requirements of the test standard. See below for details.

The Supplier shall use the Certification Mark(s) only in accordance with their Certification Body's instructions.

An example of the Certification Mark(s) that can be used for this Scheme is as follows:

From the 1st December 2019 the new MCS Certification Mark is available for use:

MCS

CERTIFIED

Prior to the 1st December 2019 but still in use until a product is phased out or a Manufacturer wishes to migrate over to the new MCS Certification Mark:

APPROVED PRODUCT

MCS

Certificate Number MCS "XXX"

"Description of the Technology certificated"

Where 'XXX' is the certificate number, and the logo of the Certification Body issuing the certification would sit on the right-hand side of the logo.

Companies may only use the Mark while the certification is maintained.

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AMENDMENTS ISSUED SINCE PUBLICATION

Document Number	Amendment Details	Date
1.1	'UK' removed from scheme name; 'Department of Trade and Industry' MCS mark replaced by 'BERR 'MCS mark	11/01/2008
1.2	Revision details added; BRE Certification Limited mark replaced by BRE Global mark	25/02/2008
1.3	Gemserv details added as Licensee. Document reformatted to reflect brand update. References to BERR updated to DECC, MCS logo updated accordingly. Website and email addresses updated to reflect new name.	01/12/2008
1.4	Quality review	10/01/2009
1.5	MCS Mark updated Update to BWEA revision 29 Feb 2008 Size limit modified to be 0 - 50kW. Repetition of underlying standards eliminated. Product family guidance given Tighter definition of compliance.	10/07/2009
2.0	Given revision number 2.0 to reflect major changes in underlying references: Revised following publication of IEC 61400-2 edition 3 (available as an FDIS pre-release of the official standard with IEC reference number 88/465/FDIS), and corresponding publication of a revision to the BWEA standard, now titled RenewableUK Small Wind Turbine Standard (01 October 2013).	01/10/2013

	Name adjusted to align with international standards. Option of using 61400-1 added with removal of 200m2 swept area constraint if used. Following initial consultation: Sunset and sunrise modified to 0-3-5 years	
2.1	Minor change following final publication of IEC 61400-2 edition 3.0 and corresponding minor changes and errata in Renewable UK Small Wind Turbine Standard.	15/01/2014
2.2	MCS Mark Updated. Rebranding of document, update of email and website addresses and cosmetic changes.	01/12/2019