

# Scaling up renewable energy investments in West Africa



*Regional power decarbonisation and trading opportunities in West Africa for more affordable and secure access to energy*

## 1. Background

West Africa is characterised by its rich geographical, demographic, cultural and economic diversity. It is primarily made up of countries with smaller populations, with the notable exception of Nigeria. Nigeria dominates the region both demographically and economically, contributing to roughly three-quarters of West Africa's primary energy supply and housing nearly half of its people.

The ECOWAS (Economic Community of West African States) region comprises 15 countries: Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo. It represents around one-third of the population of sub-Saharan Africa, totalling nearly 400 million people. A unifying challenge across all ECOWAS Member States is the limited access to modern energy sources: 47% of the region's inhabitants lack electricity access, and a staggering 87% do not have access to clean cooking fuels and technologies (IRENA and AfDB, 2022).

### Macro-economic overview

Many of the elements necessary for cross-border collaboration are already present in West Africa. At the regional level, organisations and institutions exist that promote co-operation and trade among West African countries. In particular, ECOWAS is a political initiative united in the desire for regional integration in all sectors of economic activity as well as in social and cultural fields. The ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE), the West African Power Pool (WAPP) and the ECOWAS Regional Electricity Regulatory Authority (ERERA) are specialised institutions of ECOWAS established to support and advance regional energy integration and renewable energy development.

From an economic perspective, growth in gross domestic product (GDP) varies widely within the region. Between 2012 and 2019, 10 out of 15 West African countries had average real GDP growth rates above 4%, slightly more than the 3.1% average growth rate for sub-Saharan Africa (World Bank, n.d.). In 2020, West Africa's average real GDP fell 0.22%, due mainly to the impacts of the COVID-19 pandemic. According to the African Development Bank, the projected GDP growth in the region is 4.1% for 2022 and 4.2% for 2023 (AfDB 2022a). Extreme poverty in West Africa increased nearly 3% in 2021, due to the impacts of the pandemic (UN ECA *et al.*, 2021). If the economic effect of the Russia-Ukraine crisis is accounted for, a further 1.8 million people in 2022 and 2.1 million people in 2023 could be pushed into extreme poverty in West Africa (AfDB, 2022b).



Fluctuating global commodity prices, rising demand for food and energy, and inflationary pressures following the Ukraine crisis and the COVID-19 pandemic will likely have different impacts in Africa overall, including in West Africa. Such economic shocks present major challenges for the fiscal situation in import-based economies over the short to medium term. Meanwhile, countries that are net exporters remain highly dependent on global prices and are exposed to price fluctuations.

The anticipated average inflation rate for the ECOWAS region in 2022 was 9.9%. Nigeria and Sierra Leone are outliers, with both countries projected to see inflation peaks of 13.3%. Persistent budget deficits, driven largely by the demand for extensive spending on development and infrastructure, have been the predominant catalysts of inflation. For more than two decades, West Africa, paralleling other African areas, has grappled with these continual deficits, which frequently surpass the macroeconomic convergence benchmark of 3% of GDP established by ECOWAS (AfDB, 2021).

Within West Africa, the monetary policy frameworks vary due to the two distinct exchange rate systems being used in the region. Countries in the West African Economic and Monetary Union (WAEMU) – including Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo – have their CFA Franc exchange rate fixed to the Euro (IMF, 2022). Meanwhile, countries outside the WAEMU – Cabo Verde, The Gambia, Ghana, Guinea, Liberia, Nigeria and Sierra Leone – often engage in foreign exchange market interventions to regulate their currency values.

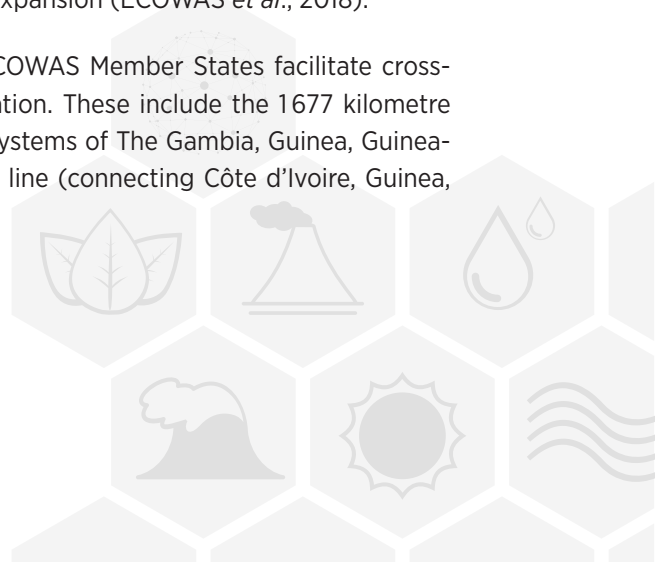
Given its young demographic (420 million people between the ages of 15 and 35), West Africa faces the challenge of absorbing more than 10 million people entering the job market every year, against an average regional job creation of 3 million jobs annually. The energy transition is an opportunity to provide a young workforce with the necessary skills to integrate and help grow the renewable energy market, which has the potential for direct job creation. The International Renewable Energy Agency (IRENA) estimates that West Africa will see a consistent drop in fossil fuel-related jobs to 2030 and a parallel growth in jobs related to the energy transition, especially linked to energy efficiency, renewables, bioenergy, grids and flexibility (IRENA and AfDB, 2022).

## West Africa's energy sector

West Africa has abundant renewable energy resources – including solar, wind and hydropower – that could be leveraged for regional integration and economic development. Improving cross-border energy trade and interconnections could help increase access to reliable and affordable power for people and businesses in the region. The development of renewable energy projects in West Africa could also attract foreign investment, create jobs and support the growth of local industries.

The West African energy sector is transforming rapidly with the deployment of large-scale renewable energy capacities, including four 150 megawatt (MW) regional solar parks in Burkina Faso, The Gambia, Mali and Niger. These projects, supported by the World Bank, are part of the ECOWAS Master Plan and aim to achieve a cumulative capacity of 600 MW. Integration of these projects into the regional power pool (WAPP) highlights the commitment to renewable energy expansion (ECOWAS *et al.*, 2018).

Additionally, several high-voltage interconnections between ECOWAS Member States facilitate cross-border electricity trade and enhance regional energy co-operation. These include the 1677 kilometre OMVG 225-kilovolt interconnector (linking the national power systems of The Gambia, Guinea, Guinea-Bissau and Senegal) and the 1357 kilometre CLSG 225-kilovolt line (connecting Côte d'Ivoire, Guinea, Liberia and Sierra Leone).



However, West Africa faces high energy vulnerability, volatile fuel prices and relatively unreliable electricity network systems. Energy poverty and its impact on local economic and social development remains a major challenge. The region faces significant energy challenges, including low access to modern energy sources, high dependence on biomass fuels for cooking, and significant indoor air pollution. In the past two decades, access to modern clean cooking in the region has increased only 10%, reaching an access rate of 13% in 2019, the second-lowest rate on the continent. At the same time, West Africa has the second-highest electricity access rate (53%) on the continent – with a large rural-urban divide – while electricity demand is expected to more than double by 2030 (IRENA and AfDB, 2022). Increasing energy access represents a key step in reconciling the region's rising energy demand with the need to deliver sustainable development.

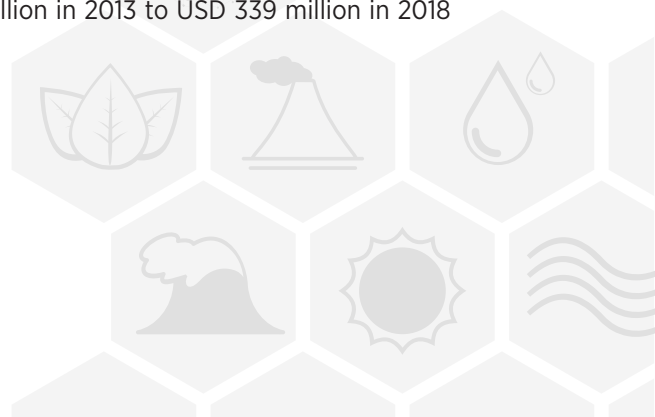
Fossil fuels, especially oil and natural gas, are a critical part of West Africa's economy, as the region includes important producer economies such as Nigeria, Ghana and Côte d'Ivoire. In Nigeria, the oil and gas sector contributed nearly 10% of GDP in 2019 and accounted for nearly 80% of electricity generation (IRENA, 2022). Due to the already existing abundance of oil and gas resources in the region as well as the new discovery of gas fields in Côte d'Ivoire, Senegal, and elsewhere, countries are considering how to reconcile and navigate resource development, decarbonisation and economic development objectives.

In 2020, only around 6 gigawatts (GW) of West Africa's total installed power capacity of 26 GW was from renewable energy resources. The region has a huge renewable energy potential that, if harnessed, could play an important role in addressing current energy shortages. In the coming years, rising energy demand, driven by population growth (around 2.5% per year), rapid urbanisation, and economic development, will require urgent action to tap into the region's vast renewable energy resources. Across West Africa, the potential renewable resource capacities are estimated at 1956 GW for solar, 106 GW for wind, and 162 GW for hydropower, with peaks in Mali for solar and in Nigeria for hydropower (IRENA and AfDB, 2022).

The region is an ideal candidate for regional energy trade because of the vast renewable energy potential, the presence of energy-exporting countries, and the situation of large energy-deficit countries encountering high costs. The World Bank (2018) estimates that integrated power trade in West Africa could save USD 5-8 billion per year by enabling countries to import electricity at lower cost, thereby increasing access to affordable, reliable and modern energy.

Despite the benefits of regional electricity trade, the level of cross-border electricity exchange remains very limited. Much of West Africa's electricity transmission and distribution infrastructure is in need of expansion and repairs. Substantial upgrades are also needed to increase investment in cross-border electricity transmission, as it could play an important role in ensuring reliability. Moreover, investments in the digitalisation of such infrastructure are needed for increased flexibility, monitoring and maintenance.

In West Africa, rural electrification rates are still below 40%. Electricity losses from national grids are above 28%, with frequent disruptions, and electricity prices average USD 0.35 per kilowatt-hour (kWh), with values in some countries reaching USD 0.66 per kWh. Off-grid solutions have gained momentum in recent years with the installation of increasingly cost-competitive solar home systems and mini-grids in rural and remote areas, demonstrating the great potential of these systems to improve electricity access in West Africa. As of 2023, around 385 mini-grids with a combined capacity of nearly 0.03 GW were operating in the region, with 95% of them powered by solar photovoltaics (PV). The market for mini-grid start-ups that provide energy access grew from USD 19 million in 2013 to USD 339 million in 2018 (Antonanzas-Torres, Antonanzas and Blanco-Fernandez, 2021).





The deployment of stand-alone power generation systems during the last decade has helped to increase the electrification rate in rural areas across sub-Saharan Africa, due to a combination of falling costs for solar PV and new and innovative financing models. However, progressive policy and regulatory measures are required to generate greater benefits from the energy transition.

Across the West Africa region, countries are developing policy and legislative frameworks to respond to the energy crisis and to the need for a renewable, decarbonised, decentralised energy supply that addresses climate change and the commitments that countries have made under the Paris Agreement.

## Energy policy implementation

The regional organisation ECOWAS has played a pioneering role in developing a regional framework for sustainable energy and has provided both guidance and support to Member States to adopt and establish markets for renewable energy and energy efficiency. ECOWAS also relies on the Regional Electricity Regulatory Authority (ERERA), established in 2008, which aims to ensure good governance as it regulates cross-border electricity exchanges, creates a favourable investment environment for regional electricity projects, and provides technical assistance to national electricity regulators. ECOWAS recently introduced two new instruments to encourage private investments in the energy sector, with a focus on renewable energy deployment and the development of a regional electricity market. These initiatives – the Updated Energy Policy 2023 and the ECOWAS Electricity Code (Act) 2023 – aim to ensure universal access to modern energy services in the region.

As a specialised institution of ECOWAS, the West African Power Pool (WAPP) includes 14 of the Member States of the ECOWAS community. It was created in 1999 with the vision “to integrate the national power systems into a unified regional electricity market with the ultimate goal of providing in the medium and long term, a regular and reliable energy at competitive cost to the citizenry of the ECOWAS region” (WAPP, 2023).

Another concrete step was the establishment in 2008 of the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE), the first regional centre in sub-Saharan Africa dedicated to renewable energy and energy efficiency technologies. Since its inception, ECREEE has focused on developing and implementing key programmes and policies. In an important milestone, the Centre developed an ECOWAS Renewable Energy Policy (EREP) and an ECOWAS Energy Efficiency Policy (EEEP), which were adopted in July 2013 by the 43rd Ordinary Session of the Conference of Heads of State and Government of ECOWAS.

The region has set the following goals:

1. Increase the share of renewable energy (including large hydropower plants) in the total electricity mix from 24% in 2018 to 48% in 2030. The share of new renewable energy sources – such as wind, solar, small hydropower and bioenergy (excluding large hydropower) – is expected to increase from 2% in 2018 to around 19% in 2030.
2. Create favourable conditions for private investments in energy efficiency and stimulate industrial development and employment by reducing energy costs.

The ECOWAS Energy Efficiency Policy (EEEP) and other similar initiatives aim to provide 2 GW of power generation capacity through efficiency gains and by doubling the savings from energy efficiency. In addition, significant initiatives include introducing instruments for financing sustainable energy (including carbon finance) and, in the longer term, establishing a regional fund for the development and implementation of sustainable energy projects (Okpanachi, Ambe-Uva and Fassih, 2022).

Creating a regional power market can help achieve these goals through “clearly defined, regionally aligned policies framed within a broader vision” (Bello and Ojoyi, 2017), as countries in the region have different renewable energy potentials. Partnerships between IRENA, the WAPP and ERERA already have led to the creation of the West Africa Clean Energy Corridor (WACEC), aimed at enhancing the “development and integration of utility-scale renewable power in West African power systems” (Bello and Ojoyi, 2017; IRENA, 2023). The institutional set-up for implementing the respective WACEC strategies comprises ECREEE, Germany’s international development agency (GIZ), the WAPP, IRENA, and the ECOWAS Commission, with ECREEE’s National Focal Institutions ensuring co-ordination with the countries (Okpanachi, Ambe-Uva and Fassih, 2022).

The WACEC seeks to identify sites for renewable power generation and to expand on the WAPP projects, which currently attain a peak load of around 25 GW. According to a 2021 report from the US Agency for International Development, the WACEC aims to deploy up to 10 GW of solar energy into the region’s generation mix by 2030. The ultimate goal of the WACEC is to “facilitate trans-border regional renewable energy trade that will benefit from resource complementarities and economies of scale” (IRENA, 2019).

Positive results have been achieved in some countries, such as Cabo Verde and Ghana, which have greatly improved energy access through renewable energy and upgrades to infrastructure. However, progress has been uneven across countries, with some facing conflicting policy measures. Efforts to achieve greater economic diversification are at times counteracted by stakeholders in the oil sector who continue to benefit from the status quo (Okpanachi, Ambe-Uva and Fassih, 2022). As a result, some steps in the right direction have been taken to improve the regional electricity supply through renewable energy and energy efficiency policies. However, efforts are still needed to move from policy to investments.

## **Barriers and limitations**

A transparent, holistic and enabling policy structure is essential to draw investment towards the energy transition in West Africa. A major limitation to the actual application of relevant policies lies in the lack of implementing regulation, as well as in the absence of a sufficiently developed, strong and efficiently regulated power grid for national and cross-border transmission and trading of electricity.

A series of key technical and regulatory barriers must be overcome to avoid an increase in risk and uncertainty perception (real or perceived) from private sector and international investors. Indeed, the need for significant increases in public and private investment can only be met with the support of sustained sector reform and improved fiscal sustainability. This will require, among other things, sustained and co-ordinated efforts to ensure cost-reflective tariffs, effective planning and organisation of investments in the sector, and efficient institutions and utilities. Most importantly, the energy goals of each country’s national development plan should guide investment plans and strategies. Progress in these areas can help mobilise the required capital for renewable energy capacity.

## **Investment**

Growing electricity demand in West Africa is expected to be met through significant investments in power generation as well as new interconnections. This will help the region to better exploit its renewable energy potential and to develop a diversified generation portfolio. IRENA analysis (2021) suggests that the average annual investment in power systems on the African continent needs to double by 2030, from around USD 30 billion today to around USD 40-65 billion. For West Africa in particular, the combined investment needs between 2015 and 2030 are USD 67 billion for renewable power generation and USD 52 billion for transmission and distribution infrastructure.



Currently, with support from partners such as the World Bank, the WAPP has mobilised around USD 5 billion to build nine cross-border interconnectors, with the goal of connecting all 14 WAPP member countries by 2024. In the area of climate change, 48 African countries have requested more than USD 1200 billion in international finance to achieve the goals of their Nationally Determined Contributions (NDC) under the Paris Agreement by 2030. Nigeria alone accounted for USD 200 million of this (IEA, 2022). More recently, as a first in the region, Nigeria launched its Energy Transition Plan (Nigeria ETP, 2022), a comprehensive strategy to mobilise investments, enhance private sector participation, and forge opportunities in the energy transition, targeting net zero greenhouse gas emissions in five sectors by 2060.

## 2. Recommendations to policy makers on how to further scale up the promising renewable energy market in West Africa

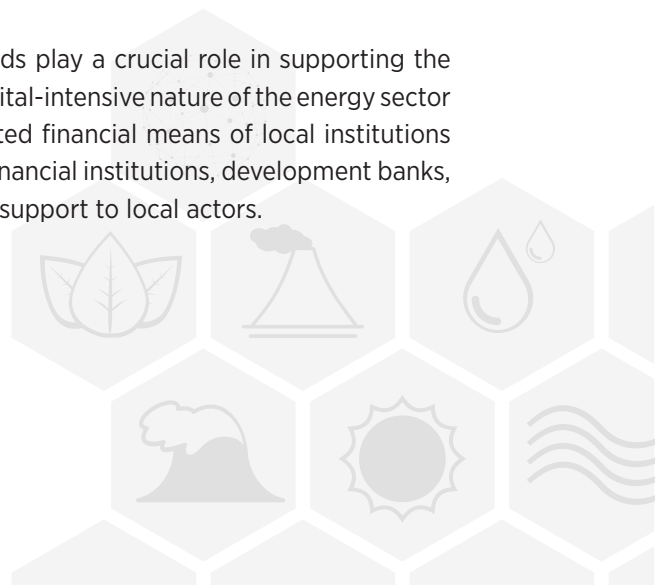
**Recommendation 1: Enhance the regional dimension of renewable energy in West Africa at the policy, financial and technical levels, and draw attention to the opportunities and benefits that renewables bring to the region.**

Local governments, public institutions and regional entities have already started the process of regional integration to unlock the potential of renewable energy in West Africa. However, progress has been slow, due mainly to political and technical challenges as well as to external factors such as the COVID-19 pandemic and recent disruptions in global supply chains. Local governments are the protagonists of the political effort required for further integration. ECOWAS and the WAPP are the ideal political and technical arenas to support the integration process and to guide the international community in the direction that West African countries want to take.

Promoting regional integration in West Africa, which accounts for one-third of Africa's total GDP, is essential to attract energy investments and to support economic development and prosperity. Making renewable energy a primary driver of future energy development can reap multiple gains for the region. Integrating renewables into the energy mix supports energy independence, enables resilience and mitigates the already disastrous impacts of climate change.

Given the complexity and cost of building and operating conventional power plants, and the increasing demand for energy driven by demographic and economic trends, renewable energy can help stabilise electricity prices and bring electricity to the millions of people who still lack it in West Africa. Furthermore, renewable energy technologies have demonstrated that, combined with the appropriate flexibility technologies and business models, they are reliable and can ensure security of supply. Renewables have the potential for local job creation and long-term socio-economic benefits, with a higher return on job creation per USD invested compared to the conventional energy sector. The ongoing global energy crisis must encourage the shift towards renewables worldwide, and West Africa stands to gain from this acceleration.

Transmission infrastructure, interconnection lines and smart grids play a crucial role in supporting the development of renewable energy in the region. However, the capital-intensive nature of the energy sector presents a financial challenge, particularly considering the limited financial means of local institutions for infrastructure investments. To bridge this gap, international financial institutions, development banks, bilateral co-operation agencies and the private sector can offer support to local actors.



Building partnerships and regulatory structures for public-private sector co-operation will be key to mobilising both public and private funds for the benefit of the region's renewable energy sector. Following and reinforcing continental initiatives such as the Programme for Infrastructure Development in Africa – Priority Action Plan (PIDA PAP) will set an example for effective infrastructure development across the region.

Moreover, the Africa Single Electricity Market (AfSEM), launched by the African Union Commission in 2021, aims to create a unified marketplace by pooling utilities from all African countries. This initiative facilitates cross-border and inter-regional electricity trade, fostering greater energy co-operation within the continent.

#### Action points:

- » **Establish and reinforce strategic and results-oriented partnerships** with various African and international organisations and development partners active in the renewable energy field. The aim is to leverage existing efforts and resources as well as to establish regional and international dialogues to strengthen electricity infrastructure and adapt it to a regional market.
- » **Strengthen co-ordination and co-operation** among national and local governments, international financial institutions and international co-operation agencies to create a regional policy framework to attract private investors by reducing perceived risks.
- » **Promote and raise awareness of the socio-economic benefits of renewable energy** in comparison with the conventional energy sector, and overcome misleading communication that can create barriers with local communities.
- » **Update energy development plans** to attract international investors and demonstrate the strength of the ongoing energy transition, by establishing clear and realistic targets for renewables by 2030, with a vision for 2050. As part of the implementation of the ECOWAS Renewable Energy Policy, all Member States have developed National Renewable Energy Action Plans (NREAPs) containing renewable energy targets for 2030. However, addressing the challenge requires periodic monitoring, evaluation and reporting on these plans.
- » **Increase the efficiency and transparency of state-owned utilities**, and establish policies and implement operational plans to enable private participation, also in partnership with public institutions. This should include mechanisms to strengthen the bankability and creditworthiness of state-owned utilities to mitigate the risk of payment default.
- » **Support and facilitate local job creation** through a re-skilling lab and favourable policies.
- » **Ensure that research and innovation are financed and supported** to enable technological improvements and to adapt renewable energy technologies to local conditions. This includes supporting the operationalisation and domestic integration of the ECOWAS Green Hydrogen Policy, adopted by ECOWAS Energy Ministers in March 2023. To achieve this, the region must focus on developing a conducive ecosystem for green hydrogen, establishing the appropriate institutional framework, providing support for research and development (R&D), investing in capacity building and raising awareness about the potential of green hydrogen within West Africa.





**Recommendation 2: Co-ordinate the development of power generation with the development of the infrastructure network, to avoid bottlenecks and fully exploit the potential of renewable energy.**

The transformation of the power generation mix has implications for investments in the transmission and distribution networks that must be managed by regulators and regional organisations. While it typically takes one to two years to commission a solar PV or wind power plant, it takes longer to develop new transmission lines to transport electricity. Co-ordinated planning between power plants and the transmission network is a pre-requisite for development that does not create bottlenecks that can undermine efforts and progress.

Integrating large amounts of renewable energy will require a responsive and smart transmission network that can exploit the full potential of renewables – including loss reduction – and create new opportunities for the entire value chain. Channelling public finance and co-ordinating policies more effectively, by identifying investment priorities and attracting investors, can generate substantial advantages of scale. Governments must grow pipelines of bankable infrastructure projects that meet rigorous quality standards.

**Action points:**

- » **Develop a clear and transparent regulatory framework** for both electricity generation and transmission/distribution, in addition to cost-efficient tariffs (including cross-border).
- » **Establish rules for generator access and use of the network**, including cost allocation and curtailment management, to facilitate regional integration of renewable energy. Additionally, support the creation of designated Renewable Energy Zones to maximise the use of abundant renewable resources and to streamline the development of clean energy projects.
- » **Harmonise the permitting process among Member States** to expedite strategic regional projects, reducing administrative bottlenecks and speeding up turnaround times. This will facilitate smoother and more efficient project development. In addition, mobilise public finance and enable generators and private investors to play a role in transmission infrastructure, possibly by creating a public-private partnership framework to benefit from the private sector's capital and expertise.
- » **Develop regional grid codes** compatible with cross-border trading, common rules for connection, grid access, operation and maintenance, cost definition and allocation.
- » **Include flexibility elements in the generation system** (e.g. regulation of business models based on hybrid plants, battery storage and other forms of storage) to ensure smooth integration of renewables into the power system.



### Recommendation 3: Include decentralised renewable energy solutions in national strategies to maximise energy access.

Despite progress, 188 million people in West Africa still lack access to electricity. To bridge this gap, a two-pronged approach is needed: utility-scale generation and transmission grids for urban areas, and the implementation of mini-grid and off-grid solutions to complement utility-scale plants to address energy access gaps in rural areas. For clean cooking, solutions such as biogas and bioethanol are crucial. Investment in large-scale renewable energy should not overshadow stand-alone and off-grid solutions, which have proven successful in providing rural populations with basic electricity services and resilience, especially during the COVID-19 outbreak, which reversed significant progress in energy access.

#### Action points:

- » **Support the integration of mini-grid and off-grid solutions** into national policies and plans to facilitate future integration with the national transmission and distribution network.
- » **Integrate clear and transparent regulation** to unlock private investment in off-grid solutions.
- » **Strengthen regional regulatory frameworks** to support the adoption of ECOWAS Minimum Energy Performance Standards and strengthen quality standardisation and consumer protection.
- » **Invest in education, training and R&D** to support the creation of local markets for small-scale renewable energy technologies.

### Recommendation 4: Include clean cooking solutions in national strategies to enhance energy access.

Across the region, countries can promote the integration of clean cooking solutions, such as biogas and bioethanol, into national strategies and plans as a means to accelerate tangible progress in energy access.

#### Action points:

- » **Facilitate the integration of clean cooking solutions** into national strategies and plans, and encourage private investment to expedite progress.

### Recommendation 5: Adopt a clear regulatory framework and ensure its implementation.

Rules that govern who can participate in the energy sector, and how, are the starting point for positive, long-term development of renewable energy. National regulators, ministries and local governments must work together to publish a national framework that addresses key regulatory barriers and covers areas such as foreign direct investment rules, pathways to market and procurement processes. Considering the huge potential sources of renewable energy in West Africa, a clear regulatory framework is one of the missing elements to attract international investors. Some West African countries have already developed promising regulatory frameworks that include, for example, competitive procurement schemes, net metering, corporate power purchase agreements and renewable purchase obligations. However, at times these schemes lack secondary legislation or regulations, which are essential for their successful implementation.



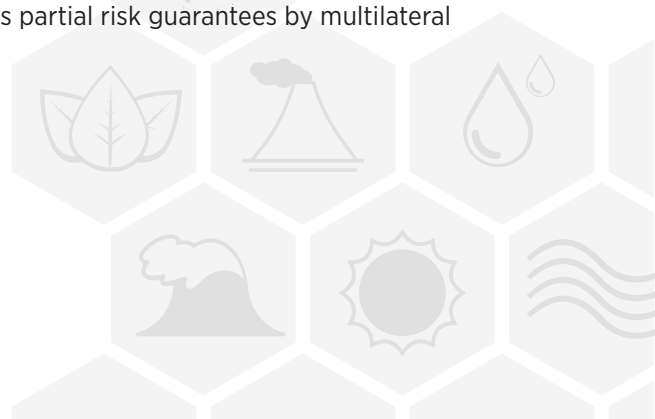
#### Action points:

- » **Remove barriers to foreign direct investment** (where they exist) that impede the participation of independent power producers in the regional energy market.
- » **Ensure a balance between local content rules and market competitiveness** to stimulate both international and local engagement.
- » **Establish multiple routes to market** to allow independent power producers to choose from a portfolio of opportunities (auctions with a state-owned off-taker, corporate power purchase agreements, self-generation, etc.).
- » **Apply cost-reflective tariffs and design targeted social policies** to guarantee affordable energy access to the most vulnerable groups. In addition, provide incentives to industries to invest in more efficient technologies, while ensuring the sustainability of electricity production.
- » **Organise competitive procurement schemes** to attract international companies and to improve the sector's competitiveness, and implement standard and bankable power purchase agreements. To reduce the cost of capital, additional measures may include improving regulatory stability and transparency and enforcing regulations; enhancing investor confidence through clear and predictable policies, and promoting financial mechanisms that lower financing risks. These efforts can contribute to making renewable energy projects more attractive to investors and potentially result in reduced financing costs over time.
- » **Support the further development of a power trading market**, with appropriate structures and rules, to accelerate regional energy integration and maximise the value of the WAPP. Active support from governments and local institutions in the formulation and acceptance of market rules is vital to unlock the full potential of regional power trading. Specific legislation on power trading requires extensive expertise as well as a regional approach.

#### **Recommendation 6: Establish financial guarantee schemes to reduce the cost of capital, and ensure the effective use of currency risk mitigation instruments, convertibility and transferability (or establish other solutions such as partial guarantees).**

The perception of high business risks by investors is one of the main challenges slowing the development of renewable energy. Risk perception among private investors is particularly high when it comes to financing projects. These financing risks include credit risks, but also market risks such as rising interest rates and currency depreciation. The development of effective blended financial risk management to support independent power producers and banks is crucial to reducing the cost of capital-intensive renewables and unlocking the full potential of cost-effective renewable energy sources.

Furthermore, transparent policies on currency risk hedging, convertibility and transferability are a crucial aspect in the decision process of international investors. Co-operation with international financial institutions and multilateral banks can be a way to integrate financial de-risking solutions and attract more investment. Nevertheless, this can also be a challenge in African countries, where sovereign guarantees can cripple countries' economies, or for countries that are not able to issue them. Therefore, it is also necessary to provide other solutions such as partial risk guarantees by multilateral development banks.



#### Action points:

- » **Engage and support monetary co-operation with non-WAEMU countries** (Cabo Verde, The Gambia, Ghana, Guinea, Liberia, Nigeria and Sierra Leone).
- » **Mitigate the risk of non-payment of a trade transaction caused by currency depreciations**, by hedging the issues of foreign exchange risk, for example through specialised institutions.
- » **Ensure a clear and transparent process for the approval of offshore accounts** within local governments and ministries.
- » **Provide alternative solutions such as partial guarantees and blending facilities** to increase the affordability of risk mitigating instruments.

### Recommendation 7: Build the capacity of public institutions, policy makers and technical operators to enhance the local workforce and to ensure a just and fair energy transition

Strengthening the technical, economic and regulatory core competencies of decision makers is key to accelerating the transition to renewables. This can be achieved using advanced tools that assist in evaluating and implementing optimal solutions tailored to various energy scenarios, ensuring the smooth incorporation of renewables into West African electricity markets. Furthermore, a pro-active approach is needed to engage young professionals from technical, commercial and managerial backgrounds to expedite the renewable energy transition.

#### Action points:

- » **Empower the local workforce**, with a particular focus on technical and vocational trainings for youth and women.
- » **Support decision makers and future leaders** by strengthening technical, economic and regulatory competencies to assess and deploy the most appropriate solutions in different energy contexts.
- » **Support and recognise young entrepreneurs and leadership** by promoting youth participation in the renewable energy sector.
- » **Explore and support innovative projects** (including productive uses of energy and integrated water-energy-food nexus solutions) and businesses to enhance access to energy and entrepreneurship.
- » **Support South-South co-operation** on the exchange of best practices and innovative solutions.
- » **Strengthen communication and consultation with local communities** in the process of deploying renewable energy, both at the small-scale and the utility-scale, and increase the involvement of local communities in the management of localised energy infrastructure.
- » **Develop a standardised regional certification scheme** for the installation and maintenance of renewable energy generation infrastructure, recognised by professionals and end users in all ECOWAS Member States.

## References

- AfDB (2022a)**, *West Africa economic outlook 2022: Supporting climate resilience and a just energy transition*, African Development Bank, Abidjan, [www.afdb.org/en/documents/west-africa-economic-outlook-2022](http://www.afdb.org/en/documents/west-africa-economic-outlook-2022)
- AfDB (2022b)**, *African economic outlook 2022: Supporting climate resilience and a just energy transition in Africa*, African Development Bank, Abidjan, [www.afdb.org/en/documents/african-economic-outlook-2022](http://www.afdb.org/en/documents/african-economic-outlook-2022)
- AfDB (2021)**, *West Africa economic outlook 2021: Debt dynamics; the path to post-COVID recovery*, African Development Bank, Abidjan, [www.afdb.org/en/documents/west-africa-economic-outlook-2021](http://www.afdb.org/en/documents/west-africa-economic-outlook-2021)
- Antonanzas-Torres, F., J. Antonanzas and J. Blanco-Fernandez (2021)**, “State-of-the-art of mini grids for rural electrification in West Africa”, *Energies*, Vol. 14, p. 990, <https://doi.org/10.3390/en14040990>
- Bello, O. and M. Ojoyi (2017)**, “Low-carbon energy transition in Africa: Insights from West Africa”, South African Institute of International Affairs, Johannesburg, <https://saiaa.org.za/wp-content/uploads/2017/07/Policy-Briefing-164.pdf>
- ECOWAS et al. (2018)**, *ECOWAS master plan for the development of regional power generation and transmission infrastructure 2019-2033*, Economic Community of West African States, Abuja, [www.ecowapp.org/sites/default/files/volume\\_0.pdf](http://www.ecowapp.org/sites/default/files/volume_0.pdf)
- IEA (2022)**, *Africa energy outlook 2022*, International Energy Agency, Paris, [www.iea.org/reports/africa-energy-outlook-2022](http://www.iea.org/reports/africa-energy-outlook-2022)
- IMF (2022)**, *IMF country report no. 22/67 West African Economic and Monetary Union*, International Monetary Fund, Washington, D.C.
- IRENA (2023)**, “West Africa Clean Energy Corridor”, [www.irena.org/Energy-Transition/Country-engagement/Regional-Initiatives/West-Africa-Clean-Energy-Corridor](http://www.irena.org/Energy-Transition/Country-engagement/Regional-Initiatives/West-Africa-Clean-Energy-Corridor), accessed 14 August 2023.
- IRENA (2022)**, *Energy profile: Nigeria*, International Renewable Energy Agency, Abu Dhabi, [www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical\\_Profiles/Africa/Nigeria\\_Africa\\_RE\\_SP.pdf](http://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Africa/Nigeria_Africa_RE_SP.pdf)
- IRENA (2021)**, *The renewable energy transition in Africa*, International Renewable Energy Agency, Abu Dhabi, [www.irena.org/publications/2021/March/The-Renewable-Energy-Transition-in-Africa](http://www.irena.org/publications/2021/March/The-Renewable-Energy-Transition-in-Africa)
- IRENA (2019)**, *Scaling up renewable energy deployment in Africa: Impact of IRENA's engagement*, International Renewable Energy Agency, Abu Dhabi, [www.irena.org/-/media/Files/IRENA/Agency/Publication/2019/Jan/IRENA\\_Africa\\_impact\\_2019.pdf](http://www.irena.org/-/media/Files/IRENA/Agency/Publication/2019/Jan/IRENA_Africa_impact_2019.pdf)
- IRENA and AfDB (2022)**, *Renewable energy market analysis: Africa and its regions*, International Renewable Energy Agency and African Development Bank, Abu Dhabi and Abidjan, [www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Jan/IRENA\\_Market\\_Africa\\_2022.pdf](http://www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Jan/IRENA_Market_Africa_2022.pdf)
- Nigeria ETP (2022)**, “Nigeria energy transition plan”, <https://energytransition.gov.ng>
- Okpanachi, E., T. Ambe-Uva and A. Fassih (2022)**, “Energy regime reconfiguration and just transitions in the Global South: Lessons for West Africa from Morocco's comparative experience”, *Futures*, Vol. 139, <https://doi.org/10.1016/j.futures.2022.102934>
- UN ECA et al. (2021)**, *Monitoring report on the impacts of COVID-19 in West Africa*, United Nations Economic Commission for Africa, Addis Ababa, <https://repository.uneca.org/handle/10855/47581>
- WAPP (2023)**, “Creation of the WAPP | ECOWAPP”, West African Power Pool, [www.ecowapp.org/en/content/creation-wapp](http://www.ecowapp.org/en/content/creation-wapp), accessed 14 August 2023.
- World Bank (2018)**, “Regional power trade in West Africa offers promise of affordable, reliable electricity”, 20 April, [www.worldbank.org/en/news/feature/2018/04/20/regional-power-trade-west-africa-offers-promise-affordable-reliable-electricity](http://www.worldbank.org/en/news/feature/2018/04/20/regional-power-trade-west-africa-offers-promise-affordable-reliable-electricity)
- World Bank (n.d.)**, “World Bank Open Data”, <https://data.worldbank.org>, accessed 14 August 2023.

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## About the IRENA Coalition for Action

The IRENA Coalition for Action brings together leading renewable energy players from around the world. The Coalition facilitates global dialogues between public and private sectors to develop actions to increase the share of renewables in the global energy mix and accelerate the global energy transition. Within the Coalition, the Business and Investors Working Group is chaired by the Global Wind Energy Council and SolarPower Europe. The Group puts forward analysis and recommendations based on on-the-ground experiences of some of the leading private sector players in the renewable energy field. IRENA acts as the Secretariat of the Coalition.

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