

INTERNATIONAL RENEWABLE ENERGY AGENCY

Eleventh meeting of the Council

Abu Dhabi, 24 – 25 May 2016

**Note of the Director-General
Region in Focus – West Africa****I. Background**

1. With a population of over 300 million and fast economic growth over the past decade, West Africa's power needs are rapidly rising. The energy systems in West Africa are faced with a number of interrelated challenges such as low energy access, insecure energy supply and growing environmental degradation. Only 42% of the population in ECOWAS¹ countries have access to electricity (falling to 8% in rural areas) and the power supply is estimated to meet only 37% of current demand. IRENA's latest capacity statistics show that the total installed power generation capacity in the region is about 12 GW, with 5 GW or 41% from renewables. Almost all renewable electricity comes from hydropower (4,820 MW in 2015), with solar and wind making a very small contribution (140 MW). In addition, approximately 480 MW of new solar PV capacity is in various stages of development.

2. The region has vast renewable energy potential to cover the unmet power demand, reach widespread access to electricity while supporting the region's transition to a low carbon growth path. The ECOWAS Renewable Energy Policy adopted in February 2015 aims to increase the share of renewable energy in the region's electricity mix to 35% in 2020 and 48% in 2030 (10% and 19%, respectively, with hydro excluded).

II. IRENA's engagement in West Africa.

3. In July 2011, IRENA convened a high-level consultative forum attended by African and other countries as well as regional institutions, including, the African Union Commission, New Economic Partnership for Africa's Development (NEPAD), and the Conference of Energy Ministers of Africa (CEMA). This meeting and the concluding Ministerial Communiqué constituted the starting point of IRENA's engagement in Africa. The Communiqué identified key priorities for accelerating the adoption of renewable energy towards making Africa a lead region in the transition to renewable energy. It underlined the importance of formalizing IRENA's strategic presence in Africa and concretizing institutional arrangements for cooperation with African regional bodies and strategic partners.

4. Since the establishment of IRENA, 51 African countries have become affiliated with the Agency, including all 15 West African countries, 12 of which are full Members, leading to the Agency's extensive engagement through a number of bilateral and multilateral initiatives, including the first Renewables Readiness Assessment conducted in Senegal.

¹ ECOWAS (Economic Community of West African States) countries: Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo

5. Based on the needs identified in the region, IRENA has started, in close cooperation with key regional stakeholders, various activities, including RRAs and post RRA related work, capacity building, support for project developers, as well as the recently initiated discussions regarding a Clean Energy Corridor concept in the region.

a. Capacity building support

6. As stipulated in the Ministerial Communiqué, Renewables Readiness Assessments (RRAs) have been one of the key priority actions constituting the backbone of IRENA's interventions at national and regional level. IRENA has so far facilitated the RRA process in four West African countries (Gambia, Ghana, Niger and Senegal) providing them with a holistic assessment of the conditions for renewable energy deployment on the ground. The RRAs recommended courses of action to improve countries' renewables readiness and to overcome key barriers impeding the deployment of renewables.

7. The RRA process identified solar PV as key renewable energy technology for the region, which has led to the formulation of a capacity building programme 'Promoting a Sustainable Market for PV Systems in ECOWAS region' (ProSPER), which aimed at strengthening local capacities to accelerate deployment of solar PV systems through the promotion of incentive schemes and entrepreneurship as well as capacity building for financial institutions. The successful implementation of ProSPER was followed by plans for (i) the creation of the ECOWAS Renewable Energy Entrepreneurship Support Facility to strengthen entrepreneurs' capacity in the region; and (ii) piloting of an internationally accredited regional certification scheme in West Africa. IRENA has further supported capacity development in this region, with particular focus on renewables-based mini grids.

8. Furthermore, the RRAs noted limited skills in planning with a substantial share of renewables, which may hamper the achievement of the regional renewable energy targets set through the ECOWAS Renewable Energy Policy. IRENA conducted the 'Energy Planning Capacity Building Programme' for the ECOWAS region with a focus on long-term power sector capacity expansion planning. This programme enabled trainees to develop capacity expansion plans using IRENA's SPLAT-W tool, and assessed the roles of renewable energy in their future generation mix.

9. RRAs in West Africa have also found that the lack of technical skills constitutes one of the main obstacles for the development of bankable renewable energy project proposals in the region. Through several trainings in the region, policy makers, project developers, investors and finance institutions have been introduced to the use and functionality of the IRENA Project Navigator to assist in improving the bankability of renewable energy projects in West Africa. The Project Navigator provides project developers with the knowledge, tools, case studies and best practices to support the successful completion of their projects.

b. Regional engagement

10. West Africa's interest to develop a regional clean energy corridor was triggered by the development of the implementation of the Clean Energy Corridor concept in the Eastern Africa Power Pool (EAPP) and Southern African Power Pool (SAPP) regions. The Africa Clean Energy Corridor (ACEC) initiative aims to promote the development of renewable power and the cross border trade of electricity in the Eastern and Southern Africa Power Pool regions. As part of its focus, the Corridor work aims to facilitate a steady flow of bankable renewables-based power projects to attract long-term stable investments within the Corridor. The ACEC process led to the identification of areas of high potential for the development

of cost effective solar and wind power plants. Zoning work outcomes are starting to be actively used in planning processes at both national and regional levels. With IRENA's continuing support, Swaziland, for example, is taking the identified zones for solar and wind as the basis for the development of a more integrated national energy master plan. IRENA will also use the zoning work as a basis for an assessment of specific site suitability to guide investments in selected ACEC countries. In this context, Zimbabwe is envisaging to hold renewable energy auctions which are guided by the zoning results. IRENA is working with key partners for translating the results of the zoning work into relevant renewable energy projects within EAPP and SAPP countries as well as to be considered in the revision of the Programme for Infrastructure Development in Africa (PIDA). Targeted support is being provided to regulatory decision makers to develop their national and regional regulatory frameworks in the Southern Africa region with Namibia, Tanzania, and Zimbabwe as pilot countries.

11. The West Africa Clean Energy Corridor (WACEC) is largely benefiting from the experiences gained during the initiation and development of ACEC. It will focus on supporting an accelerated development of utility-scale, renewables-based electricity and on promoting its cross border trade. An action plan for the implementation of the initiative was developed and validated through a stakeholder consultation process with governments and key regional partners in April 2016 in Dakar. The WACEC initiative will provide the required comprehensive umbrella to effectively use the Agency's various analytical and facilitation tools in a coordinated manner in support of regional and national efforts to accelerate renewables deployment in the region.

12. Renewable energy resource analysis for the West African Power Pool region will entail a region-wide pre-feasibility assessment of solar and wind opportunities for both grid connected and off-grid systems. This will be carried out in the framework of the work of the Global Atlas. In addition to the resource intensity (i.e. solar irradiation or wind speeds), specific attention will be paid to key dimensioning parameters, such as distance to the transmission network, population density, terrain, exclusion from protected areas and areas with land-use constraints. The result of the analysis will be high-resolution maps (at 1 km) that show the suitability for locations across the sub region to deploy solar or wind. These results will be hosted in the Global Atlas and disseminated broadly to stakeholders in the region to facilitate further discussion and prioritization of potential development areas.

13. To promote project development in Africa, the Sustainable Energy Marketplace is offering an online platform that brings together projects and project owners, governments, financiers and investors, and service and technology providers active in the continent in a virtual marketplace. This will make the projects and all relevant stakeholders visible, easily identifiable and approachable through efficient search functions, and in this way reduces the asymmetric information and increases the transparency and liquidity of the renewable energy project market. The Marketplace aims to actively facilitate project initiation and development, and to bring bankable renewable energy projects to financial closure by facilitating the awareness of and access to financial and risk mitigation instruments, advisory services, and support programmes. Furthermore, this will be complemented by project development support to be provided through the Project Navigator.

14. As part of IRENA's efforts to secure concessional loans to promising renewable energy projects in developing countries, West Africa has been one of the largest beneficiaries of the IRENA-ADFD Project Facility. Renewable energy projects have been approved in Burkina Faso, Mali, Sierra-Leone and Senegal in the first three cycles.

15. In recognition of renewable energy's essential role in decarbonising the energy system, IRENA has started to support the development and implementation of climate-related activities in West Africa, including, the *regional climate change strategy* and the country-level *Intended Nationally Determined Contributions* (INDCs), with an ultimate goal of equipping countries and the region to support the development and implementation of NDCs and to unlock opportunities for renewable energy investment benefitting from climate finance.

c. Partnerships

16. To ensure the long-term impact of the regional and country specific work, IRENA has formulated strategic partnerships with a wide range of stakeholders in West Africa to promote greater effectiveness and sustainability of the work undertaken, create synergies, maximize complementarities and facilitate convergence of efforts, which would lead to higher impact. In this regard, IRENA has established close partnerships with African Union Commission, ECOWAS Commission, ECOWAS Center for Renewable Energy and Energy Efficiency (ECREEE), West African Economic and Monetary Union (UEMOA), African Development Bank (AfDB), ECOWAS Regional Electricity Regulatory Authority (ERERA), West Africa Power Pool (WAPP), together with other development partners and various national institutions.

Questions for discussion

- Given the growing demand for IRENA country support services globally, how can the Agency best engage with West Africa to shape the upcoming phase of growth in its regional and country support activities?
- What should be the appropriate level of ambition and how can this be sustained while activities becoming more resource demanding?
- What are the most practical options for the Agency for developing partnerships with regional and development partners towards maximizing resource mobilization to support the region's clean energy transition?

Suggested reading

[Africa 2030: Roadmap for a Renewable Energy Future](#)

[Africa Power Sector: Planning and Prospects for Renewable Energy](#)

[Renewables Readiness Assessment: Ghana](#)

[Renewables Readiness Assessment: Niger](#)

[Renewables Readiness Assessment: Senegal](#)

[Renewables Readiness Assessment: The Gambia](#)