



IECRE OPERATIONAL DOCUMENT

IEC System for Certification to Standards relating to Equipment for use in Renewable Energy applications (IECRE System)

Acceptance of RECB





THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2018 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester.

If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

Useful links:

IEC publications search - www.iec.ch/searchpub

The advanced search enables you to find IEC publications by a variety of criteria (reference number, text, technical committee,...).

It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released.

Available on-line and also once a month by email.

Electropedia - www.electropedia.org

The world's leading online dictionary of electronic and electrical terms containing more than 30 000 terms and definitions in English and French, with equivalent terms in additional languages. Also known as the International Electrotechnical Vocabulary (IEV) on-line.

Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: csc@iec.ch.



IECRE OD-550-1

Edition 4.0 2018-06-18

IECRE OPERATIONAL DOCUMENT

**IEC System for Certification to Standards relating to Equipment for use in
Renewable Energy applications (IECRE System)**

Acceptance of RECB

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

PRICE CODE

ZZ

CONTENTS

CONTENTS2

1 Objectives3

2 Definitions and acronyms3

3 Certification schemes3

4 Requirements3

5 RECB Acceptance process5

6 Re-assessment.....8

7 Confidentiality8

1 Objectives

This Operational Document gives the procedures for accepting new entrant RECBs into the IECRE system, and reassessment of RECBs previously approved as part of the WE (Wind Energy) Sector.

The basic acceptance procedure is given in the WE-OMC RoP and this operational document gives the detailed procedure. The assessment is based on peer assessment in line with ISO/IEC 17040.

The IECRE scheme intends to promote high standards, transparency and fair competition in the industry and as such, the focus of the assessment will therefore be on the quality of work performed.

2 Definitions and acronyms

Definitions are given in IEC WE-OMC RoP and ISO/IEC 17040.

CB is used to cover both RECB and new entrance candidate RECB. RoP:

Rules of Procedure

3 Certification schemes

There are presently two schemes defined under which an RECB can be accepted:

- Type and component certification
- Project certification

These schemes are defined WE-OMC RoP and the related operational documents OD501 for type and component certification respectively OD502 for project certification.

4 Requirements

The WE-OMC RoP gives the basic requirements and procedure for acceptance of an RECB. The basic requirements are amended and further detailed in this chapter.

4.1 The RECBs to be reassessed and the new entrance candidates must be accredited by an IAF/MLA accreditation body per ISO/IEC 17065.

The RECBs to be reassessed must be accredited by an IAF/MLA accreditation body per ISO/IEC 17065 with the scope including one or several of the following IECRE system schemes:

- a. Type and component certification
- b. Project certification

The new entrance candidate RECBs shall be accredited by an IAF/MLA accreditation body per ISO/IEC 17065 with the scope including the applicable IECRE scheme or an equivalent scheme. Equivalent scheme shall be understood as a certification scheme for the wind energy sector having the following features:

- a. Covers component, type respectively project certification
- b. Organized in modules, with intermediate conformity statement for each module
- c. Has design review, independent load analysis, measurements and testing as well as inspections activities
- d. Has equivalent level of detail for the assessment activities

- 4.2** Active participation in SG550 which apart from sharing the workload assigned to SG550 also implies participation and presence in more than half of its face to face meetings. The presence may be through web based participation but physical presence is required for minimum one meeting per year.
- 4.3** Knowledge and understanding of IECRE system rules and the WE-OMC procedures and related technical codes and standards relevant for the scheme. The CB shall have implemented their own procedures and instructions to ensure compliance.
- 4.4** State of the art knowledge (active participation in IEC TC88 WG or local mirror groups e.g. blade design to understand state of the art).
- 4.5 Human Resources:**
- a. The CB shall limit subcontracting to cover maximum 1/3 of the technical certification work.
 - b. The CB shall have a minimum of 2 experts available in each technical area
 - c. The CB shall have implemented a system for qualification of its technical certification staff. The system shall include training programs (theoretical and practical) relevant to the type of certification work covered by the qualification. The system shall also address the maintenance and updating of qualifications.

4.6 Experience:

4.6.1 Type and component certification:

Both RECBs subject to reassessment and new entrant candidate RECBs shall demonstrate that it has sufficient experience or that it has maintained the experience by issuing 3 type certificates for different wind turbine types according to IECRE or equivalent scheme during the last two years (for new entrance candidate RECB) or since the last peer assessment (for RECB). An equivalent scheme shall at least include independent load analysis, manufacturing evaluation, type testing and design evaluation.

One of the type certificates could be replaced by ongoing certification work per IECRE or equivalent scheme. In this case the process should be at a stage where certification reports are available at least for loads and critical components and at least one conformity statement. Or one type certificate may be replaced by multiple component certificates such that the component certificates make out the full scope of a type certificate. For clarity sake, a minimum of 2 full type certificates shall be available.

If this requirement is not fulfilled, additional peer assessment will be required as outlined in chapter 5.5.

4.6.2 Project certification:

Both RECBs subject to reassessment and new entrant candidate RECBs shall demonstrate that it has sufficient experience or that it has maintained the experience by issuing 3 project certificates according to IECRE or equivalent scheme during the last five years (for new entrance candidate RECB) or since the last peer assessment (for RECB). An equivalent scheme shall at least include independent integrated load analysis, design evaluation, manufacturing evaluation, installation and commissioning. A project certificate may be replaced by multiple conformity statements such that the conformity statements make out the full scope of a project certificate. Two of the project certificates shall be for a deep water offshore project and with more than 5 wind turbines.

If this requirement is not fulfilled, additional peer assessment will be required as outlined in chapter 5.5.

4.6.3 Onshore Project design certification:

Both RECBs subject to reassessment and new entrant candidate RECBs shall demonstrate that it has sufficient experience or that it has maintained the experience by issuing 3 project design certificates according to IECRE or equivalent scheme during the last five years (for new entrance candidate RECB) or since the last peer assessment (for RECB). An equivalent scheme shall at least include site specific load analysis, design evaluation. A project design certificate may be replaced by multiple conformity statements such that the conformity statements make out the full scope of a project design certificate.

If this requirement is not fulfilled, additional peer assessment will be required as outlined in chapter 5.5.

4.6.4 Offshore Project design certification:

Both RECBs subject to reassessment and new entrant candidate RECBs shall demonstrate that it has sufficient experience or that it has maintained the experience by issuing 3 project design certificates according to IECRE or equivalent scheme during the last five years (for new entrance candidate RECB) or since the last peer assessment (for RECB). An equivalent scheme shall at least include independent integrated load analysis and design evaluation. A project design certificate may be replaced by multiple conformity statements such that the conformity statements make out the full scope of a project design certificate. Two of the project design certificates shall be for a deep water offshore project and with more than 5 wind turbines.

If this requirement is not fulfilled, additional peer assessment will be required as outlined in chapter 5.5.

4.6.5 Site suitability evaluation:

Both RECBs subject to reassessment and new entrant candidate RECBs shall demonstrate that it has sufficient experience or that it has maintained the experience by issuing 3 site suitability evaluation conformity statements according to IECRE or equivalent scheme during the last five years (for new entrance candidate RECB) or since the last peer assessment (for RECB).

If this requirement is not fulfilled, additional peer assessment will be required as outlined in chapter 5.5.

5 RECB Acceptance process

5.1 RECB Application Form

Each CB subject to assessment shall submit the completed form AD 001 to the IECRE Secretary. New entrance candidate RECBs shall submit AD 001 through the national Member Body for their endorsement.

The IECRE Secretary will review the received AD 001 for completeness before proceeding with the assessment planning.

5.2 Peer assessors

Each peer assessor shall be approved by WE-OMC and shall as a minimum meet the following criteria:

- a. 5 years of experience in conformity assessment of which the last 2 years within wind industry.
- b. 5 years of experience in the wind industry including at least 2 years of experience from one relevant technical area.
- c. fluent in the English language.

Each RECB shall at least provide two peer assessors to the pool of approved peer assessors. The application form AD 002 shall be used for new peer assessors. The peer assessment planning should be such that all peer assessors are utilised at least once every three years.

The IECRE Secretary shall maintain the list of peer assessors meeting the qualification requirements and approved by WE-OMC. This list shall be made available to WE-OMC and SG 550.

All qualified peer assessors shall receive training on the IECRE peer assessment rules and best practices once every three years. Details and further requirements related to training are given in a separate document.

5.3 Assessment team

The IECRE Secretary shall select the peer assessors from the above list of qualified peer assessors. The assessment team shall consist of two assessors from two different RECBs and they should have expertise in at least two different technical areas.

The IECRE Secretary or an appointed qualified assessor will participate as lead assessor.

IECRE Secretary shall inform the RECB/applicant RECB of the names of the assessors at least two months before the planned date of the peer assessment.

5.4 Assessment preparation

The preparation for the assessment consists of:

- For the lead assessor:
 - to define, in agreement with the RECB/applicant RECB and the two peer assessors, the dates for the peer assessment
 - to prepare, in coordination with the two selected peer assessors, the assessment plan (describing the content of the assessment and the sharing of works between the assessors); and to send it to the applicant RECB, at least two weeks before the beginning of the assessment
- For the RECB/Applicant RECB: to prepare the part of the assessment report OD 004 which can be completed in advance and submit to the lead assessor.

5.5 Assessment

5.5.1 Duration

The assessment covering one scheme will last for maximum two full consecutive working days allowing for around 8 hours of interviews and document review and provided the requested information is readily available in English language. If two schemes are to be covered, two additional working days for one peer assessor is required (this may be an additional peer assessor or an extension of the duration for the full team of peer assessors).

In case the requirement in chapter 4 related to experience is not fulfilled (new entrance candidate RECB or RECB with limited experience since the last peer assessment), the assessment will last for three full consecutive working days, allowing one extra day for additional vertical assessment, i.e. a complementary technical assessment on at least two technical areas (one for each selected peer assessor).

To extend the scope for an RECB qualified for type and component certification to also include project related certification, the following applies:

- a) **Site suitability evaluation:** No additional peer assessment required. Demonstration through correspondence of additional required competency in site assessments to be evaluated by the original peer assessment team.
- b) **Onshore Project Design Certification (including site suitability evaluation):** No additional peer assessment required. Demonstration through correspondence of additional required competency in site assessments and civil engineering to be evaluated by the original peer assessment team.
- c) **Offshore Project Design Certification:** The RECB shall demonstrate that it has sufficient experience by issuing 3 design evaluation conformity statements according to IECRE equivalent scheme during the last five years including at least independent integrated load analysis and sub structure. Two of these conformity statements shall be for locations with significant wave loading and with more than 5 wind turbines.

The scope for offshore project design certification also covers onshore project design certification.

An additional assessment is required and the assessment will last for maximum two full consecutive working days allowing for around 8 hours of interviews and document review provided the requested information is readily available in English language. The lead assessor will attend corresponding to one working day as the review of the management system is already done for the initial RECB assessment.

In case the requirements above related to experience are not fulfilled, the assessment will last for three full consecutive working days, allowing one extra day for additional vertical assessment, i.e. a complementary technical assessment on at least two technical areas (one for each selected peer assessor).

- d) Onshore Project Certification:** The RECB shall demonstrate that it has sufficient experience by issuing 3 project certificates (alternatively conformity statements covering the full scope of a project certificate) according to IECRE equivalent scheme during the last five years including at least independent integrated load analysis, foundation design evaluation, manufacturing surveillance, installation and commissioning.

An additional assessment is required and the assessment will last for maximum two full consecutive working days allowing for around 8 hours of interviews and document review provided the requested information is readily available in English language. The lead assessor will attend corresponding to one working day as the review of the management system is already done for the initial RECB assessment.

In case the requirements above related to experience are not fulfilled, the assessment will last for three full consecutive working days, allowing one extra day for additional vertical assessment, i.e. a complementary technical assessment on at least two technical areas (one for each selected peer assessor).

An RECB approved for Onshore Project Certification will also be approved for Onshore Project Design Certification (including site suitability evaluation).

- e) Offshore Project Certification:** The RECB shall demonstrate that it has sufficient experience by issuing 3 project certificates (alternatively conformity statements covering the full scope of a project certificate) according to IECRE equivalent scheme during the last five years including at least independent integrated load analysis, sub structure design evaluation, manufacturing surveillance, installation and commissioning. Two of these conformity statements shall be for locations with significant wave loading and with more than 5 wind turbines.

The scope for offshore project certification also covers onshore project certification and project design certification.

An additional assessment is required and the assessment will last for maximum two full consecutive working days allowing for around 8 hours of interviews and document review provided the requested information is readily available in English language. The lead assessor will attend corresponding to one working day as the review of the management system is already done for the initial RECB assessment.

In case the requirements above related to experience are not fulfilled, the assessment will last for three full consecutive working days, allowing one extra day for additional vertical assessment, i.e. a complementary technical assessment on at least two technical areas (one for each selected peer assessor).

5.5.2 Assessment scope

The assessment shall take place at the CB site where its most important certification activities are carried out.

The assessment starts with an initial meeting:

- gathering all 3 assessors, and the RECB representatives
- where the assessment objectives, organisation, timing, participants are confirmed The applicant RECB shall be evaluated against all requirements in chapter 4 of the present document.

The assessment activities consist of:

- Organisation documents (Organigram, Quality Manual) review with focus on impartiality.
- Accreditation documents (accreditation certificate, accreditation audit report) review

- Certification process documentation (procedures, templates) review with focus on the specifics for the IECRE system.
- Qualification files (internal resources and sub-contractors) review • Project files review, including:
 - Records (contract review, evaluation review, certification decision, annual reporting ...)
 - Identification of the certified wind turbine/component
 - Standards considered (all relevant standards for type certification shall be mentioned)
 - Technical certification documents (evaluation plan, evaluation reports, independent calculation results and other relevant reports)
 - Final evaluation (review by someone not taking part of the review/evaluation work)
 - Deliverables (conformity statement, certificates)
 - Outstanding issues, conditions, limitations (type certificate must not have any open issues)
 - Certification decision (background for decision documented)
 - Annual reporting (demonstrate that this is implemented)
 - 2½ year surveillance (demonstrate that this is implemented)

The applicant RECB shall ensure all necessary information and/or documentation is made available to the peer assessors. This will also include all documents referred in the technical certification documents.

5.5.3 Assessment report

The reporting template OD 004 shall be used for the reporting from the peer assessment. Any non-resolved deviations shall be highlighted in the conclusion of this report. For further requirements to reporting and handling of non-conformities, see the WE-OMC Rules of Procedures. For RECB re-assessment non-conformities shall be closed within 3 months.

The conclusions of the assessment report shall be agreed upon by the assessment team (lead assessors, and the two peer assessors), and by the CB representative.

The summary assessment report, is established by the IECRE Secretary within 10 days from the assessment, and excludes all confidential information, such as the name of the staff interviewed and the sensitive identifying information (name of customer, project or wind turbine names ...). The summary report will be sent to the WE-OMC for voting and provisional approval allowing RECB to start/continue operating. Subsequently the summary report will be sent to REMC for final approval per the IECRE system rules.

6 Re-assessment

The acceptance of the RECB is valid for a period defined in the WE-OMC Rules of Procedures.

The IECRE Executive Secretary will notify RECBs early in the year as to when their reassessment is required for that year. The RECB shall then apply for re-assessment within one month of the notification. In case of unsuccessful re-assessment or refusal, the RECB will be suspended.

7 Confidentiality

Confidentiality in the RECB acceptance process is considered as essential, as peer assessors are originating from competitive RECB, and certification information and documentation

should be confidential within the RECBs. The protection of confidential information is managed as follow:

- Each person, when submitting his request to become a peer assessor to the IECRE Secretary, commits (to the IECRE and to the concerned RECB/applicant RECB) to keep secret all information he will received from the RECB/applicant RECB (and its customers) during the complete acceptance process, for a duration not shorter than 10 years.
- Each (applicant and accepted) RECB will add in its contracts with its own customer a clause allowing the participation of third part observers (in line with §4.1.2.2.c.3 of ISO/IEC 17065)

**INTERNATIONAL
ELECTROTECHNICAL
COMMISSION**

3, rue de Varembé
PO Box 131
CH-1211 Geneva 20
Switzerland

Tel: + 41 22 919 02 11
info@iec.ch
www.iec.ch

**IEC SYSTEM FOR CERTIFICATION TO STANDARDS
RELATING TO EQUIPMENT FOR USE IN RENEWABLE
ENERGY APPLICATIONS (IECRE SYSTEM)**

IECRE Secretariat c/o IEC
3, rue de Varembé
PO Box 131
CH-1211 Geneva 20
Switzerland

Tel: + 41 22 919 02 11
secretariat@iecre.org
www.iecre.org