

Terms of Reference (TOR)

ECOWAS Certification for Sustainable Energy Skills (ECSES) Programme - Phase 1

1. BACKGROUND

1.1. ABOUT IRENA

The International Renewable Energy Agency (IRENA) is an inter-governmental organisation, mandated by member states around the world to promote the widespread and increased adoption, and sustainable use of all forms of renewable energy. In accordance with its Statute, IRENA's objective is to "promote the widespread and increased adoption and the sustainable use of all forms of renewable energy". This concerns all forms of energy produced from renewable sources in a sustainable manner. These forms include bioenergy, geothermal energy, hydropower, ocean, solar and wind power.

1.2. PROJECT BACKGROUND

For successful renewable energy installations and projects, there is a need for quality assurance at various levels. This includes quality assurance of equipment e.g. through the establishment and enforcement of product standards. However, high-quality products will only provide the desired services if renewable energy systems are designed, installed and maintained by highly qualified individuals.

Cognizant of this need in West Africa, IRENA and the Economic Community of West African States (ECOWAS) members, coordinated by the ECOWAS Centre for Renewable Energy & Energy Efficiency (ECREEE) decided to support the development of the regional market for renewable energy services by establishing a certification scheme for solar photovoltaic (PV) installers. This will provide the possibility for solar PV installers to obtain a quality certification that is recognized in all ECOWAS member states. IRENA is supporting ECREEE in putting in place a regionally recognised certification scheme for solar PV installers. The need for certifying the skills of solar PV technicians is also highlighted in several of the National Renewable Energy Action Plans (NREAPs) developed by the ECOWAS member states.

IRENA, ECREEE, GIZ and other partners have been working on the establishment of a regional certification scheme (RCS) for off-grid solar PV installers, known as the ECOWAS Certification for

Sustainable Energy Skills (ECSES) Programme since 2014. This process started with the development of the Job Task Analysis (JTA) for installers of off-grid solar PV systems. The final version of the JTA which was validated at a regional workshop with all 15 ECOWAS member states held in Praia, Cabo Verde in December 2015. The JTA is a trilingual document (English, French and Portuguese).

Training institutions (TIs) from selected ECOWAS countries have been identified for piloting and participating in the certification scheme based on criteria derived from the JTA.

2. OBJECTIVE

The overall objective of the regional certification programme is to support the development of renewable energy (RE) markets in the ECOWAS region by improving the skills of RE professionals through a regional certification system, which is to be based on unified and harmonized technical guidelines (JTA) for each target group and skills level.

Phase 1 of this programme aims to carry out all the required tasks (elaborated in the following section) for the operationalisation of the RCS for installers of off-grid solar PV systems (standalone solar PV with single or multiple modules).

3. SCOPE OF WORK

This assignment entails the tasks required of the consulting services entity related to Phase 1 of the RCS (i.e., certification for installers of off-grid solar PV systems). The scope of work of the consulting services entity includes but it is not strictly limited to the activities detailed in the sections below.

3.1. GENERAL PREPARATION

3.1.1. Inception

During the inception phase the consulting services entity will:

- i. Review background material (JTA, workshop reports, ToR of the Technical Committee, etc.)
- ii. Elaborate the proposed methodology and develop workplan for the assignment in conjunction with IRENA and ECREEE for their approval

- iii. Prepare materials and conduct 2-day inception workshop¹ in Praia, Cape Verde

Deliverable 1: Methodology and workplan approved by IRENA and ECREEE;

Deliverable 2: Successful completion of a 2 day inception workshop in Praia, Cape Verde and elaboration of workshop report

3.1.2. Structure and operations of programme

The consulting services entity will support IRENA and ECREEE in elaborating the governance/oversight structure of the RCS, tailoring the best practices from successful certification schemes internationally to the West African context, and suggest the functions needed by the 'Regional Certification Body', the entity responsible for development and operation of the scheme. The consulting services entity will develop a framework document for the programme, outlining amongst other things:

- i. Structure of the Regional Certification Body (as a separate internal document);
- ii. Roles and responsibilities of the various institutions involved in the Regional Certification Scheme;
- iii. Rules of the scheme;
- iv. Certification pathway with details and procedures for each step;
- v. Other information determined relevant by the consulting services entity and stakeholders;
- vi. Ways to ensure long-term sustainability of the training programme looking at commercial/business aspects, market linkages, demand creation, etc.;
- vii. Mechanism for feedback and continuous improvement of the scheme (e.g. updating of the JTA and the examination contents);
- viii. Measures to ensure that the regional certificate gains relevance in the market (e.g. encourage public institutions procuring PV systems to require suppliers having certified installers).

Deliverable 3: Report on the structure of the regional certification body (Internal)

Deliverable 4: RCS Programme framework document (rules, responsibilities, procedures, etc.)

¹ The date of the inception workshop may be postponed subject to IRENA requirement

The project team of the consulting services entity may be required to present the aforementioned deliverables at a regional workshop to the TC, IRENA, ECREEE and other stakeholders

3.2. CONTENT DEVELOPMENT FOR THE Regional Certification Scheme

3.2.1. Develop examination contents and procedures

The consulting services entity will be responsible for

- i. The development of examination procedures manual, including entry criteria, (looking at ISO standard 17024 requirements, where relevant) for the regional exams in English and French;
- ii. The development of a database of examination questions for at least 10 unique exams covering all aspects of the JTA in English and French.

Deliverable 5: Examination procedures manual in English and French

Deliverable 6: Database of examination questions in English and French

3.2.2. Curricula review and improvement

Review the relevant curricula of each of the 21 selected training institutes including the following tasks:

- i. For each training institute provide targeted and actionable recommendations (in English or French) to align the curricula with the JTA where necessary.
- ii. Write a brief summary report in English to provide insights into the state of the curricula across the selected institutes, and highlight common strengths and weaknesses.

Deliverable 7: Recommendations documents based on review of 21 TI curricula ensuring alignment with JTA for each TI

Deliverable 8: Summary report highlighting common strengths and weaknesses and suggestions for improvement

3.2.3. Brief country implementation strategies

In close consultation with IRENA and ECREEE, the consulting services entity will develop strategies for the successful implementation of the RCS programme, in one Anglophone and one Francophone

ECOWAS member state. The specific countries will be selected by IRENA and ECREEE. Taking stock of the specific needs and requirements of each country vis-à-vis the international best practices, the strategy should at a minimum include:

- i. Identification and roles of key country stakeholders including:
 - a) TIs that should be encouraged to participate in the RCS in the future
 - b) Energy sector institutions
 - c) National education bodies
 - d) RE industry and professional associations
 - e) Electrical safety and licencing bodies
 - f) Projects/donors implementing related activities
 - g) Others as deemed appropriate
- ii. Marketing and outreach approach
- iii. Communication channels
- iv. Commercial considerations
- v. Other information deemed relevant by the consulting services entity and stakeholders

In addition to the implementation strategies for the two selected countries, the consulting services entity shall also provide recommendations to IRENA and ECREEE on the way forward to implement the RCS programme in the remaining ECOWAS member countries

***Deliverable 9:** Brief country implementation strategy reports (one for each selected country);*

***Deliverable 10:** Document on the roll-out of the RCS programme to the remaining ECOWAS states, including recommendations*

3.3. IMPLEMENTATION SUPPORT

This part of the scope of work involves direct implementation support for the first off-grid PV installers examinations while providing inputs for the subsequent implementation in the remaining countries. The 8 participating countries are as follows:

1. Benin
2. Burkina Faso
3. Cape Verde

4. Ghana
5. Mali
6. Nigeria
7. Senegal
8. Sierra Leone

3.3.1. Implementation support for examinations

The consulting services entity team member(s) shall carry out onsite supervision of examinations of installers of off-grid solar PV systems in one Anglophone and one Francophone country, as selected by IRENA and ECREEE to:

- i. Support examination partners in conducting the examination as per the developed manual;
- ii. Provide inputs to examination partners in the grading/marking of first exam of installers (remotely if needed);
- iii. Prepare lessons learned for improvement in subsequent examinations.

***Deliverable 11:** Compilation of lessons learned from exams in two countries*

3.3.2. Wrap-up phase

The consulting services entity shall support the wrap-up phase of the assignment. This will include the preparation of a 2-day workshop (location to be finalised and communicated at a later stage) for the examination partners and any other participants suggested by IRENA. The overall purpose is to:

- i. Present the findings from the first two exams and prepare the other examination partners for conducting examinations in their respective countries.
- ii. Ensure knowledge transfer to local personnel to facilitate the implementation and auditing of future examinations under the RCS
- iii. Ensure examination process harmonization and uniform level of required competence for passing examinations.
- iv. Present the structure and suggested contents of the final report for subsequent approval

The consulting services entity shall provide remote support to examination partners coordinated by IRENA/ECREEE post-workshop should any queries arise.

Deliverable 12: Successful completion of wrap-up phase, including the final wrap-up 2 day workshop and submission of workshop report

3.3.3. Final report

The consulting services entity shall prepare a comprehensive report in English of the assignment, incorporating feedback and comments from stakeholders (IRENA, ECREEE, Technical Committee, etc.). The structure and table of contents for the report will be elaborated by the consulting services entity, in conjunction with and for approval from IRENA and ECREEE. It is expected that significant material will be incorporated from interim deliverables (the final report is expected to be around 50 – 70 pages).

Deliverable 13: Final report, as defined during the project implementation.

4. RESPONSIBILITIES OF THE CONSULTING SERVICES ENTITY AND OUTPUT

The consulting services entity will be responsible for assisting IRENA in developing and implementing phase 1 of the **ECOWAS Certification for Sustainable Energy Skills (ECSES) Programme** covering the scope of work presented in section 3 of this Terms of Reference. The consulting services entity will be responsible to elaborate and deliver the deliverables as outlined later in this section.

All reports must follow the publication policies and guidelines of IRENA/ECREEE as set out during the inception phase, and the IRENA anti-plagiarism policy.

4.1. ANTI-PLAGARISM POLICY

Plagiarism will not be tolerated whatsoever in IRENA publications. Any report, working paper or other document prepared for IRENA must constitute original work, in which all sources for information or data receive complete and accurate attribution. Passages taken from prior publications or other works must either be presented as direct quotations (marked "...") or paraphrased, with the source clearly stated in a Harvard-style citation in either case.

IRENA uses plagiarism-detection software to review all draft publications. Passages found to resemble existing publications too closely may require rewriting and more explicit source citation. Passages copied from prior publications (by IRENA or other publishers) cannot be accepted as original work and may be

returned to the commissioned writer or partner entity for further revision. IRENA reserves the right to withhold payment to a commissioned writer or partner entity until any such revision is satisfactorily undertaken. Plagiarism, including either copy-and-paste text production or failure to cite sources, may result in rejection of the draft with no financial obligation on the part of IRENA.

All documents submitted as part of this contract will be the intellectual property of IRENA. IRENA would be free to share the documents with its partners

4.2. ADDITIONAL REQUIREMENTS

The consulting services entity will be required to discuss the project progress by joint video or telephone conference with the project team at IRENA Headquarters, Abu Dhabi, United Arab Emirates and ECREEE, Praia, Cape Verde. This will typically be on a weekly or fortnightly basis.

Note that primary deliverables and all communication with IRENA is to be in English (unless stated otherwise in this TOR), the consulting services entity may utilise translation services for other languages if necessary so long as the quality is equivalent of that provided by a native of the language.

5. TIMELINE

	Milestones	Deadline
1	Methodology and workplan approved by IRENA; Successful completion of a 2-day inception workshop and submission of workshop report	Within 3 weeks of contract award ²
2	Report on the structure of the regional certification body (Internal); RCS Programme framework document	Within 4 weeks of inception workshop
3	Examination procedures manual in English and French; Database of examination questions in English and French	Within 12 weeks of inception workshop
4	Recommendations documents based on review of 21 TI curricula ensuring alignment with JTA for each TI;	Within 12 weeks of inception workshop

² The date of the inception workshop may be postponed subject to IRENA requirement

	Summary report highlighting common strengths and weaknesses and suggestions for improvement.	
5	Brief country implementation strategy reports; Document on the roll-out of the RCS programme to the remaining ECOWAS states, including recommendations	Within 16 weeks of inception workshop
6	Compilation of lessons learned from exams in two countries	By 30 th June, 2018
7	Successful completion of wrap-up phase, including final 2-day wrap-up workshop and submission of workshop report	By 31 st July, 2018
8	Final report (expected to be 50 – 70 pages long)	By 31 st October 2018

**** Duration of the deliverables includes waiting time for reception of comments from internal and external reviewers and time for logistical arrangements for trainings/workshops (where applicable) and do not necessarily represent time of consulting services entity's work.**

It is expected that this study requires approximately 100 person-days (including travel days) distributed across the project team. The assignment is required to be completed by 31st October, 2018. The 3-month period between milestones 7 and 8 is to allow for examinations under the RCS (if any) taking place in other countries where the consulting services entity may be required to provide remote support as required. The consulting services entity may allocate a maximum of 6 person days for this period indicated separately in the submission.

Please note that all expenses pertaining to missions (i.e. travel, boarding and lodging) other than the person-days should be left out of the consulting services entity's submission in response to the TOR as the required travels will be arranged by IRENA in accordance with the organisation's policy and procedures.