

The EU and the African continent, the energy-development nexus



Challenges and Opportunities of the African energy landscape

COVID (1): REVERSAL OF PROGRESS

The **Covid-19** pandemic:

- pushed more than 20 African countries into debt distress.
- hampered access to energy: 4% more people lived without electricity in 2021 than in 2019.
- Africa's gross domestic product (GDP) contracted by 2.3% in 2020, plunging it into its first economic recession in 25 years.
- The first month of the pandemic led to an 81% drop in income for informal workers in Africa and affected their capability to pay energy suppliers.
- The loss of revenue highlighted the risks of lack of financial sustainability of utilities and off-grid providers and their inability to react to such shocks.

WAR IN UKRAINE (2): REVERSAL OF PROGRESS

Russia's invasion of Ukraine in February 2022:

- has sent global food and fuel prices soaring, hurting households, industries and entire economies – most severely in the developing world where people can least afford it.
- The prices of liquefied petroleum gas (LPG) increased by more than 60% and diesel doubled in some countries, such as Nigeria, over the year to April 2022.
- Many African countries are heavily reliant on fuel and food imports, with net imports reaching over 5% of GDP in several countries in 2020. **Natural gas-based fertiliser** markets further threatened food security in import-dependent countries.



By the end of 2021, Africa exceeded expectations of a 3.7 % GDP growth, recording a 4.5 % growth

BUT

Development projects were either revoked or paused, causing damage

STATE OF PLAY

- Africa accounts for less than 6% of global energy consumption and 2% of cumulative global emissions.
- **Africa has one-fifth of the world's population:** today one billion people or 16% of the world population live in SSA. By 2050, they will double and in 2100, 3.9 billion people or 39% of the world's population could live in the region. It is home to the world's youngest population.
- As its population and incomes grow, the **demand for modern energy expands** by a third between 2020 and 2030 in the SSA.
- In 2019, the wealthiest 10% of Africans owned 70% of the continent's wealth. Both within-country and between-country **inequality across Africa has increased** since then, rebounding to levels from the early 2010s.

CHALLENGES (1): ACCESS TO AFFORDABLE ELECTRICITY.

- At present, 600 million people, or 43% of the total population, lack access to electricity, most of them in sub-Saharan Africa.
- Universal access to affordable electricity, achieved by 2030 in the SAS, requires bringing connections to 90 million people a year, triple the rate of recent years.
- As its population and incomes grow, the demand for modern energy expands by a third between 2020 and 2030. As its economy grows, in the SAS, energy demand in industry, freight and agriculture grows by almost 40% by 2030.

CHALLENGES (1): ACCESS TO ELECTRICITY

- The goal of universal access to modern energy calls for **an investment of USD 25 billion** per year. This is around 1% of global energy investment today, and similar to the cost of building just one large liquefied natural gas (LNG) terminal.
- The continent has to focus on **energy efficiency** in order to temper demand growth, reduce fuel imports, strain on existing infrastructure and keep consumer bills affordable. Energy and material efficiency reduce electricity demand by 230 terawatt-hours in 2030 – 30% of electricity demand today.
- Building **codes and energy performance standards**, which restrict the sale of the least efficient appliances and lighting, would make up 60% of these savings.

CHALLENGES (2): CLEAN COOKING FUEL

- **Achieving universal access to clean cooking fuels and technologies by 2030 requires shifting 130 million people away from dirty cooking fuels each year.** Today, 970 million Africans lack access to clean cooking.
- 64% of Africans rely predominately on **gathered wood and agricultural and animal wastes as fuel for cooking.** The traditional use of such fuels accounts for more than 40% of the total increase in final energy use between 2010 and 2019. Depending on how these fuels are gathered, it can also contribute to deforestation, which in some African countries matches levels seen in the Amazon.
- Liquefied petroleum gas (LPG) is the leading solution in urban areas, but recent price spikes are making it unaffordable for 30 million people across Africa, pushing many to revert to the traditional use of biomass.
- We estimate that on average the number of people without access to clean cooking fuels and technologies increased by around 20 million, 2.5% annually in 2020 and 2021.

CHALLENGES (2): CLEAN COOKING FUEL

- **Higher LPG prices**, in particular, are restraining efforts to expand the use of clean cooking fuels. International LPG prices have jumped by more than 60% since December 2019, pushing up LPG prices by 40-60%. This has caused many families to revert to polluting cooking fuels such as charcoal with serious consequences for human health and deforestation.
- Switching to modern cooking techniques and fuels reduces the total amount of energy needed for cooking by more than 60% between 2020 and 2030, its share of total household energy demand dropping from 90% to 70%.
- Countries are re-evaluating clean fuel subsidy schemes and exploring alternatives such as improved **biomass cook stoves, electric cooking and biodigesters**. The improvement rates needed for universal clean cooking access by 2030 are unprecedented, but the benefits are huge: reducing premature deaths by about 500 000 a year by 2030, drastically cutting time spent gathering fuel and cooking, and allowing millions of women to pursue education, employment and civic involvement.

CHALLENGES (3): LACK OF STRATEGY

- Of 54 African countries, only 25 have put in place **clear energy access strategies**.
- Achieving universal electricity access requires initiatives to ensure alignment of policy, regulation, planning and politics.
- Delivering on policies and plans can be complex in countries where the institutional capacity to run competitive procurement processes and to coordinate a large number of stakeholders is weak.
- A significant step in that direction was achieved at the World Bank's 2020 Annual Meetings with a commitment to set up the **Powering Transformation Platform in each African country**. Through the platform, each government will set their country-specific vision, goals and metrics, track progress, and explore and exchange innovative ideas and emerging best practices according to their own national energy needs and plans.

CHALLENGES (3): LACK OF STRATEGY

- It is crucial to put in place a **regulatory framework** that can unlock private investment. Such frameworks can be standardised at the regional level to significantly reduce barriers to entry and risks to investment, especially in smaller or more fragile countries.
- **Standardisation** both facilitates and incentivises projects to reach scale, which is essential for reducing the cost of services for both governments and final users. Scale can also be promoted through smart subsidisation, especially targeted to the most remote and least commercially viable markets.
- It is vital to coordinating efforts and ensure efficient use of available resources, as well as to provide clarity to investors and donors about which technology is expected in which area. Electrification plans are often highly technical, however, and governments can be reluctant to take ownership of them. As a result, it is essential that plans are developed under the direct leadership of the appropriate government agency, with coordination and alignment between multilateral and bilateral institutions.
- Electrification plans should also be in step with broader socioeconomic development considerations, especially in rural areas. The sequencing, timing and scale of rural electrification projects should follow broader government plans for rural development; a failure to do so risks the creation of plans that do not align with policies and therefore are left to gather dust on a shelf. Integrated planning

CHALLENGES (4): LACK OF INFRASTRUCTURE

- Much of the region's energy supply infrastructure is in need of expansion and repairs, both of which stalled at the start of the pandemic due to financial and logistical reasons.
- An estimated \$345bn of investment need in sub-Saharan African transmission and distribution infrastructure to absorb all of the planned new generation assets.
- Substantial upgrades are also needed in the fuel delivery infrastructure. Most of it is located in coastal areas, with only minimal facilities to serve inland demand.
- Increased investment in cross-border electricity transmission infrastructure between African countries could play an important role to ensure reliability.
- Increased investment in the digitalization of such infrastructure is needed for monitoring and maintenance

CHALLENGES (4): LACK OF INFRASTRUCTURE

- **The Programme for Infrastructure Development in Africa (PIDA)** is co-led by three executive agencies: African Union Commission, New Partnership for Africa's Development (NEPAD) Secretariat and African Development Bank. It aims to promote the development of needed infrastructure.
- PIDA's two Priority Action Plans include 72 energy infrastructure projects, which make up 15% of all projects (most concern transport and telecommunications). Over 60% of the energy projects are located in sub-Saharan Africa and more than two-thirds are to increase electricity transmission capacity, in support of the Africa Single Electricity Market and the Continental Power System Master Plan, which aim to establish long-term planning for regional power pools
- **The creation of the African Continental Free Trade Area (AfCFTA)**, which became operational in January 2021, creates a common market with a combined GDP of USD 3.4 trillion. The objective is to encourage the growth in trade within Africa by removing trade barriers. It complements other efforts like the PIDA and those of the African Union Development Agency (AUDA-NEPAD) to improve intra-African infrastructure. Currently, tariffs and physical infrastructure barriers limit intra-African trade, which accounts for only 14% of total African exports

CHALLENGES (5): ADAPTATION INVESTMENT

- Despite being a **minor contributor to global emissions**, Africa yet needs to do far more to adapt to climate risks than the rest of the world.
- By 2050, Africa accounts for no more than 4% of cumulative global energy-related CO₂ emissions, regardless of the scenario. But with today's policies, the global average temperature rise is likely to hit 2 °C around 2050, but this would probably result in a median temperature rise of 2.7 °C in North Africa. That would reduce African GDP by around 8% in 2050 relative to a baseline without any climate impacts. Losses in some regions such as East Africa would reach around 15%.
- 53 African countries had submitted a Nationally Determined Contribution (NDC) – a climate action plan to mitigate greenhouse gas emissions and adapt to climate change – to the UNFCCC. Mitigation includes both making future growth less emissions-intensive and reducing emissions in absolute terms. Of these NDCs, 80% are updated first or second submissions, with some, although not all, calling for enhanced ambitions.

OPPORTUNITIES:

- Africa is considered the **most opportune market for renewable energy**, with current estimates placing solar at 10TW; hydro at 350GW; and wind at 110GW.
- Despite the significant progress made by some countries to expand green energy utilization – Mozambique for example is considered one of the greenest countries in the world, deriving 81% of its electricity from hydropower – much of Africa's resources remain largely untapped, offering lucrative opportunities for investors.
- Electricity is the backbone of Africa's new energy systems, powered increasingly by renewables. Africa is home to 60% of the best solar resources globally, yet only 1% of installed solar PV capacity.

EU'S PRESENCE IN THE AFRICAN ENERGY DEVELOPMENT LANDSCAPE: MOVING BEYOND A DONOR-RECIPIENT RELATIONSHIP

- The European Commission and the European External Action Service's vision of the future Africa-EU partnership are outlined in the Joint Communication '**Towards a Comprehensive Strategy with Africa**'.
- The Africa-EU Partnership was formally established in 2000 at the first Africa-EU Summit in Cairo. It is guided by the **Joint Africa-EU Strategy (JAES)**, adopted in 2007.
- In December 2020, a new platform was created to enable stakeholders from both continents to exchange ideas, and best practices and make recommendations on major challenges affecting both Africa and Europe. These **Africa-Europe Foundation Strategy Groups** in the areas of Health, Digital, Agriculture and Sustainable Food Systems, Sustainable Energy and Transport and Connectivity.

EU'S PRESENCE IN THE AFRICAN ENERGY DEVELOPMENT LANDSCAPE: MOVING BEYOND A DONOR-RECIPIENT RELATIONSHIP

- This strategic shift towards Africa is also underpinned by a plethora of recent diplomatic initiatives by EU member states:
 - A. including Germany's Marshall Plan with Africa (2017),
 - B. former President Juncker's call for an Africa–Europe Alliance for Sustainable Investment and Jobs (2018).
 - C. Von Der Leyen visiting Africa one week after being elected

EU'S PRESENCE IN THE AFRICAN ENERGY DEVELOPMENT LANDSCAPE

- **The Africa-EU Energy Partnership (AEEP)** is a long-term framework for strategic dialogue aimed at sharing knowledge, setting political priorities and developing joint programmes on the key energy issues.
- **Long-Term Joint European Union - African Union Research and Innovation Partnership** on Renewable Energy
- the **External Investment Plan (EIP)** was adopted in September 2017 to contribute to the UN's sustainable development goals, while tackling some of the root causes of migration by boosting investments in sustainable energy-related infrastructure (production, distribution) in Africa. Sustainable development goal 7 emphasised the critical role of affordable, reliable and modern energy to everyone around the world. The EIP supports partner countries by mobilising and leveraging public and private finances, providing technical assistance to help prepare investment projects and developing a favourable investment climate and business environment.
- The European Commission, EU countries and the EU financial institutions have committed to mobilise the EIP and the Electrification Financing Initiative (ElectriFI) to support the Africa Renewable Energy Initiative (AREI). This Africa-owned and led initiative, launched at COP21 in Paris in December 2015, aims at harnessing Africa's abundant renewable energy resources to support their development strategies and leapfrog towards low-carbon economic development.

EU'S PRESENCE IN THE AFRICAN ENERGY DEVELOPMENT LANDSCAPE

- **The EU Global Technical Assistance Facility for Sustainable Energy (EU GTAF)/Stantec:**

- provides services in support of sector reforms, governance, planning, and the creation of a conducive environment for investment as well as the identification and design of specific investments or investment programs and the mobilization of funds.

- coordinates and manages strategic partnerships with related initiatives, provides ad hoc advisory support to the European Commission and EU Delegations in partner countries, delivers training services, supports knowledge management and dissemination, and conducts visibility and communication activities.

- **Support to ECOWAS Regional Electricity Regulatory Authority (ERERA)/ Stantec:** support ERERA in its mission to implement effective regulatory mechanisms contributing to the development of a regional electricity market. This involves assisting with drafting rules and preparing a roadmap for access to cross-border grid capacity and domestic grids, and defining and revising rules and proceedings for market surveillance. We also help draft a regional directive on harmonizing the organisation of national electricity markets and facilitating interactions with other sub-regional organisations and non-ECOWAS countries involved in the operation of the West African Power Pool (WAPP) regional market.

- **Parliamentary Action on Renewable Energy (PARE):** Raising awareness and mobilising political will on climate and renewable energy in Africa:

- International roundtables focused on specific topics or research programmes

- National roundtables including MPs from a single country

- One-on-one engagement with key legislators

EU'S PRESENCE IN THE AFRICAN ENERGY DEVELOPMENT LANDSCAPE

- **The Covenant of Mayors in Sub-Saharan Africa:** helping cities tackle climate change and access to energy. It was launched in 2015 and is part of the Global Covenant of Mayors (GCoM), the largest network of cities driving urban climate action, uniting more than 10,000 municipalities in their fight against climate change.
- The **Electrification Financing Initiative (ElectriFI)** is a EUR 275+ million impact investment facility funded by the European Union and managed by European Development Finance Institutions, committed to increase access to clean energy in developing countries.
- The **AfricaConnect** is 37 million projects aimed at establishing high-capacity regional data networks for research and education in the whole of Africa, and to improve the volume and reliability of connectivity to the global research and education community.

An aerial night photograph of a modern city. The central focus is a large, multi-tiered, dome-shaped building with a glowing green and blue facade. To its left is a large, curved, multi-story building with a grid-like facade. In the background, a large, circular, multi-lane roundabout is illuminated with green and blue lights. The surrounding city is lit up with streetlights and building lights, creating a warm, golden glow. The sky is dark, and the overall scene is a vibrant display of urban architecture at night.

**Thank
you!**

Any question?