

Section 3
TERMS OF REFERENCE (TOR)

**ENABLING FRAMEWORKS FOR INVESTMENT IN ECOWAS FOR THE
IMPLEMENTATION OF THE WEST AFRICA CLEAN ENERGY CORRIDOR
ACTION PLAN**

Capacity Building on Power Purchase Agreements

I. Background

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. This concerns all forms of energy produced from renewable sources in a sustainable manner, which include bioenergy, geothermal energy, hydropower, ocean, solar, and wind energy.

The energy system in West Africa is faced with a number of interrelated challenges: low energy access, insecure energy supply, and growing environmental degradation. The installed power generation capacity of the region is in the order of 16 GW comprising of 32% of hydro and 68% of thermal capacity, which covers only 37% of the power demand. Only 42% of ECOWAS population have access to electricity, which drops down to single digits in rural areas.

The power system in West Africa is confronted with the challenges arising from the supply deficit and thus growing demand is unmet. Furthermore, the region faces the difficulty of raising sufficient funds internally or attracting outside investors willing to incur the high perceived risk in the electricity sector in the region. Overall, unreliable power holds back the region's industrial development and has a negative impact on productive activities. Transmission and distribution losses are at around 40%, increasing electricity tariffs significantly. The cost of providing backup power handicaps productive industries and blackouts reduce annual economic growth in Africa by around 2%.

The region has vast renewable energy potential to cover the unmet power demand and reach the universal access to electricity while supporting the region's transition to a low carbon growth path. In that regard, in July 2013 the ECOWAS Authority of Heads of State and Government adopted the ECOWAS Renewable Energy Policy (EREP) that aims to increase the share of renewable energy in the region's overall electricity mix to 35% in 2020 and 48% in 2030 (excluding large hydro, to 10% and 19%, respectively). The EREP is complemented with the ECOWAS Energy Efficiency Policy (EEEP) that targets to implement measures that would make available 2000 MW of power generation capacity through efficiency gains and in the long term, more than double the annual improvement in energy efficiency, compared to 2010 levels.

With a view to supporting the creation of a regional power market, IRENA, in collaboration with ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE), West African Power Pool (WAPP), and ECOWAS Regional Electricity Regulatory Authority (ERERA), has initiated the West Africa Clean Energy Corridor (WACEC) initiative. Building on the ongoing efforts in the region, including, those of UEMOA, AfDB, and other development partners such as GIZ and USAID, WACEC will promote the development of utility scale renewable power and its integration to the West African power systems.

As endorsed by the ECOWAS Energy Ministerial in December 2016, the WACEC's implementation plan is built on the five pillars of (i) Zoning and Resource Assessment to identify sites for renewable power generation in areas with high resource potential and suitable transmission routes; (ii) National and Regional Planning to fully consider cost-effective renewable power options; (iii) Enabling Frameworks for Investment to open markets and reduce financing costs; (iv) Capacity Building to plan, operate and maintain power grids and markets with higher shares of renewables-based electricity; and (v) Public Information and Awareness Raising on how the corridor can provide secure, sustainable and affordable energy.

In March 2017, the Energy Ministers at the Specialized Technical Committee on Energy, Transport and Tourism of the African Union recommended the Member States to integrate the concept of the Clean Energy Corridors, which includes WACEC for the West Africa region, into their national renewable energy and climate change agendas as well as the process of creation of a sustainable and low-carbon power markets. This was included in the concluding declaration, which will be presented to the African Heads of States for endorsement.

II. Rationale

With a view to diversifying the regional power mix through an accelerated penetration of renewables as set out in the EREP, there is a need to strengthen skills in order to create the necessary conditions for an effective development and implementation of renewable energy projects on the ground. These skills include, among others, the ability to develop of bankable Power Purchase Agreements (PPAs) for renewable power procurement, especially in the context of the region's interest to harmonise PPAs across the ECOWAS region.

Under the implementation of the WACEC, IRENA, together with the key regional institutions, intends to support the strengthening of the capacities of the relevant stakeholders of the ECOWAS power sector through series of tailor-made capacity building activities.

III. Objective and scope of the work

The main objective of this work is to reinforce the capacities of key governmental stakeholders (Ministries, Utilities and Regulatory Bodies) in the ECOWAS countries in the development of PPAs for renewable energy through:

- taking stock of the existing models for renewable energy PPAs in the region;
- analysing the existing PPA models in the region against the best global practices for PPA templates,
- analysing possible alignment of the existing PPA models in light of the standardised contracts and agreements that are being developed under the Global Solar Energy Standardisation Initiative, a joint initiative by both IRENA and the Terrawatt Initiative (further information to be communicated with the consulting entity)
- preparing and conducting tailor-made trainings on the development of PPAs based on the areas of improvement identified

IV. Expected Outcomes

This project is expected to contribute to an increase in the number of countries designing and implementing renewable energy PPAs, especially solar PV and wind, through an improved

understanding of the requirements for their design, development and implementation based on the best practices from the region and beyond.

V. Detailed description of the work

The project aims to enhance the capacities of local stakeholders to create the enabling frameworks for strengthening renewable energy development and investments. The technical assistance to be conducted by the consulting entity will mainly target policy makers and regulatory bodies.

The consulting entity will work closely with the IRENA, WAPP, ERERA and ECREEE in the implementation of the assignment as described in these Terms of Reference.

The consulting entity is expected to develop a technical offer with an appropriate methodology and specific work plan that will ensure the achievement of the assignment's objective **within an implementation period of 7 months.**

Before starting the assignment, the consulting entity will be required to attend a briefing meeting, with IRENA and the ECOWAS counterparts, to be held in the region and for which the participation of the consulting entity will be covered by IRENA. Generally, all outputs under the assignment will be both in English and French. All reports, working papers or other documents prepared for IRENA must conform to IRENA/OECD style requirements. These requirements are outlined in IRENA's style guide, which together with other guiding documents will be given to the consulting entity at the beginning of the assignment.

The project will focus on **two tasks**:

Task 1: Capacity development for policy makers, regulators and utilities on conducive renewable energy PPAs

The specific focus under this task is to provide countries with the expertise to design and negotiate PPAs for RE projects. The primary objective of this task is to strengthen the capacities of policy makers, regulators and utilities in the development and negotiation of bankable PPAs with Independent Power Producers (IPP). It will comprise of 2 sub-tasks as follows:

Sub-task 1: The consulting entity should first take stock of and analyse the various market mechanisms existing in the region (e.g. feed-in-tariffs, auctions, quota systems) as well as PPAs used for RE IPP projects in the region against the international best-practices, including the standardised solar PPAs developed under the Global Solar Energy Standardisation Initiative, and identify gaps, which will be presented in the form of a gap analysis report. This sub-task can be done through interviews and desk research and input from local partners.

Sub-task 2: Furthermore, the consulting entity should design the technical content two series of two workshops of 4 days each for the representatives of ministries, utilities and regulatory bodies from the 15 ECOWAS countries as well as training centres, based on the outcomes of the gap analysis. The content of the trainings should also encompass any relevant work conducted by IRENA on the topic, including ways to streamline the documentation development and permitting process using standardised contracts.

Two of the trainings will be held in French, the other two in English. The gap analysis report as well as all workshop and training materials should be made available in both languages.

It is expected that 45 participants¹ from all **fifteen** countries will be present at the trainings through their ministries, regulatory bodies and national power utilities along with IRENA, ECREEE, ERERA and WAPP. Participants are expected to be directors, senior executives, or of similar profiles. The content of the workshops will include but not limited to the following contents:

1. PPAs as part of an overall RE procurement strategy
2. Planning, procurement approach and design
 - a. Facilitate competitive process
 - b. Qualification criteria for project bankability
 - c. Non-negotiable agreements → Early engagement with lenders to address key risks in obtaining a bankable PPA
3. Requirements to ensure the financial bankability of a PPA through investment decisions and project structuring
4. Identify all types of risks (including legal, commercial, financial, environmental and social risks) as well as the appropriate mitigation (de-risking) instruments, financing mechanisms and innovative structures and alternative finance tools such as carbon finance
5. Off-taker defaults and guarantees
6. Contract design and negotiation (e.g. connection agreements, negotiation of tariffs with investors)
7. Practical sessions, in small groups, on the application of the training output at country level

The consulting entity will be responsible for the identification of the speakers/facilitators and for providing support to the logistics for the workshop (e.g. drafting of invitation letters, proposal for dates and venues etc.). IRENA and the ECOWAS counterparts will be responsible for the selection and invitation of the speakers and participants for the workshop including the associated costs (rental of venue, travel costs, catering and accommodation of participants). The consulting entity will be responsible for compiling the workshop documentation, including summary and conclusions.

Task 2: Design of a follow up programme

Following the workshops and the identification of priority areas, the consulting entity will support IRENA in designing a follow-up programme that will define:

- Scope of the programme and methodology for the follow up work;
- Support methods: on line forums, on site, by email, etc.;
- Estimated duration of the follow up programme;
- Final conclusions incl. results monitoring: along with IRENA and all the institutions and stakeholders involved in the workshops the results will be evaluated.

IRENA and the ECOWAS counterparts should follow up on the changes/action plans that the utilities will implement in the short-to-medium run.

VI. Expected Deliverables and Timeline

The two above-listed tasks are to be completed by end 2018 as per the following timeline:

¹ 3 representatives per country, from the ministries, regulatory bodies and national power utilities

	Deliverable	Timeline²
i	Gap analysis report on the existing market mechanisms and renewable energy Power Purchase Agreements in the ECOWAS region	by 28.02.2018
ii	2 series of two 5-day training workshops each on the development of PPAs for policymakers, regulatory bodies and power utilities.	1 st series of training by 15.05.2018 2 nd series of training by 31.07.2018
iii	Design of a follow up programme	by 31.08.2018

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² The timeline is subject to changes depending on the start date of the project, with prior consent of IRENA.