





# West Africa Monitor Quarterly

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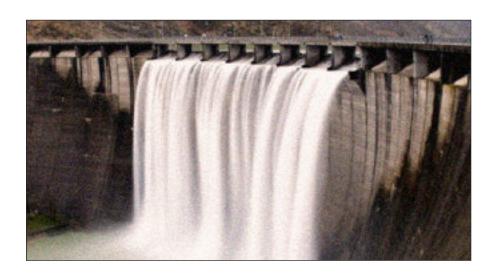
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The West Africa Monitor is produced by the country economists of the African Development Bank Group's (AfDB) West Africa Regional Department (ORWA) and Nigeria Department (ORNG). The current issue has been produced in close collaboration with the Bank's Energy Department (ONEC) and Statistics Department (ESTA).

Part of the Bank's Knowledge Management Strategy for West Africa, it aims at monitoring key socio-economic developments in the region and provides brief analysis on latest events across the countries. The report is deliberately crafted to be succinct and in non-technical language for wider circulation. Each issue includes special thematic coverage. The current issue has a focus on the energy sector and is composed by (i) a Regional Overview highlighting major political, economic and social development trends; (ii) a set of country updates featuring the latest macroeconomic development and the latest development of the energy sector (iii) a thematic section on the state of energy in the region.

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# REGIONAL OVERVIEW

## Political Developments

Political stabilization in the region suffered a major setback, due to the resumption of conflict in Mali and the harshening of conflict in Northeastern Nigeria. In Mali, the northern town of Kidal witnessed fresh hostilities, following a visit by the Prime Minister last May. As such, skirmishes between the Malian army and armed groups resumed on May 21, but were promptly followed by a ceasefire, mediated by the African Union. The events were reflected in the parliament, as opposition parties unsuccessfully sought the resignation of the government over its management of the crisis.

In Nigeria, increased global awareness of the conflict with extremist group Boko Haram, most exemplified by the highly mediatized kidnapping of 276 Nigerian schoolgirls from the town of Chibok in April, as well as a string of bombings and school shootings across the country, most recently on June 25th in Abuja, is putting pressure on the government to increase its involvement in the local conflict.

Successful elections were held in April and May in Guinea-Bissau, yielding victory to the historical PAIGC (Partido Africano da Independência da Guiné e Cabo Verde) and confirming José Mario Vaz as president. The process took place in peaceful conditions, and bodes well for a stable outlook for the country, which awaits the resumption of international assistance and engagement. Further to the elections, the African Union ended the country's membership suspension from the organization.

While no major election is expected in the next quarter, various pre-election moves have materialized, such as political concessions by the Ivorian Government to encourage the FPI (Front Populaire Ivoirien) opposition party to resume negotiations and reconciliation talks, in the run up to the November 2015 elections. The process is nevertheless expected to face many hurdles; as exemplified by the rejection of the Independent Electoral Commission (CEI) by the FPI in June 2014, on the basis that it was not adequately representative. On the other hand, the United Nations Mission in Cote d'Ivoire (ONUCI) has seen its mandate renewed in June 2014, for another year.

### **Economic Developments**

West Africa's growth remains strong in the first quarter of 2014, with the region on its way to become the continent's fastest growing region. Nevertheless it appears to perform somewhat below the optimistic growth projections of 7.1% in 2014.

Nigeria's GDP grew by 6.6% in the first quarter of 2014, according to its Central Bank. This represents a slight slowdown from the 6.9% posted in Q42013, largely due to due to a decrease in non-oil receipts, which was not offset by the oil sec-

tor's performance. In Ghana, the GDP witnessed a 6.7% GDP growth in Q12014 down from the 9% in the corresponding period in 2013. While Nigeria appear to have regained market confidence and stabilized the Naira, pressures still remain on Ghana, with a continued depreciation of the Cedi and widening fiscal imbalances.

Inflation remains subdued in most countries, with the notable exception of Ghana, where it has exceeded 7 percent q-o-q in the first quarter rising to 15 percent in June. The rise in inflation during the period was mostly influenced by cost push pressures arising from upward

adjustments of petroleum and utility prices, higher transportation cost, and the pass through effect of the currency depreciation. Nigeria has managed to slow down its inflationary pressures, while Senegal, Niger and Guinea-Bissau are witnessing deflationary trends in the first quarter of the year.

Nigeria is now Africa's largest economy, following the rebasing exercise conducted by the government in April, which brought the Nigerian GDP measuring from a poorly-reflective 1990 base to a more relevant 2010 one and established its GDP at NGN 80.2 trillion /







Monthly inflation, Q1 2014 (%)					
	Jan-14	Feb-14	Mar-14	Q1 2014/Q4 2013	
Benin	1.25	-0.88	0.26	0.95	
Burkina Faso	-0.83	-0.46	0.66	-0.99	
Cabo Verde	-0.33	-0.16	-0.40	-0.33	
Côte d'Ivoire	0.09	-0.08	-0.09	0.15	
Ghana	3.90	1.10	0.90	7.42	
Guinea	0.70	1.25	0.89	2.59	
Guinea-Bissau	-0.28	-1.41	-0.38	-2.41	
Mali	-0.17	-0.98	0.09	-1.04	
Niger	-0.55	-1.96	-0.95	-2.87	
Nigeria	-0.65	0.50	0.78	1.56	
Senegal	-0.28	-1.33	-0.48	-2.60	
Togo	0.00	1.06	0.17	0.68	

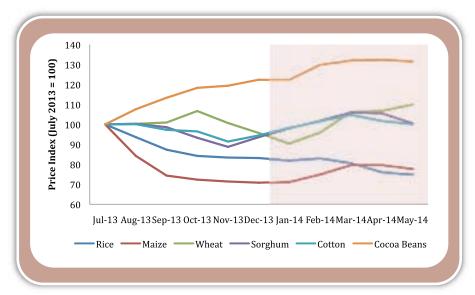
Source: AfDB statistics department.

USD 509.9 billion for 2013. Nevertheless, these new figures should not comfort the country into an illusion of growth, but rather encourage it to address structural deficiencies and major weaknesses. By better reflecting the sectorial composition of the economy, it is hoped that this exercise will allow for better economic planning, as well as help dis-

play Nigeria as an attractive destination for investment.

Commodity prices increase represent both a blessing and a challenge. The increase in the prices of cocoa and cotton during the first quarter of 2014, have reversed the downward trend experienced in most of 2013, strengthening the external position of countries exporting such commodities. Price of most staple foods, such as wheat, maize, or sorghum, also followed a similar pattern, displaying a high progression in 2014. However this may lead to an increased risk of food insecurity, as well as heightened pressure on many countries' balance of payments.

#### **Commodity Price Indices**



Source: World Bank/AfDB









Maintaining macro-economic balances remain a challenge for many countries where fiscal policy has weakened and debt-to-GDP ratios have risen rapidly (e.g. Burkina Faso, Cabo Verde, Gambia and Ghana), and the risk of debt distress is increasing. The composition of primary spending should be revised, to avoid jeopardizing macroeconomic stability and longer-term public debt sustainability. An interesting case is the one of Liberia's most recent 'austerity' budget which is aimed at cutting the running expenditures of ministries and state agencies, while freeing up resources for energy and road infrastructure investments.

Access to energy remains a binding constraint for growth in West Africa, manifested by a shortage of production and national distribution paucity. Across the region, the sector suffers from inefficiencies and poor governance. With 57% of the people of the region deprived of electricity, concerted action by

national governments and regional organizations to improve access is necessary.

## Social Developments

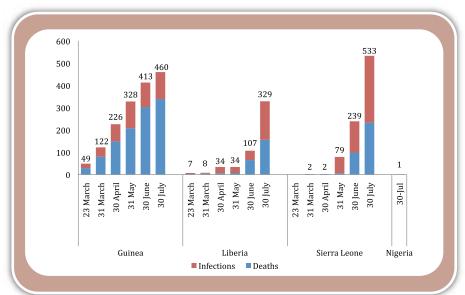
#### Ebola Crisis

The Ebola crisis, which had dominated the attention of West Africans during the first half of 2014, continues to worsen. The virus outbreak has killed 729 people by the end of July 2014, and the numbers are still increasing. Described by many as unprecedented in terms of geographical distribution, people infected and deaths, the epidemic has claimed most of its victims in Guinea, which has reported 460 cases and 339 deaths by the end of July. Sierra Leone has reported 533 cases and 233 deaths; and in Liberia, 329 cases and 156 deaths. Cote d'Ivoire, which had seen a single case of Ebola fatality in 1994, and Mali remain unaffected by the epidemic.

The repercussions of the Ebola epidemic go beyond casualties in lives however, as a month-long border closure between Senegal and Guinea, which lasted from March 29 to May 6, reportedly impacted trade between the two countries, notably for agricultural goods. On July 27, Liberia closed most of its borders, then introduced travel restrictions between counties, as well as closed major markets – thus reducing the supply of food and goods throughout the country.

A new call for collective action was issued on 2-3 July, during a two-day summit in Ghana in the presence of ministers from 11 countries, along with health experts and Ebola survivors. The summit concluded that a joint strategy was necessary to halt the spread of the disease, which is lethal in 90% of the cases. The plan includes the establishment of a World Health Organisation "Sub-regional Control Center" in Guinea, improved surveillance and reporting of cases, and greater cross-country communications.

Total Ebola cases (cumulative), per country



Source: Based on WHO data.









→ BENIN

→ BURKINA FASO

→ GHANA

→ GUINEA-BISSAU

LIBERIA

→ MALI

→ NIGER

NIGERIA

**SENEGAL** 





# BENIN



- In the first semester of 2014, the economy has floundered due to repeated strikes coinciding with tensions between the public and the private sectors.
- Growth is expected to remain strong in 2014, due to the increase in agricultural production and port activities.

• The country is facing an energy crisis, due to insufficient production. The challenge now will be to implement projects aiming at increasing production and improving sector governance.

#### Overview

Economic activity in the first half of 2014 suffered from a tense social context. The first quarter was impacted by strikes and labour movements. Tensions between the public and private sectors have persisted amid a legal discord between the Presidency and cotton magnate Patrice Talon.

Prospects nevertheless remain positive for the rest of the year, with improved perspectives for dialogue between the government and the private sector. Growth is expected to hold above 5% in 2014, driven by the agricultural and port sectors, as well as the operationalization of a new cement plant. Benin has also recently obtained the support of the international financial community, during the round table organized to finance its infrastructure program in June

2014. The key challenge ahead for the government of Benin will be the need for a suitable mechanism to better mobilize resources and implement the investment program.

# Energy Focus: Benin facing a persistent energy deficit

Benin's energy crisis has endured since 2006. Nearly three-quarters of the population has no direct access to electricity, and this proportion reaches up to 95% in rural areas. Moreover, Benin remains greatly dependent on external supply of electricity: in recent years, more than 90% of the national demand of electricity is fulfilled through imports (from Nigeria, Ghana, and to a lesser extent Cote d'Ivoire). With the decline of these supplies, electricity supply has fallen to 140 MW, for an average demand of 200 MW.

This has led to an average load shedding of 4 hours per day, which has clearly affected the economic activity. Main challenges in the energy sector are hence to increase electricity production, to improve transportation and distribution, to strengthen the institutional framework of the Regulatory Authority for Electricity, and to introduce new tariffs that would ensure the financial viability of the Benin Electric Power Company (SBEE).

To address such challenges, the government has taken important measures aimed at: (i) increasing production, mainly through the construction of hydroelectric dams and the development of renewable energy (biomass, solar, wind); and (ii) improving access to electricity through of transmission and distribution. However it remains crucial to map those initiatives in a coherent and structured plan, to ensure effective implementation.







# BURKINA FASO



- Burkina's economy has proven its resilience over the past two years. Growth prospects are good, yet remain contingent on the peaceful management of the 2015 elections, as well as the price of gold and cotton.
- The energy sector is widely affected by the climate conditions, the landlocked geography of the country, and the absence of fossil resources. Most of the power produced comes from imported sources. The potential for solar energy remains untapped.

#### Overview

Burkina Faso's economy remains strong despite difficult conditions due to low international gold and cotton prices. The economy has grown at a rate of 9% and 6.6% in 2012 and 2013 respectively. The main drivers of the economy are agriculture and mining. In 2013, inflation remained at a low rate of 0.5%, against 3.8% in 2012. The country's economic performance depends greatly on the price of gold and cotton, as well as the weather fluctuations, which are typical of a Sahel country. For the years 2014-2016, economic perspectives remain favorable, with growth expected to remain strong with an annual rate of 6 to 7%. However, the country's prospects would

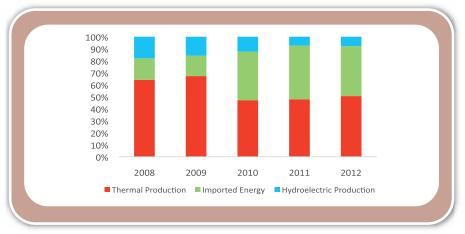
greatly depend on a successful management of the 2015 elections, a good harvest, and a more contained decrease in the prices of gold and cotton.

# Energy Focus: Reducing energy dependence through renewable energy

Burkina Faso's geography, as a land-locked Sahel country, prevents it from having access to affordable or clean energy. Access to electricity remains low in Burkina Faso, with large disparities between urban (46%) and rural areas (2%). Energy production in the country is dominated by the importance the thermal power (88%) in the total electricity supply mix.

The government has undertaken sectoral reforms aimed at strengthening national institutional capacity, liberalizing the electricity sector and diversifying production sources; and finally, ensuring better coverage of the country, especially in rural areas. Currently, Burkina Faso continues to import almost 45% of its electricity consumption from Côte d'Ivoire and Ghana. This dependence results in Burkina Faso having the highest cost per kWh in the WAEMU region (118 FCFA / kWh versus 56 FCFA in Benin and 53 FCFA in Niger), and subjects it to large and random oil price fluctuations. Consequently, the State provides large subsidies, to the tune of 3% of current budget expenditures.

#### Burkina Faso: Energy Production



Source: SONABEL

Burkina Faso's renewable energy resources are largely limited to hydropower and solar energy. The potential of hydropower is limited, and depends on the erratic rainfall in the Sahelian regions; solar is the only abundant energy source. The Government is currently exploring ways to exploit this resource in a context of public-private partnership. To this end, a call for applications for the construction of a solar field of 100 MW was launched; and the private sector, the African Development Bank's private sector department plans to support the construction of a solar power plant of 20 MW.









# GHANA



• Ghana's macroeconomic condition continues to deteriorate despite the registered robust GDP growth of 7.1 % in 2013.

- Government has resorted to Central Bank financing, amidst domestic interest rate soaring, an initiative that is detrimental to private sector investment.
- Ghana continues to experience power shortages exacerbated by inefficiencies in the power sector due to non-cost recovery prices, high transmission losses, low gas supply and excess demand for energy.

Macroeconomic Indicators					
	2012	2013 (e)	2014(p)	2015(p)	
Real GDP Growth (%)	8.8	7.1	7.7	8.0	
Real GDP Per Capita Growth (%	5.2	1.7	5.0	5.3	
CPI Inflation (%)	9.2	11.7	9.9	8.6	
Budget balance (% of GDP)	-11.8	-10.8	-8.5	-6.2	
Current account balance (% of GDP)	-12.4	-12.3	-12.5	-16.9	

Source: Government of Ghana; African Development Bank.

#### Overview

Ghana's macroeconomic condition continues to deteriorate despite the registered robust GDP growth of 7.1 % in 2013. Inflation has continued rising to 15% in June 2014 up from 13.8% in January; partly a reflection of the continuous depreciation of the cedi, which in nominal terms has depreciated by over 30% for the past six months to June 2014. Increased government reliance on domestic borrowing for financing its budget deficit, particularly from the Central Bank has exacerbated the rise in inflation and continued depreciation of the cedi. The Bank of Ghana had to finance the entire 1st Quarter 2014 budget deficit of 2.1% of GDP, as other sources of finance became more expensive. The 91-days Treasury Bill interest rate rose to 24.1% in June, up from 19.2% in January 2014. Nonetheless, the government plans to float a Eurobond of around US\$1.5billion in the coming months.

## Energy Focus: Ghana Braces for Continued Power Rationing as demand continues to rise

Ghana has faced intermittent power supply since 2012, affecting private sector activity and threatening the gains made from the sustained robust economic growth over the past two decades.

Rationing began in September 2012 following drastic shortfall in gas supply from Nigeria through the West African Gas Pipeline (WAGP), and has been further worsened by the breakdown of some of generation plants and inadequate gas and water supply to power generating stations.

Power generation in Ghana remains far below demand, despite the installed capacity of 2,480MW by end 2013 (out of which 47% is thermal) and distribution coverage of over 70% of the population. With demand for power rising at a rate of 10% annually, the government is challenged to ensure increased power generation capacity to at least 250MW annually; efforts that seem unlikely in view of the current pace of investment. The planned completion of a gas processing plant in Atuabo by July 2014 has the potential of decreasing the cost for power generation in the country. Moreover, the Millennium Challenge Account (MCA) Compact II with Ghana has strong energy programs focused at improving the policy environment and power generation for the energy sector.





# GUINEA-BISSAU



- Successful elections are giving hope for the future. However, the new PAIGC-led government will face a difficult socio-economic situation with large accumulated arrears and civil servant strikes.
- The second half of 2014 may prove challenging: resumption of official aid may take longer than expected as donors are still gauging their intervention.
- The electricity sector is plagued by much inefficiency which constrains the country's development. While medium-term solutions are emerging through regional interconnections, quick fixes must be found.

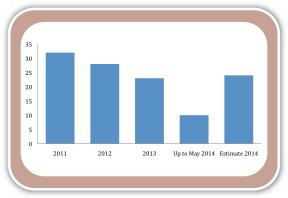
#### Overview

Presidential and legislative elections took place in a peaceful environment over April and May 2013. The country's historical party, the PAIGC, scored victories on both fronts, securing 57 out of 102 parliamentarians and the president's seat for José Mario Vaz. As work on boosting the economy after two years of transition begins, economic growth hinges upon two conditions: a resumption of aid to the country and a successful cashew nuts campaign. In this respect, the 2.8% expected growth will be at risk.

Development assistance is likely to be restored soon. The EU, AfDB and IMF are scoping out their future interventions, as are bilateral organizations waiting for a lifting of official sanctions when a new government is sworn in to move ahead.

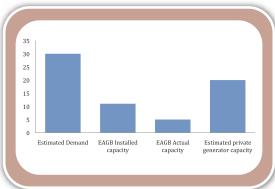
The cashew export campaign is broadly on track, despite initial fears by traditional buyers. Fearing low prices early in the season the government initially looked at several options regarding how to support producers contemplating a massive production buy-out program to ensure that the set price for producers is guaranteed. Although belatedly, buyers have come forth at mid-seasons helping prices to rise. In July 2014, producers were receiving

#### Electricity production (Gwh/yr)



Source: EAGB

#### Electricity Production Capacity (MW)



Source: EAGB, World Bank.

FCFA 300/kg, above the FCFA 250/kg statutory price.

# Energy Focus: Lights out in the electricity sector

Electricity production remains a major issue. In 2013, a total of 22.97 GWh

were produced in the country down from 32.29 GWh before the 2012 coup, of which only 12.26 GWh were distributed as 47% of production is unaccounted for due to losses along the grid. To date, there are only two 2.5 MW generators currently operating in Bissau by the stated-owned EAGB (out of a total capacity of 11 MW) which can only supply 58% of the capital's population with intermittent access to electricity. Concurrently, it is estimated that there are about 2,150 off-grid generators for an estimated capacity of 20 MW.

Electricity is cited as the second most important constraint for businesses behind political instability (80.6%). Along the same lines, the latest Doing Business report ranks the country 188th out of 189 countries, estimating that it takes 455 days to obtain electricity. Against this background the challenge going forward is finding a sustainable solution to electricity generation. The regional OMVG intercon-

nection is an integral part of it. It will however take time to come about. In the meantime, studies must start on alternatives (such as the Saltinho hydro project), but also of a strengthening of EAGB's capacity to handle production and distribution, and by securing fuel supply.









## **LIBERIA**



- The FY2013/14 budget has faced execution challenges due to revenue shortfalls. The draft FY2014/15 Budget submitted to the Legislature calls for further austerity.
- The Government submitted a \$559 million draft Budget to the Legislature, calling for austerity through recurrent expenditure cuts.
- Energy production and access is expected to expand substantially over the next two years, working to address one of the most binding constraints to the business environment.

#### Overview

The FY2013/14 budget has faced execution challenges due to revenue shortfalls, previous year expenditure overruns, and weak expenditure controls. Budgeted revenues of \$582.9 million are estimated to reach only \$506.1 million. Revenue shortfalls are related to weak tax administration including a change in the income tax regulations which has since been reversed, low production in the forestry sector due to governance issues, and slower than expected domestic growth. Additionally, the Legislature had added some \$30 million in expected revenues which did not fully materialize. The launch of the Liberia Revenue Authority on 1 July 2014 should contribute to improved revenue mobilization, although it will require sufficient funding to fulfill its mandate.

Revelations of extensive commitments to road contracts without budget allocations have raised concerns about expenditure controls. Between 2010 and 2013 the Ministry of Public Works made more than \$70 million in unfunded spending commitments on roads contracts. An investigation into the matter

is being led by the General Auditing Commission and a Presidential Committee.

The Government has submitted a \$559 million draft FY2014/15 Budget to the Legislature, which calls for further austerity through cuts in current expenditure at Ministries and Agencies. The draft Budget includes \$18.25 million for district development funds, at the request of the Legislature, despite limited clarity on the use of the funds. Mid-term Legislature elections will be held in October.

Energy Focus: Production and access is expected to expand significantly over the next two years

While Liberia currently faces one of the lowest rates of energy access in the world, and one of the highest costs, this should change substantially over the next two years. Current production is only 23 MW, but three Heavy Fuel Oil (HFO) plants are expected to come online between December 2014

and 2015 with a total 38 MW in capacity. A fourth HFO plant with 10 MW capacity is also being considered. The Mount Coffee Hydropower Plant will gradually come online between December 2015 and June 2016.

Transmission and distribution are also increasing rapidly. The Liberia Electricity Corporation serviced only 2,170 connections in Monrovia as of July 2010, but this has increased to around 22,000 in July 2014, and these are increasing by about 1,000 per month. Improving governance and regulation in the sector will become increasingly important to maintain recent investments, while addressing losses, tariff setting, and expansion to rural areas.

#### Energy Production Capacity Projections (MW)













- The security situation has sharply deteriorated, further to the resumption of hostilities between the Malian army and armed groups in May. A cease-fire was subsequently signed between the two parties.
- Economic recovery is expected in 2014 with an estimated GDP growth rate of 6.5%.

#### Overview

The security situation has sharply deteriorated in Mali, and particularly so in Kidal; on May 21st, hostilities resumed between the Malian army and armed groups, but a ceasefire was signed the next day, under the patronage of the Chairman of the African Union.

The political situation has since been marked by renewed tensions. Opposition parties attempted a vote of no confidence and called for the resignation of the Government without success.

Economic recovery should be stronger in 2014, after a recession in 2012 due to the security situation and limited growth in 2013 because of the weak agricultural production. The growth rate is expected to reach 6.5% this year, pending a strong performance in the agriculture and gold sectors, as well as the successful implementation of the IMF's Extended Credit Facility (ECF) programme, which would condition budget support. Unfortunately a bad rainy season has negatively affected agricultural productivity and, in turn, GDP growth. Forecasts currently project a

stronger growth in 2015, with a GDP growth rate of 5.6%.

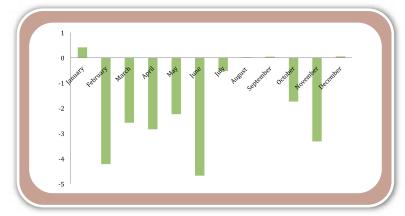
## Energy Focus: Mali's energy sector

Electricity supply in Mali remains insufficient, and of low quality. The average annual growth rate of electricity demand is estimated around 15%. Total electricity demand was 1555.29 GWh, with a production forecast of 1,533.64 GWh therefore presenting a deficit of 22 GWh. Thermal energy dominates the energy mix, and is projected to increase from 47% to 62% between 2013 and 2017. This share is only likely to decrease

following the entry in service of two new hydropower plants, in Gouina and Kénie.

The deterioration of the energy mix cannot solely be made up for by rate adjustments, nor by budget subsidies, estimated at \$9 million in 2014. Improving the energy sector will require efforts from consumers and from the Energie du Mali company. In 2013, a rate adjustment was adopted, based on indexing tariffs on production costs; also, a 3% general increase in prices over three years beginning in 2015 was decided, in order to reestablish the financial viability of the EDM company. Other measures are also being taken for the development of hydro and solar energy.

#### Energy Deficit, 2014



World Bank, AFD.







## NIGER



- Niger's economic growth remains strong, despite a decline in 2013 and an unfavorable regional context.
- Niger imports more than 85% of its energy consumption in Nigeria. The available hydroelectric and solar energy potential remains largely untapped.

#### Overview

Despite a sharp decline in 2013, the economy of Niger has maintained a steady growth over the past three years, with a positive outlook. Growth declined to 3.6% in 2013, following a strong performance in 2012, posting a growth rate of 11.1% in 2012. This decline is due to the weak rainfall during the 2013/2014 agricultural season, the decline in mining production, and the repercussions of the crisis in the Sahel. As hydrocarbon production increases, growth is expected to reach 6.5% in 2014, with an inflation rate of 2.5%. The outlook for 2014 and beyond will depend on the now-delayed negotiations with Areva, the endurance of pockets of instability along the southern borders (because of the Mali conflict), the northern borders (due to Boko Haram in Nigeria), and exposure to climate shocks.

Energy Focus: Reducing energy dependence

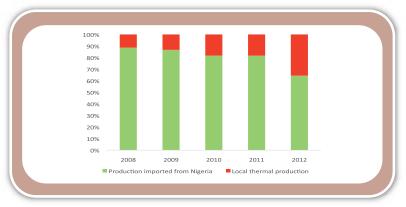
Despite Niger's a significant energy potential, access to electricity remains very limited. The household electrification rate stands at about 10% (end of 2013), with wide disparities between urban, where it is estimated at 47%, and rural areas where it is stands at only 0.4%. The country imports more than

85% of its electricity consumption from Nigeria on the basis of a 1972 agreement, which was renegotiated in 2010. Rates in Niger have not been substantially amended since 1994. As such, the country enjoys one of the lowest kilowatt/hour prices in the sub-region. Modern electricity is only a small part of energy consumption in Niger, otherwise dominated by traditional sources (biomass and firewood). With the beginning of oil production and the entry in operations of the Zinder refinery, reducing Niger's dependency on Nigeria could be considered pending the availability of the financial resources necessary to build new power plants and improve the energy efficiency. Furthermore, the construction of the Kandadji dam, complemented with a 130 MW power plant will enable Niger to utilize its hydroelectric potential and improve

its resilience. As for solar energy, no solar farm project is currently at an advanced stage.

The governance of the energy sector is characterized by the multiplicity of actors (regulatory, production and distribution), all state-controlled. The public Nigerian Electricity Corporation (NIGELEC) conducts the production, transmission and distribution on behalf of the state. Key reforms in the sector are: (i) increasing access and reducing the disparity between rural and urban areas; (ii) modernizing transport and distribution infrastructure; (iii) establishing information systems and developing appropriate national plans (such as the national master plan, and the national plan for rural electrification) and (iv) strengthening the capacity of stakeholders.

**Niger: Energy Production** 



Annuaire statistique du Niger (INS)









# NIGERIA



- Following its GDP rebasing, Nigeria is now the biggest economy in Africa with a GDP of USD 510 billion, and real growth of 5.4% in 2013 with good prospects for 2014.
- Inflation is a major concern, trending upwards from 7.7% in February 2014 to 8% in May.
- Nigeria is making notable progress in its power sector reform with efforts geared toward meeting the lingering challenges of finance, skills and gas supply.

### Overview

With the rebased GDP figures, Nigeria is now the biggest economy in Africa, revealing limited structural change but with an emerging challenge of crawling inflation. Preliminary figures of the GDP rebased from 1990 to 2010 saw the economy leapfrog to become the largest in Africa, with an estimated real GDP of USD 510 billion in 2013, an increase of almost 90% over pre-rebasing figures. A mild structural shift is discernible with the share of services and manufacturing sectors rising significantly from 29% to 51% and from 2% to 7.7% respectively. New activities also emerged, notably entertainment, which contributed 0.18% to GDP. While the decline in the contribution of agriculture from 35% to 23.3% signals improved structural change, the decline in the share of industry from 36% to 24.8%

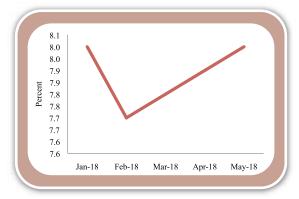
is worrisome. Also worrisome is the gradual upward crawl in inflation from 7.7% in February 2014 to 8% at the end of May. There are concerns that this may continue as the country approaches the General Elections in February 2015.

## Energy Focus: Recent Progress and Challenges with Power Sector Reform

Significant progress has been made in the power sector reform, but with lingering challenges in finance, manpower and gas supply. Some of the key achievements include successful privatization of the government-owned monopoly power company (Power Holding Corporation of Nigeria), rehabilitation of existing power plants, establishment and operatio-

nalization of key market players, improved gas-to-power infrastructure, and the release of USD100 million AfDB loan to Transmission Company of Nigeria (TCN) and China's EXIM Bank's USD500 million loan to undertake critical transmission projects. Despite these achievements, three main challenges remain. These are: raising long-term finance for the private-sector owned generation and distribution companies, estimated at USD10 billion annually between now and 2020; meeting the skills gap of distribution, generation and transmission companies; and inadequate and interrupted gas supply to the power stations. There are indications that the Government is addressing these challenges. For instance, in February 2014, local and international development organizations, financial institutions and investors were gathered in an International Conference on Private Sector Financing and Support for the Power Sector to devise strategies and explore opportunities for broadening access to capital. The Government also unveiled several fiscal incentives that could help attract private local and foreign investors to the sector. Going forward, the country should draw lessons on sourcing innovative finance for sustaining the power sector from experiences of Kenya's Ken-Gen IPO, Uganda's Bujagali hydroelectric investment, Tanzania's Small Power Produces Project, and Côte d'Ivoire's development of independent power plants.

#### Electricity Production Capacity (MW)



Source: EAGB, World Bank.







# SENEGAL



• The country is witnessing a sustained growth, mostly driven by the service sector, primarily transport, telecommunications, and financial services.

• Access to energy remains limited in Senegal, with the upkeep of large state subsidies to the sector.

#### Overview

Economic growth is projected at 4.8% for 2014, following a recovery that began in 2012 and continued through 2013, with a growth rate estimated at 3.5%. The government continues to experience rising public debt, which stood at 45.6% of GDP in 2013, but remains below the 70% limit stipulated by in the WAEMU convergence criteria. The current account deficit (including grants) was 10.4% in 2013. Inflation remained very low, in the order of 0.7% in 2013

Energy Focus: Energy's key role in Senegal's growth and development

compared to 1.4% in 2012.

Energy is a major constraint to growth in Senegal. The electricity access rate is about 56% of the population, reaching 90% in urban areas and 26% in rural areas. The average electricity consumption was 187 kWh per person in 2011. 90% of

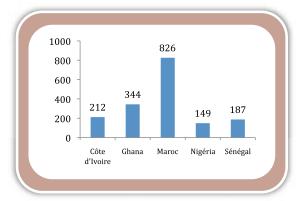
the energy production is thermal, mainly from liquid petroleum products. The electricity sector in Senegal is estimated to represent about 3.8% of GDP in both 2012 and 2013; this share is projected at 3.9%

Access to electricity (% of the population), 2011



Source: World Bank

Electricity consumption (Kwh/person), 2011



in 2014. Subsidies to the electricity sector accounted for approximately 1.5% of GDP annually over the period 2011-2013. For comparison, these grants amount to almost as much as the health budget.

2013 was marked the first year of implementation of government's 2012 "Letter for Development Policy of the Energy Sector". The country's strategy is based on a policy of diversifying electricity production, through the use of a mix of coal, natural gas, hydropower, and renewables. The Government aims to reach the threshold of having 20% of the total energy production come from renewable sources by 2017. In December 2013, the state awarded licenses to private developers of solar and wind energy. In terms of governance, a performance contract was signed between the State and the National Electricity Company in June 2013. Consolidating improvements in the sector requires the effective implementation of the Letter for Development Policy, and of the planned reforms.





## THE STATE OF ENERGY IN WEST AFRICA

Access to Energy

Supply

Cost and Pricing

Energy and Competitiveness in West Africa

Regional Cooperation in West Africa

Key Challenges

Conclusions and key opportunities





# THE STATE OF ENERGY IN WEST AFRICA

As West Africa rises to become the fastest growing region in the continent, energy has the potential of being either a key growth driver or a major bottleneck that could put a brake to its developmental potential. A critical element of competitiveness and a potential chiller effect on growth endeavors, the mismatch between the increasing demand for energy and the limited power generation and transmission is a clear limit to the region exploiting its full potential. The electricity demand/supply gap in West Africa is currently greater than 40%.

West Africa is nevertheless rich in energy resources - from large hydropower energy potential thanks to its rivers, strong winds that could allow for wind energy deployment, high amounts of solar radiation, alongside large reserves of gas and oil estimated to 60 billion barrels, representing half of the continent's reserves<sup>1</sup>. Yet most of this potential is untapped, and most people in the region African lack access to modern energy supply or suffer from high prices and/or unreliable provision.

The energy sector in the region is plagued by inefficiencies and poor governance. Nevertheless a number of initiatives are being rolled out by governments and regional organizations to identify weaknesses, redress inconsistencies, and suggest solutions for synergic sectorial growth. This section describes the state of energy in the region, highlighting the main challenges and opportunities faced by the region.

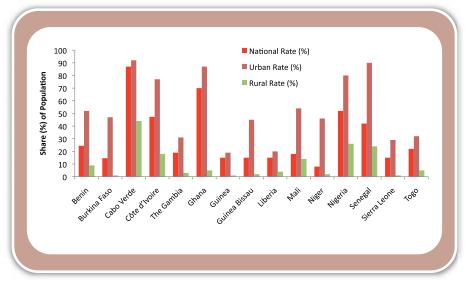
## Access to Energy

Access to electricity in West Africa is among the lowest worldwide, as 57% of the population does not have access to electricity, a figure that is in line with the average for Sub-Saharan Africa, but extremely low compared to 23% in the developing world and 18% globally<sup>2</sup>. Nevertheless, West Africa has been hard at work working towards democratising access to energy, through a large number of national and regional initiatives and, in the first 10 years of the 21st century, West Africa has given access to electricity to an additional 50 million people<sup>3</sup>. However access rates vary wildly from one country to the other, from a mere 8% of the total population in Niger, to 15% in Burkina Faso, Liberia, Guinea, Sierra Leone Guinea Bissau, to up to 70% in

Ghana and 87% in Cabo Verde. All West African Countries have also joined the Sustainable Energy for All Initiative towards the achievement of universal energy access by 2030, and an increase in renewable energy shares and energy efficiency improvements.

These aggregates conceal large disparities between rural areas and urban centers. Nowhere is this more visible than in Ghana, where 87% of urban dwellers have access to electricity, compared to 5% in rural areas. These numbers partially explain why, energy crises and shortages are endemic in the region. With inadequate generation capacity, low electrification, and sporadic, unreliable and expensive service, energy is at the top of questions requiring adequate policy intervention.

#### Electricity Access Rates in West Africa, 2011



Source: REN21, ECREEE

<sup>&</sup>lt;sup>3</sup> Africa-EU Energy Partnership (AEEP), Status Report: Africa-EU Energy Partnership (Eschborn, Germany: European Union Energy Initiative, Partnership Dialogue Facility, January 2014), p. 16.





<sup>&</sup>lt;sup>1</sup> Raj Verma, "Can Africa become the new Persian Gulf?" blogs.lse.ac.uk/africaatlse/2012/12/19/can-africa-become-the-new-persian-gulf/
<sup>2</sup> IEA, World Energy Outlook 2013 – Electricity Access Database (Paris: Organisation for Economic Co-operation and Development/IEA, 2013).





## II Supply

All West African countries, except Burkina Faso and Cabo Verde, are engaged in petroleum exploration. For many, the main goal is not to sell on the international market but to supply local demand. Aside from Nigeria, Africa's first producer, four other countries are also oil producers: Benin, Cote d'Ivoire, Ghana, and Niger. A brief overview can be found in table 1.

In terms of Natural gas, three West African countries are among the continent's 24 countries with proven gas reserves. Nigeria, the largest holder of reserves in the continent, dwarves all other countries with 180.4 trillion cubic feet, a hundred times more than Cote d'Ivoire and Ghana's reserves combined.4 Nigerian gas reserves were mostly discovered in the course of oil searching, and as such the necessary infrastructure to exploit it has been for many years inadequate and most of the gas flared. In recent years the flaring reduced and the country produced 1.2 trillion cubic feet in 2012, consuming roughly one fifth and exporting the rest, primarily as LNG<sup>5</sup>.

The region has a great potential to expand its use of renewable energy sources<sup>6</sup>, including modern biomass, hydropower, solar, and wind; most of it remains untapped<sup>7</sup>. Using such sources would help expand access while reducing reliance on traditional biomass, increase reliability and affordability, and contribute to climate change mitigation. Hydropower in West Africa has an estimated potential

Table 1 West Africa Main Oil Producers

Country	Global Rank, 2012 (out of 103)	Production, 2000 ('000 barrels/day)	Production, 2012 ('000 barrels/day)	Proven re- serves, 2012 (million barrels)	Consump- tion, 2012 ('000 barrels/day)
Nigeria	13	2169.35	2524.1	37200	269.9
Ghana	54	7.13	79.6	660	63.9
Cote d'Ivoire	62	12.37	38.6	250	23.6
Benin	-	0.69	NA/0	8	18
Niger	-	0	20	650*	5.7

<sup>\*</sup>Reserves for Niger are 2011 figures

Source: Claire Kupper & Margaux Vagh, "Cartographie du pétrole en Afrique de l'Ouest", Groupe de Recherche de d'Information sur la paix et la sécurité, Brussels, January 2014.

of 25,000 MW, yet only 16% of such potential has been exploited. As such, and despite its wealth in waterways, West Africa only holds 214 out of 1282 dams in Africa8. In addition, several in-country lakes and dams hold promise for renewable energy development. West Africa is home to a number of major rivers, such as the Niger river, primarily supplied by the Fouta Djallon heights, which cuts across a large part of the Sahel. Likewise, the Senegal river also crosses the Sahel before emptying into the sea. The Volta river holds great potential for Burkina Faso, Ghana, and Togo; and Lake Chad could be used to serve Niger, Nigeria, Cameroun and Chad.

In addition, solar energy is gradually becoming a source of energy generation in the sub-region. Solar power projects are spreading across the region, such as the 155 MW Nzema solar power plant in Ghana, one of the largest in the continent, and a number smaller projects in extending solar-powered electricity to

rural communities in other countries. Burkina Faso, Ghana, and Guinea are deemed to have a high potential for small hydropower (5 - 30 MW). Solar resources are particularly good in northern Mali and Niger. Wind resources are best in Cabo Verde<sup>9</sup>, Gambia and Senegal, and even in Mali (though more difficult to exploit)<sup>10</sup>.

## III Cost and Pricing

Power in Africa costs on average USD 0.18 per kilowatt-hour to produce, which is twice as expensive as the rest of the world. The lack of large power plants, which would allow for economies of scale, the reliability on expensive fossil-fuel based power generation, high costs of transmission and distribution because of geographical conditions and an often inadequate network infrastructure are the main reason for the high production costs. Furthermore, because of freoutages, companies quent individuals find themselves compelled to

<sup>&</sup>lt;sup>4</sup> KPMG, "Oil and Gas in Africa - Africa's reserves, potneital and prospects". KPMG Africa, 2013.

US Energy Information Administration, Nigeria country analysis brief. December 30, 2013. www.eia.gov/countries/analysisbriefs/Nigeria/nigeria.pdf

<sup>&</sup>lt;sup>6</sup> ECREEE, ECOWAS Renewable Energy Policy (EREP), http://www.ecreee.org/page/ecowas-renewable-energy-policy-erep

The Bank is supporting the development of several renewable energy projects, among which are the multi-purpose 25 MW Gourbassi Dam project on the Senegal river; the 147 MW Adjarala dam on the Mono river, between Benin and Togo; and the 515 MW Souapiti dam on the Konkouré River in Guinoa

<sup>8</sup> ECOWAS, West African Water Resources Atlas, Water Resource Coordination Center, 2010.

<sup>&</sup>lt;sup>9</sup> The Bank supported Cabeolica Wind Farms project in Cabo Verde was awarded the 2011 African Renewable Energy Project of the year.

<sup>&</sup>lt;sup>10</sup> ECOWAS, West African Water Resources Atlas, Water Resource Coordination Center, 2010.





rely on backup generators, which cost USD 0.40 per kilowatt-hour. In West Africa, generators represent nearly a fifth (17%) of the total installed capacity<sup>11</sup>.

The subsistence consumption of energy, estimated at 50 kilowatt-hours a month, runs an average of \$10.70 in the West African region. This is unaffordable to the majority of the population; it may be affordable to the people already connected, but in all likelihood would price out most of not all of those who remain unconnected. As demand increases - expectedly ten-fold in the next two decades assuming universal access is achieved and economic activity increases<sup>12</sup> it will be necessary to address the pricing model.

A comparison across the continent based on 2010 data found that the large discrepancy in gasoline prices - USD 1.84 in Cabo Verde, 1.44 in Burkina Faso, 0.84 in Ghana -could only be explained by an opaque mix of subtle mix of pre-tax subsidy and tax subsidies, which varies across countries<sup>13</sup>.

Those exceptionally high energy subsidies however are distorting price signals and have regressive distributional effects. The amount of subsidies is not small: about half of all African countries subsidize fuel, to an average of 1.4% of GDP<sup>14</sup>. For instance, Nigeria has, along with Angola, the highest subsidies in sub-Saharan Africa, costing it USD 7.6 billion, or 2.6% of GDP in 2012. Fuel subsidies also encourage inefficiencies in the sector, as exemplified by a recent IMF study which looked at energy subsidies concluded that, while aimed at protecting consumers, subsidies were depressing private investment and crowding out priority public spending. And by encouraging

higher energy consumption, subsidies also distort resource allocation, and draw investment away from renewable energies15.

While subsidies are clearly not sustainable, one of the problems is their stickiness - international experience proves that reforming subsidies and bringing prices closer to their real value is a political and socially costly endeavor. Attempts to slash Nigerian gasoline subsidies in 2012 was met with public outrage and halted. As such, a long term approach to reform subsidies must be found<sup>16</sup>.

## IV Energy and Competitiveness in West Africa

With energy a key production input, its cost and reliability represent a competitiveness factor for West African economies. As such, large and small firms, as well as individuals, needs electric supply that is both affordable and reliable,, since relying on backup power sources increases the energy bill. As such, the quality of energy infrastructure has a strong impact on the region's economic competitiveness. The corollary of this however is that investment in energy infrastructure will positively impact productivity; investing an additional 1 percent of GDP in transportation, communications, and energy infrastructure on a sustained basis increases the GDP per capita growth rate by 0.6 percent<sup>17</sup>.

Table 2 WEF Global Competitiveness Report

Quality of electricity supply	Score (1 to 7)	Rank (out of 144 countries)
Gambia	4.1	89
Cote d'Ivoire	3.8	96
Mali	3.5	109
Liberia	3.0	114
Ghana	3.0	116
Sierra Leone	2.6	121
Benin	2.5	122
Burkina Faso	2.3	125
Senegal	1.8	134
Cabo Verde	1.8	135
Nigeria	1.7	138
Guinea	1.5	141



<sup>&</sup>lt;sup>11</sup> Africa's Infrastructure: a time for transformation.

<sup>12</sup> ECREE, op.cit., p.50

<sup>13 &</sup>quot;Fuel Price Subsidies in Sub-Saharan Africa" in The World Bank, "Africa's Pulse". Volume 5, April 2012. http://siteresources.worldbank.org/INTAFRICA/ Resources/Africas-Pulse-brochure\_Vol5-Section\_2.pdf

<sup>&</sup>lt;sup>15</sup> International Monetary Fund, "Energy Subsidy reform: lessons and implications". January 28 2013.

<sup>World Economic Forum, "The Global Energy Architecture Performance Index Report 2014".
Easterly, W. and S. Rebelo. 1993. "Fiscal Policy and Economic Growth: An Empirical Investigation." Journal of Monetary Economics 32 (3): 417–58.</sup> 





On the Global Energy Competitiveness Index18, most West African countries assessed are deemed to be 'underperformers'. This index, which compares 146 countries based on the quality of the energy mix (self-sufficiency, and share of renewables); electricity quality, availability and access (which includes consumption, and losses); Compatibility with environmental issues; and other indices such as the frequency of power cuts, or the positive investor perception of the investment climate. Out of the 9 assessed West African Countries, 5 of them were considered "underperformers", which is the lowest quintile, scoring far below the African average; Ghana and Mali are considered as a Low Performers (fourth category), while Cote d'Ivoire and Nigeria were estimated to be 'Average Performers' (category 3).

# V Regional Cooperation in West Africa

The diversity of conditions and availability of energy sources in West Africa has made regional cooperation an integral part of the solution in addressing energy shortages in the region. Countries and regional organisations have, over the past 15 years, developed the building blocks of regional integration in the sector, including both the institutional mechanisms and some key elements of regional infrastructure (see box 3).

Among the flagship initiatives in the region is the CLSG Interconnection, which consists of the construction of nearly 1400 km of high voltage trans-

Table 2 2012 Global Energy Competitiveness Index

	2012 score	2012 rank	Performance
Benin	20.0	146	Underperformer
Burkina Faso	23.3	144	Underperformer
Cote d'Ivoire	40.0	94	Average performer
Ghana	37.5	105	Low Performer
Mali	34.2	112	Low Performer
Niger	26.7	137	Underperformer
Nigeria	40.0	94	Average performer
Senegal	26.7	137	Underperformer
Togo	25.0	143	Underperformer

#### **Box 3 Milestones in West African Energy Cooperation**

1999: Creation of the West African Power Pool, a specialized institution tasked with furthering regional power integration and creating a regional electricity market.

2003: ECOWAS set a legal framework to support cooperation in the energy field with its Energy Protocol, which established rules for trade, investment, environmental aspects and conflict resolution in energy issues.

2006: ECOWAS and the UEMOA draft a "White Paper for a Regional Policy" listing goals for 2015, including universal access to modern cooking fuel, access to an individual supply for two-thirds of the population, and access for at least 60% to productive energy services in rural areas.

2006: Completion of the West African Gas Pipeline (WAGP). Starting 2008, the pipeline connects supply from Nigeria to consumers in Benin, Togo, and Ghana.

2008: ECOWAS established its Regional Electricity Regulatory Authority (ERERA) in 2008, as a regulator of regional cross-border trade of electricity.

2010: Creation of the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE)

2012: Creation of the Observatory for Renewable Energy and Energy Efficiency, a research and statistical analysis institution on renewables; and adoption of the ECOWAS Energy Efficiency Policy and Renewable Energy Policy.

mission lines through Cote d'Ivoire, Liberia, Sierra Leone, Guinea, at an estimated total cost of EUR 326 million. The AfDB is, through the African Development

Fund, Fragile States Facility and Nigeria Trust Fund, providing financing of around 40% of the project expenses. With implementation expected to take place in

<sup>&</sup>lt;sup>18</sup> Institut Choiseul, KPMG: "2012 Global Energy Competitiveness Index" www.kpmg.com/FR/fr/IssuesAndInsights/ArticlesPublications/Documents/ Barometer-2012-Global-Energy-Competitiveness-Index.pdf









phases between 2014 and 2017, the project aims to provide all four countries with secure power supply. As the first project of the Mano River Union, the CLSG will not only provide an energy backbone for the Union's four countries; it will also include a capacity-building component, as well as a booster fund to compensate fragile states' weak capacities to prepare projects.

The OMVG (Gambia River Basin Development Organization) Energy project is another major initiative, leading to a more rational management of hydroelectric resources in the concerned countries (Senegal, Guinea, Gambia and Guinea Bissau). More specifically, this project is composed of the Sambangalou Dam, the Kaléta Dam, and an interconnection transmission line (T-Line) circuit linking the two dams to the electric grid of the four member countries.

## VI Key Challenges

#### a Weak infrastructure

In Many West African states, period of conflict have left energy production and distribution infrastructure in a severely weakened state. Liberia<sup>19</sup> and Sierra Leone<sup>20</sup>, for example, saw their production plants destroyed during their respective civil wars, along with the transmission and distribution networks, which brought their natural production to a halt.

To this must be added the obsolescence of many networks along with the lack of maintenance and upkeep capacity. For this reason, the Guinea Bissauan network's capacity fell from 12.7 megawatts (MW) in 2003 to 2 MW in 2013.

#### b Financing Energy Infrastructure

Financing in the energy sector is lacking, particularly for generation, transmission lines, and distribution; however, the attractiveness of this sector for investment is undermined by the noncost reflective tariffs, as well as subsidies that distort prices and profitability and weak performances of some of the electricity utilities. Financing will also be of particular importance in order to help the region minimize its reliance on costly thermal energy (oil and gas). But attracting investment for renewable energy faces a number of barriers, among which the dearth of information about the sector in the region<sup>21</sup>, which can affect investor confidence and inflate perceived risk.

### c Skills Shortages

According to needs assessment survey conducted in West Africa<sup>22</sup>, companies across the board reported suffering from a lack of skilled engineers and technicians to work on energy production, distribution, management and shipping. Educational institutions in the

region often fail to equip students with the necessary operation skills. Furthermore, there is an identifiable need for training and continuous education for workers.

#### d Regulatory constraints

In many West African countries the energy sector suffers from regulatory and policy gaps which impede private investment, as well as discourage investment in a sector with unclear governance. At both the country and the regional level, it is necessary to develop appropriate public policies and regulatory mechanisms that provide investors with predictable tariffs, secured off-take agreements, access to national grids, and business- easing measures. This is particularly true for renewable energy.

# VII Conclusions and key opportunities

Renewable energy is part of the solution for West Africa. With such large unexploited resource potential including wind, solar and hydropower, the region could satisfy its projected energy needs, while minimising environmental impacts and achieving greater energy security. By 2030, West Africa could be producing more that 50% of its electricity from renewable sources<sup>23</sup>. Aside from its sustainability, deploying renewable technologies can hold the key to increasing access to

<sup>&</sup>lt;sup>23</sup> Dolf Gielen, Asami Miketa, Bruno Merven, "Power supply scenarios for the ECOWAS region", in Vilar (ed.), "Renewable Energy in West Africa – Status, experiences and trends". ECOWAS Centre for Renewable Energy and Energy Efficiency, Casa África, 2012.



<sup>&</sup>lt;sup>19</sup> Republic of Liberia, Ministry of Lands, Mines and Energy, Rural and Renewable Energy Agency, Liberia Investment Plan for Renewable Energy (Washington, DC: Climate Investment Funds, Scaling Up Renewable Energy Program, October 2013), www.climateinvestmentfunds.org/cif/sites/climateinvestmentfunds.org/files/SREP\_SC.10\_4\_Investment\_plan\_for\_Liberia\_.pdf.

<sup>&</sup>lt;sup>20</sup> ECREEE, Baseline Report on Small-Scale Hydro Power in the ECOWAS Region (Praia, Cabo Verde: 2012), p. 60.

<sup>&</sup>lt;sup>21</sup> GIZ, "Renewable Energies in West Africa: Regional Report on Potentials and Markets – 17 country Analysis". www.giz.de/expertise/downloads/gtz2009-en-regionalreport-westafrica-introduction.pdf

<sup>22</sup> René Massé, "Besoins de formation professionnelle aux métiers de l'électricité en Afrique de l'Ouest", presentation at the "Accès à toutes les énergies en Afrique : Quelles solutions?" conference, Paris, 4 June 2009. www.energy-for-africa.fr/files/file/2009-acces-energies/th6\_n2\_rene-masse-besoins-de-formation-metiers-electricite.pdf





modern and reliable energy in a region with particularly low energy per capita consumption and erratic service delivery. Many such technologies are scalable and can be viable without additional investments in large scale transmission infrastructure. Decentralised solutions, through the use of renewable/hybrid offgrid and mini-grid systems, are already being prioritised in countries like Senegal and Ghana as the preferred option for promoting modern energy access to rural populations, and hold a great potential for the region as a whole.

Another major opportunity is represented by the increasing role of private sector, as a key actor and partner in the development of energy infrastructure, both traditional and renewable, given its capacity to provide capital and promote the transfer of know-how and technology. In order to fully exploit such potential, changes in the policy and regulatory framework are often required to level the playing field and to encourage private sector investments and Public-Private Partnerships (PPP). General interventions should include the unbundling of the energy sector (separation of generation from distribution, to introduce competition), development of standardized power purchase agreements, and actions

to strengthen the management of national utilities as the single off-taker of electricity and lower the risk of payment default. Actions to promote renewable energy could include "feed-in-tariffs", preferential grid access and fiscal incentives on equipment imports. Indeed, many ECOWAS countries have already embarked on this journey by setting ambitious renewable generation targets, but much remains to be done to implement the right policy mix that will unlock private investments at scale.

Maintaining a regional approach in energy development, particularly for transmission infrastructure will also be critical for widening the market opportunity and therefore unlocking larger investments which would otherwise not be viable. This includes developing the regional power pool as well as sub-regional interconnection projects, such as the earlier mentioned AfDB supported CLSG Interconnection, the OMVG Energy Project, and the Benin-Togo-Ghana interconnection - and supporting its development with the requisite legal and regulatory edits.

Capacity development is key both in policy and technical domains: With new initiatives highlighting the importance of learning and capacity building and ensuring it is a key part of their agenda, regional centres of excellence can be a useful tool to increase number of technicians and engineers crucially needed to increase sector performance. The skills gap can also be reduced through the creation of apprenticeships and exchange programmes, which would allow students to gain practical work skills alongside their theoretical curricula; as well the creation of professional training structures that would allow energy companies to outsource the task of continuous education through short modules of one to two weeks.

In addition to a growing suite of financing instruments specifically available for renewable energy, additional resources could be freed through reducing price distortions and subsidies. Various concessional instruments and facilities exist are being scaled-up to support investments in renewables, namely the Scaling-up Renewable Energy Programme (SREP) and the Sustainable Energy Fund for Africa. However, the even removal or improved targeting of fossil fuel subsidies will also ease the fiscal burden on state budgets freeing resources for investments, remove market distortions and factor in negative externalities.

