

# REPORT

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REPORT ON THE 1ST MEETING OF THE TECHNICAL COMMITTEE OF THE  
REGIONAL CERTIFICATION SCHEME FOR SOLAR PV TECHNICIANS

9th – 10th July 2018, Dakar, Senegal

**Draft**

**Participating Countries:**

**Benin, Burkina Faso, Cabo Verde, Ghana, Guinea Bissau, Ivory  
Coast, Liberia, Niger, Nigeria, Senegal, Sierra Leone, and Togo**

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Note: This draft report has not been approved and is not the official approved report until approved by the President of the Technical Committee.



ECOWAS CENTRE FOR RENEWABLE ENERGY AND ENERGY EFFICIENCY  
CENTRO PARA AS ENERGIAS RENOVÁVEIS E EFICIÊNCIA ENERGÉTICA DA CEDEAO  
CENTRE POUR LES ENERGIES RENOUVELABLES ET L'EFFICACITÉ ENERGÉTIQUE DE LA CEDEAO

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**Objective:**

This report summarizes the decisions and recommendations of the Technical Committee on the ECOWAS Competence Certification Program for Sustainable Energy (CCCED) at their first meeting in Dakar, Senegal in 2018.

**1. INTRODUCTION**

The ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE) legally instituted through the ECOWAS Council of Ministers' adoption of Regulation C/REG.23/11/08 is mandated to mainstream Renewable Energy (RE) and Energy Efficiency (EE) of ECOWAS Vision 2020 into its regional activities and policies. Also in fulfilment of the ECOWAS Renewable Energy Policy, as per the 43<sup>rd</sup> ordinary session of the authority of heads of states of government, supplementary ACT A/SA.3/07/1, ECREEE is also to enable harmonization of among other things to harmonise tax and duty policies and common standards and regional quality labelling for equipment and systems as well as the certification of skills;

The certification of skills is considered essential for the success of the RE and EE market and future projects in the West African States because certification gives the reassurance that technicians and professionals have the competencies and capacities required to complete an installation or a job safely and effectively. More specifically, the certification is a way to promote the quality and safety of RE and EE systems. In order to achieve this quality assurance at various levels of the value chain, stakeholders put emphasis on the establishment and enforcement of product standards. However, high-quality products that will enter the region will only provide the desired services if systems are designed, installed and maintained by highly qualified professionals.

As such, ECREEE in cooperation with the International Renewable Energy Agency (IRENA) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) has established a Regional Certification Scheme to certify technicians and professionals of RE and EE based on the Job-Task-Analysis (JTA) that was developed by stakeholders and recognized by all member states of ECOWAS. The Regional Certification Scheme is a voluntary scheme that is initially focusing on certifying the competencies and skills of off-grid PV systems technicians/installers but will gradually cover other RE and EE professions.

Candidates that want to acquire these skills must meet all the requirements set by the Regional Certification System. These competencies will be assessed through regional examinations which will be hosted by Partner Examination Centres in each member state. Registered candidates that will pass these competency based examinations will be credentialed and will receive a certificate and professional identity carte that is recognised by the member states of ECOWAS. Candidates who will be certified will be required to

operate in accordance with the RE and EE industry guidelines to maintain this professional credentialing. Candidates who lack the skills to pass these examinations will be trained partner training centres selected by the RCS.

After the three (3) years of developing the RCS for the ECOWAS region; ECREEE and other partners supporting the programme have reached a stage where the RCS will become operational in eight (8) pilot countries, before being rolled-out in the remaining seven (7) ECOWAS countries. Prior to that, ECREEE brought together the TC members of the RCS for solar PV technicians selected from all the ECOWAS member countries, from 9th to 10th July 2018 in Dakar, Sénégal to (i) inform them about the progress made towards the operationalisation of the RCS, (ii) validate the working documents developed for the RCS and (iii) collect comments from the TC members as well as others stakeholders that were presented at the workshop. This meeting was of a particular significance as it is the first time the TC members met as a group after it was formed by ECREEE.

The validated documents include:

- Guidelines of the Regional Certification Scheme for Off-Grid Solar PV Technicians;
- Guidelines for Developing the Examination for Certification as Certified Off-Grid Solar PV Technician;
- Guidelines for Conducting the Examination for Certification as Certified Off-Grid Solar PV Technician;
- Model of the Certificate and Sample example examination question to be issued to successful Off-Grid Solar PV Technicians
- Terms of Reference (TOR) for Technical Committee members (Roles of TC)

This first meeting of the TC was supported by the EU and the German cooperation.

## 2. ATTENDANCE OF TC MEMBERS

The following TC members participated in the 1<sup>st</sup> meeting:

- |                                |                                 |
|--------------------------------|---------------------------------|
| (i) Republic of Nigeria        | (Prof. Olunrinde Ebenezer Lafe) |
| (ii) Republic of Benin         | (Mr. Faustin Dahito)            |
| (iii) Republic of Burkina Faso | (Mr. Emmanuel Kabore)           |
| (iv) Republic of Côte d'Ivoire | (Mr. Mohamed Koïta Sako)        |
| (v) Republic of Gambia         | (Mrs Ya Awa Njie)               |
| (vi) Republic of Sénégal       | (Sidy Bouya Ndiaye)             |
| (vii) Republic of Ghana        | (Mr. Nana K.S. Asamoah)         |
| (viii) Republic of Liberia     | (Mr. Stephen V. Potter)         |
| (ix) Republic of Mauritania    | (Mr. Sidi Bouna Dah)            |



- |                                |                                   |
|--------------------------------|-----------------------------------|
| (x) Republic of Niger          | (Saidou Madougou)                 |
| (xi) Republic of Mauritania    | (Mr. Sidi Bouna Dah)              |
| (xii) Republic of Sierra Leone | (Mr. Mohamed Alie Jalloh)         |
| (xiii) Republic of Togo        | (Mr. Komi Apelete Amou)           |
| (xiv) Republic of Mali         | (Alhousein Issa Maiga) - Absent   |
| (xv) Republic of Cabo Verde    | (Mr. Emílio Benrós) - Absent      |
| (xvi) Republic of Guinea       | (Ms. Aissatou Billy Sow) - Absent |

The stakeholders at the meeting were made up of the regional certification programme team from ECREEE, GIZ, IRENA and regional consultants working on the operationalisation of the RCS (Annex A refers).

### 3. THE OPENING REMARKS

Mr. Mansour A. Dahouénon, the GIZ programme manager, opened the meeting and welcomed the participants to Dakar. He expressed a great pleasure about the progress made so far on the RCS programme and reminded the participants about its importance for the ECOWAS region in increasing the quality of solar PV professionals. He was supported by Mr. Ali Yasir, the programme officer from IRENA who also talked about the role of IRENA for the programme and reiterated the commitment of the IRENA to see the programme become a success story. Lastly, Messrs. Sire Diallo and Baboucarr Njie of ECREEE, on behalf of Mr. Mahama Kappiah, the Executive Director of ECREEE, welcomed all participants to the workshop and encouraged the participants to make needed contributions for the improvement of the working documents that was developed for the operation of the RCS.

A round of self-introductions followed the opening remarks after which the agenda of the day was presented to participants by Mr. Mawufemo Modjinou. Subsequently, presentations on the Role and Responsibilities (TOR) of the TC, Design and Structure of the RCS for off grid Solar PV Technicians were done by Mr. Lucius Mayer-Tasch. After which a presentation on the Regional Certification Guidelines was done by Mr. Geoff Stapleton to the participants. Each presentation was opened for a section of discussion and validation by TC members according to the set agenda. The consensus and decision points of the discussions were documented and adopted for the operationalization of the RCS.

#### 4. RECOMMENDATIONS AND ADOPTION

The following decisions points were taken by the TC and stakeholders of the workshop.

- "The Job-Task-Analysis for off-grid solar photovoltaic system installers" was renamed "The Job-Task-Analysis for off-grid photovoltaic solar system technicians";
- The oral examination, which is an option for the written examination for those who do not have a high level of education (electricians etc.), was withdrawn for the meantime by the TC. The TC felt it will be difficult to assess these group of people based on the JTA
- Introduce different penalties depending on the level of severity of cheating of candidate (i) warn the candidate (ii) to correct the candidate (iii) sanction the candidate. The candidate may rejoin the process getting certify after 12 months;
- The TC has decided to give the certificate and ID card with a validity of 1 year, and extend it for 5 years for candidates that will provides two cases of study of work;
- Technicians/Professionals must acquire the technical known-how in doing their job very well and must demonstrate this very well during the competency examination to (i) be credentialed as highly qualified professionals and (i) certified by CCCED;
- To be certified as a RE and EE professional, the candidate must have 80% for the practical examination and 70% for the theoretical exams;
- The TC gave NO OBJECTION to the proposals on the examination fee and the establishment of an ECOWAS certification body.

##### 4.1. Job Task Analysis (JTA) for Installers of Off-Grid Solar Photovoltaic Systems:

- The TC members were satisfied with the content of the JTA; however, the TC and other participating stakeholders unanimously recommended that the JTA should be renamed to "Job Task Analysis (JTA) for Off-Grid Solar Photovoltaic PV Technicians" since the skills and competencies that will certified by the regional certification body goes beyond those of an installer.

##### 4.2. Regional Certification Guidelines for Off-Grid Solar PV Technicians:

- Also, the TC members and the participating stakeholders recommended that oral or interview examination which is an option to replace the written examination under the RCS is removed since it will be difficult to assess and award marks. The draft guidelines made provision for technicians that are not highly educated to be assessed with a practical and an oral examination while technicians that are well educated to be assessed with a practical and a written examination, however, due to the complexity of assessing a candidate orally based on the JTA, the TC decided to remove the oral exam option as a mode of assessment for the meantime;

- In addition, the TC was satisfied with the proposed eligibility criteria except for the term “schooling or no formal schooling” that it contains. Some TC members and participants in majority, requested that these terms should be removed and the scheme should only focus on educated and formally schooled persons;
- The examination fee as well as the establishment of an ECOWAS Certification Body that is sustainable and self-financing received *No Objection*.

#### 4.3. Complaints and penalties procedures of the RCS for Off-Grid Solar PV Technicians:

- The TC decided that the RCS soften the penalty duration of technicians that cheat to 12 months, after which the technicians can be given an opportunity to rewrite the regional examination;
- It was also decided to introduce different penalties depending on the gravity of non-compliance of technicians (e.g. (i) warning (ii) request to rectify (ii) sanction the technician).

#### 4.4. Model of the Certificate/Professional ID Cards:

- The TC also decided to give the candidates the opportunity to a get a full certificate right from the beginning and remove the term “Provisional Certificate” from the certificate that will be awarded to the technicians;
- On the validity of the regional certificate, the TC decided to award the certificate for 1 year and extend it to 5 years once a technician submits two case studies to the RCB and provides information on the role s/he played during the installation of the solar PV system.
- Few changes were also proposed to be made on the certificate. These include (i) replacement of “Installer” with Technician (ii) Changing the word “accreditation” to “certification” among other things;

#### 4.5. Sample examination question :

- A sample examination question was presented to the participants of the workshop by Geoff Stapleton to give them an idea what will be expected from the technicians to acquire a regional certificate. The questions are standards and would require technicians to be very knowledgeable and undergo formal training/education to pass this examination;
- The TC members and stakeholders realising that the questions are difficult, requested if the level of the question can be toned down. The decision point on this was “No”. It is either the technician knows how to do the job well or he cannot do it. There is no halfway to reducing quality assurance gap;

- The TC and other participants also decided to award 80% as minimal required mark on practical examination instead of the open book examination with minimum required mark of 100% that was proposed to them. On the other hand, the TC and the participants accepted 70% as minimal required mark on the theory to pass the examination.

#### 4.6. Terms of the Reference of the Technical Committee:

- It was recommended that complaint procedures should be added to the TOR of the Technical Committee. This will enable the TC member to submit views and comments that can enhance the RCS;
- The TC has recommended IRENA as an observer to the ECSES. IRENA will continue supporting the ECSES in an advisory capacity on matters pertaining to the scheme, including development of future JTAs, updates of certification or examination procedures, etc. IRENA will not be involved in matters regarding complaints and appeals.

## **5. ELECTION OF TC EXECUTIVES**

The TC also elected its executives and appointed Mr Mohamed Alie Jalloh as the President, Mr Sako Mohamed as the Vice-President and Mr. Sidy Bouya as Secretary. The executives of TC will be organised into sub-committees

## **6. CLOSURE**

Mr. Ali Yasir from IRENA who was moderating the last section of the meeting expressed his thanks for all the valuable contributions made by the TC and participants throughout the meeting. Before the meeting was closed by him, the GIZ Programme Manager thanked the TC and all the participants for honouring their invitation and offering their expertise for the development of the region.

## **7. ACTION ITEMS**

All documents that were prepared as working documents for the RCS were validated by the technical committee members and the other stakeholders who participated in the Dakar Workshop. The next steps to be taken by the RCB include the following:

- Sign MoUs with selected Examination and Training Institutions;
- Develop a website for the RCS that contains all relevant information such as:  
The list of certified candidates, certification process, sample examination, complaints procedures, National partner Institutions (Examination and





Training Institutions), upcoming exams timelines, JTA for off-grid solar PV technicians

- Undertake examinations and operationalise the RCS in 8 pilot countries (Senegal, Ghana Benin, Burkina-Faso, Mali, Nigeria and Sierra Leone) and roll-out to the RCS to the remaining 7 ECOWAS member states by 2019;
- Develop JTA for advanced level solar PV skills;
- Expand network of partner institutions
- Explore options for making the RCB a sustainable Certification Body
- Accredit the CB to the ISO/IEC 17024:2012

These actions will be implemented by ECREEE/GIZ RCS programme team from year 2018-2020.

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Mr Mohamed Alie Jalloh  
**President**

## ANNEX A:

### I. Workshop Banner



### II. List of participants

Country	Name	Last name	Contact email / Telephone	Institution	TC member
Benin	Faustin	Dahito	faustdahito@yahoo.fr +229958145	Association Interprofessionnelle des Spécialistes des Energies Renouvelables du Bénin - AISER- BENIN	Yes
Benin	Mansour	Dahouénon	mansour.dahouenon@giz.de	GIZ	No
Burkina Faso	Emmanuel	Kabore	manuelkabore@yahoo.fr +22678815577	Association des Professionnels de l'Energie Solaire au Burkina Faso – APES-BF	Yes
Sénégal	Siré	Diallo	sdiallo@ecreee.org	ECREEE	No
Cabo Verde	Mawufemo	Modjinou	mmodjinou@ecreee.org	ECREEE	No
Cabo Verde	Lucius	Mayer-Tasch	lucius.mayer-tasch@giz.de	GIZ	No
Cabo Verde	Baboucarr	Njie	bnjie@ecreee.org +2385906969	ECREEE	

Côte d'Ivoire	Mohamed Koïta	SAKO	sakomk@yahoo.fr	Institut National Polytechnique Félix Houphouët-Boigny (INP-HB) de Yamoussoukro	Yes
Gambia	Ya Awa	Njie	yawanjie@yahoo.com	Gambia Technical Training Institute	Yes
Ghana	Isaac Adjei	Edwin	edwinadjei@gmail.com	Kwame Nkrumah University of Science and Technology (KNUST)	No
Ghana	Nana K.S.	Asamoah	asknelectricltd@gmail.com	Association of Ghana Solar Industries (AGSI) /Ghana Inspection Council for Electrical Installation Contracting (GICEIC)	Yes
Liberia	Stephen V.	Potter	stephenvpotter@yahoo.com	Rural and R.E. Agency	Yes
Mali	Alhoussein Issa	MAIGA	maiga_alhousseini@yahoo.com	CNESOLER	Yes
Mauritania	Sidi Bouna	Dah	dsidibouna@gmail.com	Ministère du Pétrole, de l'Energie et des Mines, Directeur de l'Electricité et de la Maitrise de l'Energie	
Niger	Saidou	MADOUYOU	nassara01@yahoo.fr	Université Abdou Moumouni de Niamey	Yes
Nigeria	Olunrinde Ebenezer	Lafe	olafe@futa.edu.ng	Federal University of Technology Akure	Yes
Sénégal	Béatrice	Vincent	Beatrice.vincent@giz.de	GIZ, Chargé du Programme, Programme Energie Durable (PED)	No
Sénégal	Souleymane Simèle	THIAM	Souleymane.thiam@giz.de +221783787656	GIZ/PESEREE	No
Sénégal	Papa Antoine Lademba	FAYE	antoine.lademba@gmail.com	Ministère du Pétrole et des Energies (ECREEE focal point for Sénégal)	No
Sénégal	Issa Rohou Laye	SONKO	ise212000@yahoo.fr +221772209397	Ministère du Pétrole et des Energies (ECREEE focal point for Sénégal)	
Sénégal	Sidy Bouya	NDIAYE	sidybouya.ndiaye@aner.sn +22177503736	Agence Nationale pour les Energies Renouvelables	Yes
Sierra Leone	Mohamed Alie	Jalloh	kortorma@yahoo.fr	National Council for Technical and Vocational and other Academic Awards (NCTVA)	Yes
Togo	Komi Apelete	AMOU	mapkamou@yahoo.fr	Université de Lomé	Yes
Australia	Geoffrey James	Stapleton	gses@bigpond.com	IRENA consultant	No
UAE	Ali	Yasir	AYasir@irena.org	IRENA	No

### III. Agenda of the meeting

Monday, 9<sup>th</sup> July 2018

<i>Time</i>	<i>Agenda item</i>
8:30	Registration of participants
9:00	Opening remarks <ul style="list-style-type: none"> <li>• Ali Yasir, Programme Officer, IRENA</li> <li>• Mansour A. Dahouénon, Programme Manager, GIZ</li> <li>• Siré A. Diallo, Programme Officer, ECREEE</li> </ul>
9:30	<ul style="list-style-type: none"> <li>• Round of introductions</li> <li>• Presentation of workshop objectives and workshop agenda, Mawufemo Modjinou, ECREEE</li> <li>• Role of the Technical Committee, Lucius Mayer-Tasch, GIZ</li> <li>• Discussion</li> </ul>
10:30	Coffee break incl. group picture
11:00	<ul style="list-style-type: none"> <li>• Design and structure of the Regional Certification Scheme, Lucius Mayer-Tasch, GIZ</li> <li>• Discussion</li> </ul>
12:30	<ul style="list-style-type: none"> <li>• Regional Certification Guidelines for Off-Grid Solar PV Installers, Geoff Stapleton, IRENA consultant</li> <li>• Discussion</li> </ul>
13:30	Lunch break
14:30	Continuation of discussion on Regional Certification Guidelines
15:00	<ul style="list-style-type: none"> <li>• Guidelines for Developing the Regional Examination, Geoff Stapleton, IRENA consultant</li> <li>• Presentation of sample examination paper, Geoff Stapleton, IRENA consultant</li> <li>• Discussion</li> </ul>
16:00	Coffee break
16:30	<ul style="list-style-type: none"> <li>• Guidelines for Conducting the Regional Examination, Geoff Stapleton, IRENA consultant</li> <li>• Discussion</li> </ul>
18:00	Closing

Tuesday, 10<sup>th</sup> July 2018

<i>Time</i>	<i>Agenda item</i>
8:30	Arrival of participants
9:00	<ul style="list-style-type: none"> <li>• Summary of results of day 1</li> <li>• Continuation of the discussion on the documents presented on day 1</li> </ul>
10:30	Coffee break
11:00	<ul style="list-style-type: none"> <li>• Model of the ECSES Certificate for Off-Grid Solar PV Installers, Mawufemo Modjinou, ECREEE</li> <li>• Discussion</li> </ul>
11:30	<ul style="list-style-type: none"> <li>• Next steps for the operationalization of the RCS, Lucius Mayer-Tasch, GIZ</li> <li>• Discussion</li> </ul>
12:30	Summary of the results of the workshop
13:30	Lunch