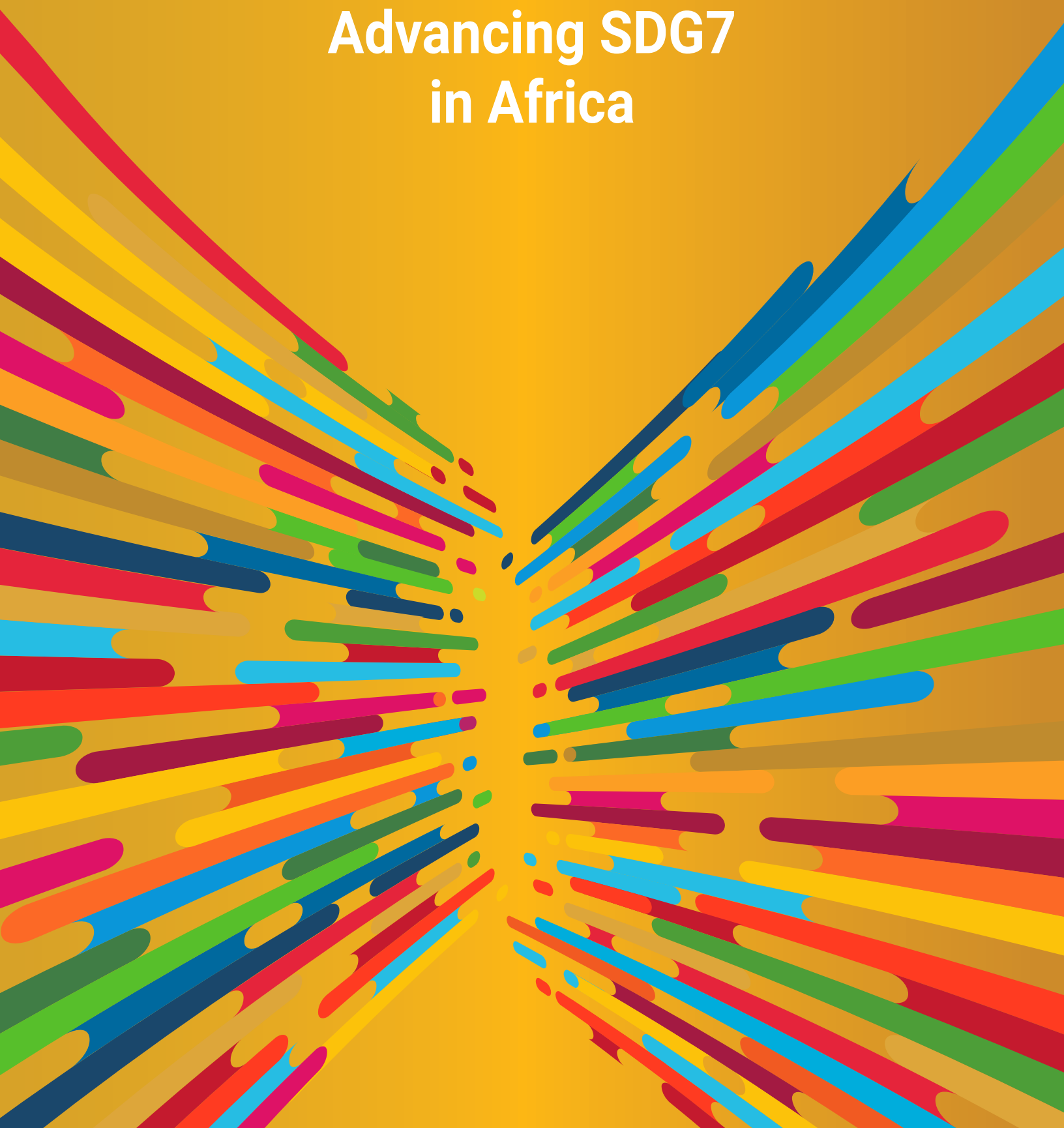
POLICY BRIEFS IN SUPPORT OF THE UN HIGH-LEVEL POLITICAL FORUM 2023

Advancing SDG7 in Africa



SDG7 POLICY BRIEFS IN SUPPORT OF THE UN HLPF 2023

This document is part of a series of policy briefs compiled by the multistakeholder SDG7 Technical Advisory Group (SDG7 TAG) in support of the review of SDG7 at the High-level Political Forum (HLPF) 2023. Convened by UN DESA, the SDG7 TAG is composed of over 40 experts from governments, UN organizations, international organizations and other stakeholders. The HLPF is the central United Nations platform for the follow-up and review of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs) at the global level. More information on the SDG7 TAG, including previous editions of the annual SDG7 Policy Briefs, is available at https://sdgs.un.org/sdg7tag

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For further information, please contact:
Division for Sustainable Development Goals
Department of Economic and Social Affairs
United Nations
DESA/DSDG: https://sdgs.un.org
SDG7 TAG: https://sdgs.un.org/sdg7tag
Email: salame1@un.org

United Nations | Department of Economic and Social Affairs

Design concept and production by
Camilo Salomon @ www.cjsalomon.com

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Contributing organizations:

United Nations Economic Commission for Africa (UNECA)

African Development Bank (AfDB)

Global Energy Interconnection Development and Cooperation Organization (GEIDCO)

Food and Agriculture Organization (FAO)

Swedish International Development Cooperation Agency (SIDA)

International Renewable Energy Agency (IRENA)

KEY MESSAGES

The constraints on African economies and communities brought on by the continent's persistent energy access deficit have recently been made worse by the global energy crisis. This, in turn, has been brought on by the COVID-19 pandemic, the Russia-Ukraine conflict and the growing impact of climate change.

If Africa is to achieve the development goals outlined in the United Nations 2030 Agenda for Sustainable Development and the larger African Union (AU) Agenda 2063, the continent needs a radical shift in how it views energy. It also needs urgent action to address its long-standing energy access issues. Such action must include increased financial support from donor countries and multilateral institutions.

Many African countries are not on track to achieve the Sustainable Development Goal 7 (SDG7) target of ensuring everyone can access affordable, dependable, sustainable and modern energy. Access to reasonably priced and reliable modern energy services is also a crucial prerequisite for progress in many other development goals.

The following priority actions are therefore recommended over the next three years:

- The rapid implementation of comprehensive policies and creating a supportive environment in which Member States of the United Nations can make the most of their constrained public resources. At the same time, private sector investment must be mobilised to enable countries to make the most of their domestic resources. Member States should also take advantage of rapidly declining technology costs for renewable energy to advance the realisation of SDG7.
- The United Nations and other organisations should assist the region's countries in implementing a comprehensive framework that enables international and domestic private sector institutions to lead in bringing investments into the continent's energy transition and transformation. This would enhance the implementation of Nationally Determined Contributions (NDCs).

- The United Nations and its development partners should support Member States with bankable actions that promote SDG7 targets in developing their energy transition plans and enhanced implementation of their NDCs.
- UNECA, other United Nations entities and development partners should support Member States with knowledge and technology transfers to secure the deployment and sustainable operation of new energy systems.
- Development partners should support Member States in advancing power sector reform. These reforms should aim to accelerate African power utilities' progress towards creditworthiness to ensure the sustainably and financial viability of the sector. This will increase the utility-based provision and attract private sector participation in energy infrastructure.
- Development partners should support Member States in developing human capital in the electricity sector. This should include support for developing national skills and technical assistance for capacity building in specific areas. These areas should consist of renewable energy and the transmission and distribution infrastructure.

Furthermore, the following priority actions towards 2030 should also be taken:

- Member States should promote investment in strengthening the grid for greater efficiency and increased penetration of variable renewable power. This should include promoting utility-scale battery storage and cross-border interconnections to accelerate access to electricity through investment in Africa's power pools.
- Member States should step up efforts to tap low-hanging fruit in energy efficiency. This should occur in all sectors and capitalise on quick wins in cities, industries, buildings and transportation, recognising that energy efficiency gains are the most cost-efficient way to increase available generation capacity and enhance energy access.
- Member States and development partners should promote sharing good practices and experiences with grid and off-grid systems. This should include regulatory frameworks, business models and instruments to attract private sector investment.
- Development partners should support Member States in harnessing the energy transition as a catalyst for socio-economic development and local value creation. This should be done through industrial policies, including developing and implementing local content enhancement throughout the renewable energy value chain. Such policies should also include regional trade cooperation, skills and educational policies to create the workforce of the future and labour market policies to support decent, well-paying jobs.

SUMMARY OF PROGRESS WITH SDG7

Efforts to achieve the SDG targets should be seen in the light of several factors. These include the changing climate, costing African economies an average of 5 per cent of their gross domestic product (GDP) annually. Some countries, however, are losing three times that amount.

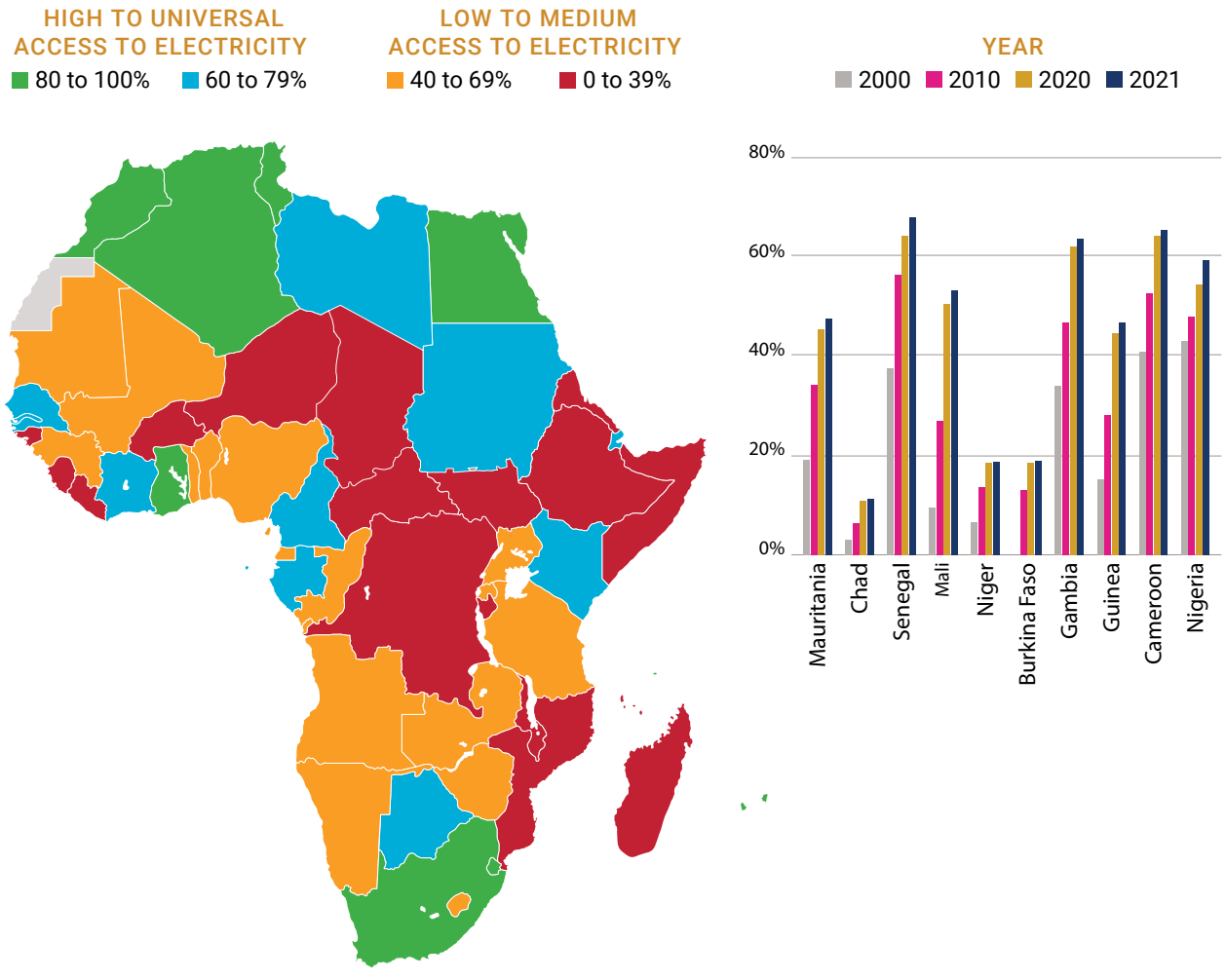
At the same time, a massive energy access deficit on the continent must be closed urgently and at scale if the SDGs are to be achieved. The continent has an abundance of energy resources, both renewable and fossil, yet public resources are highly constrained. At the same time, there are low levels of private sector investment in Africa's energy transformation and limited support for recovery from financial hardship.

SDG7.1.1: Access to electricity

According to "Africa Energy Outlook 2022", produced by the International Energy Agency (IEA), the continent has made progress towards universal energy access in recent years. Electricity coverage increased from 44–56 per cent of the continent's population between 2010 and 2023.

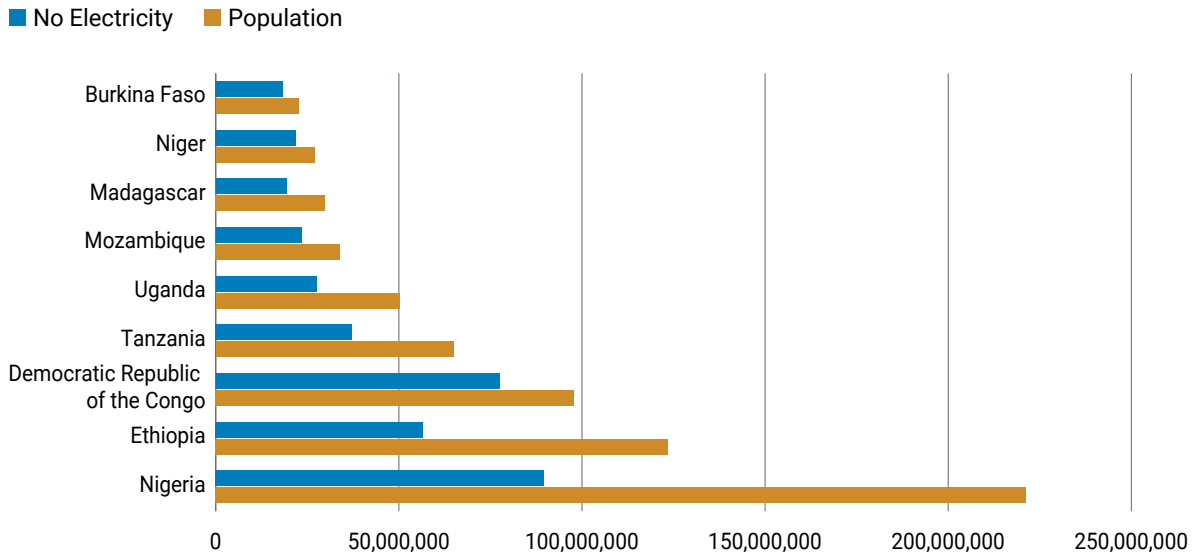
However, nearly 600 million Africans – equivalent to 43 per cent of the continent's population – lacked access to electricity in 2021. Most of these people lived in rural areas, and indeed, despite numerous national initiatives, rural electrification remains a significant difficulty for most African nations. There is, therefore, a substantial urban-rural difference in electricity access, with electrification in urban areas averaging 82 per cent (78 per cent in sub-Saharan Africa) and rural areas electrified on average at 37 per cent (28 per cent in sub-Saharan countries). As most people only have basic Tier 1 access to electricity, it has no beneficial effects on economic growth.[1]

FIGURE 1. Electricity access in Africa



Source: UNECA analysis from data supplied by World Bank, 2023.

FIGURE 2. African countries with most people without access to electricity, 2021



Source: UNECA analysis based on data supplied by the World Bank, 2023, and www.worldometers.info/world-population.

While some countries – most notably Ethiopia, Ghana, Kenya, Rwanda and Uganda – have been steadily increasing their electrification rate and could achieve universal access, others – including Algeria, Carbo Verde, Egypt, Mauritius, Morocco, Seychelles, and Tunisia – are already at or nearly at the point of universal access.

In contrast, the countries with the most significant numbers of people without access to electricity are Malawi, Burkina Faso, Chad, Niger, Nigeria and the Democratic Republic of the Congo, in that order.

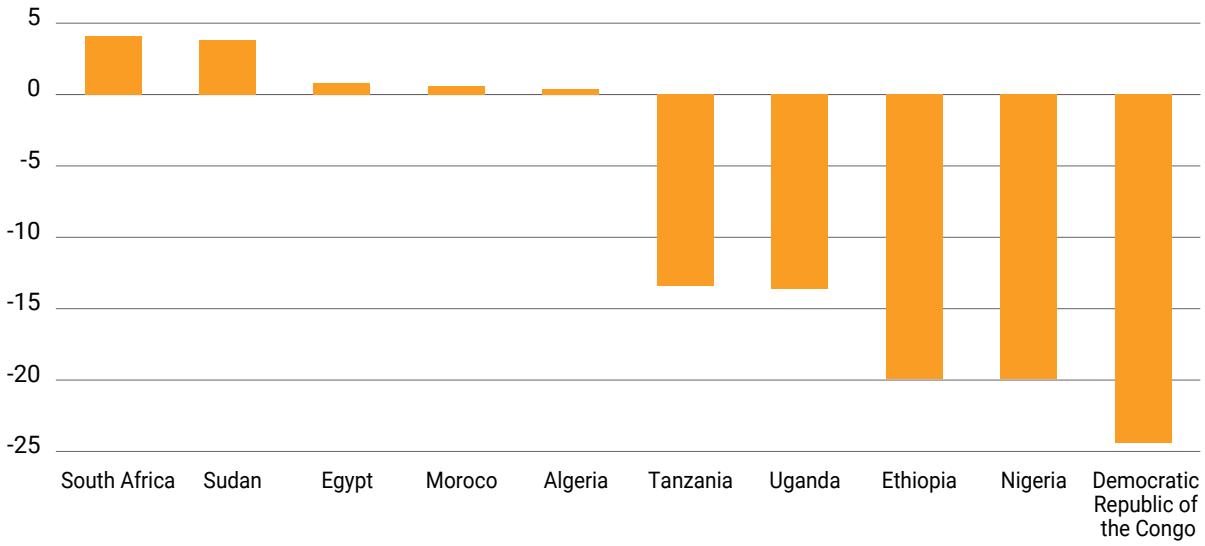
The continent's situation will worsen if existing policies and levels of ambition are maintained. At the current rate of progress, 595 million Africans will remain unconnected in 2030.[2] Nigeria, the Democratic Republic of the Congo and Ethiopia will need to receive the most attention to significantly increase the number of people with access to electricity. Moreover, other countries like Chad, South Sudan, Malawi, Burkina Faso, Niger, and Burundi will also need attention to ensure no one is left behind.

SDG7.1.2: Access to clean fuels and technologies for cooking

Africa does poorly compared to all other regions except Oceania regarding access to clean cooking.[3] This is because more than 80 per cent of the population relies on traditional biomass for preparing food. This results in more than 500,000 annual deaths linked to indoor pollution.[4]

Between 2010 and 2020, the number of Africans needing access to clean cooking solutions increased by 170 million to around 937 million due to population growth and insufficient investment in clean cooking options. Globally, 3 billion people worldwide have no access to clean fuels or technologies for cooking.[5] In 41 African countries, including the Democratic Republic of the Congo, Nigeria, Ethiopia, Uganda, and Tanzania, the number of people without access increased significantly. Only 11 countries, including South Africa, Sudan, Egypt, Morocco, and Algeria, saw significant improvements in the number of people gaining access.

FIGURE 3. Increase in population without access to clean cooking between 2010 and 2020



Source: Data provided to UNECA by World Bank/ESMAP Tracking SDG7 Database, 2022.

The persistent shortage of clean cooking options in Africa is worse in rural areas. Indeed, except for a few nations, such as Algeria, Cape Verde, Gabon, Egypt, Mauritius, Morocco, Seychelles, South Africa, Sudan, and Tunisia, the gap between access rates in urban and rural areas still needs to be addressed.

According to an analysis by Sustainable Energy for All (SEforALL), there is a significant overlap between the lack of access to electricity and clean cooking solutions. Eighty per cent of the countries in the region that are challenged by access to electricity are also challenged by access to clean cooking, indicating persistent difficulties in achieving both goals in these countries.

SDG7.2: Increased share of renewable energy in the global energy mix

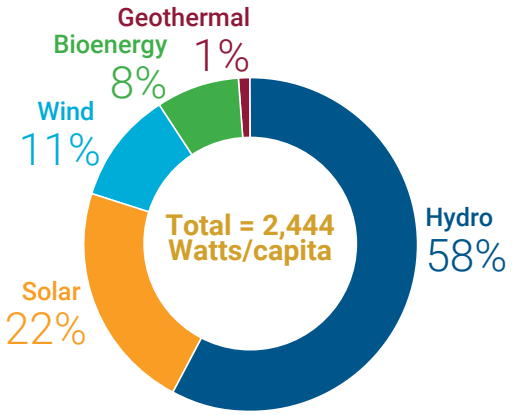
Due to the continent's heavy reliance on the usage of solid biomass, the proportion of renewable energy in total energy consumption increased slightly, from 56.6 per cent to 57.1 per cent, between 2010 and 2020.

This proportion was significantly higher than the global average of 19.1 per cent. Yet, Africa has the lowest share of modern renewable energy compared to other continents and the world, at 7.6 per cent of total final energy consumption (TFEC). Meanwhile, total installed renewable power capacity (including hydropower) rose by 107 per cent between 2010 and 2020, from 27 gigawatts (GW) to 56 GW.

In Africa, wind and solar power have dominated non-hydro renewable energy generation and installed capacity.

Between 2010 and 2020, wind power capacity increased from 865 megawatts (MW) to 7.3 GW, while solar power capacity increased from a meagre 233 MW in 2010 to 11.6 GW in 2021. Although natural gas and coal still account for most of Africa's power mix, the proportion of renewable energy sources in installed capacity climbed from 19.2 per cent in 2010 to 22.5 per cent in 2020. In terms of generation capacity, this

FIGURE 4. Installed renewable electricity-generating capacity (watts per capita) in Africa, 2021



Source: UNECA analysis based on data supplied by the World Bank, 2023.

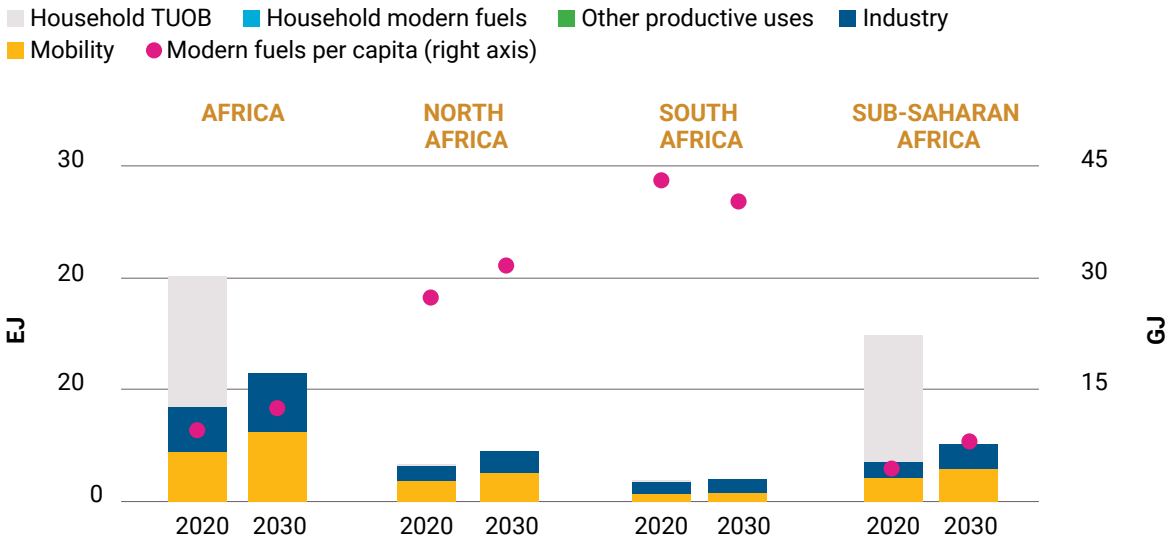
proportion rose from 16.2 per cent to 21.2 per cent over the same period. Compared to other regions, however, these shares remain relatively small.

SDG7.3: Energy efficiency improvement

Africa is the least energy-efficient in the world, followed by Asia. Between 2010 and 2019, Africa's energy intensity decreased slightly, from an average of 5.95 megajoules (MJ) per constant US dollar (US$) of GDP to 5.52 MJ/US$ of GDP – a change of only 0.83 per cent.

Africa's over-reliance on biomass for household use contributed to the continent's high energy intensity. This usage consumes most of the continent's primary energy supply after manufacturing and transportation.

FIGURE 5. Primary energy consumption in Africa by sector, fuel type and change in TFEC by fuel and sector in 2020 and 2030



Source: IEA Africa Energy Outlook 2022.

7.A.1 International public financial flows to developing countries in support of renewable energy

Public international financial flows to Africa totalled US$ 4.1 billion in 2021. This was up 22 per cent in 2020, when these flows had declined to their lowest levels since 2012 (Figure 6). This decline was partly due to the COVID-19 pandemic and partly a continuation of a declining trend that began after the 2017 peak of US$ 10.2 billion.

The increase in 2021 suggests that donors are stepping up their commitments after adjusting to the initial shocks from the pandemic and other geopolitical events. Yet, commitments in 2021 are still below the pre-pandemic average of US$ 5.2 billion per year between 2010 and 2019. Moreover, the increase in 2021 is mainly concentrated in East Africa, while other regions continued to decline in flows. Indeed, in East Africa, solar commitments rose almost five-fold between 2020 and 2021.[7]

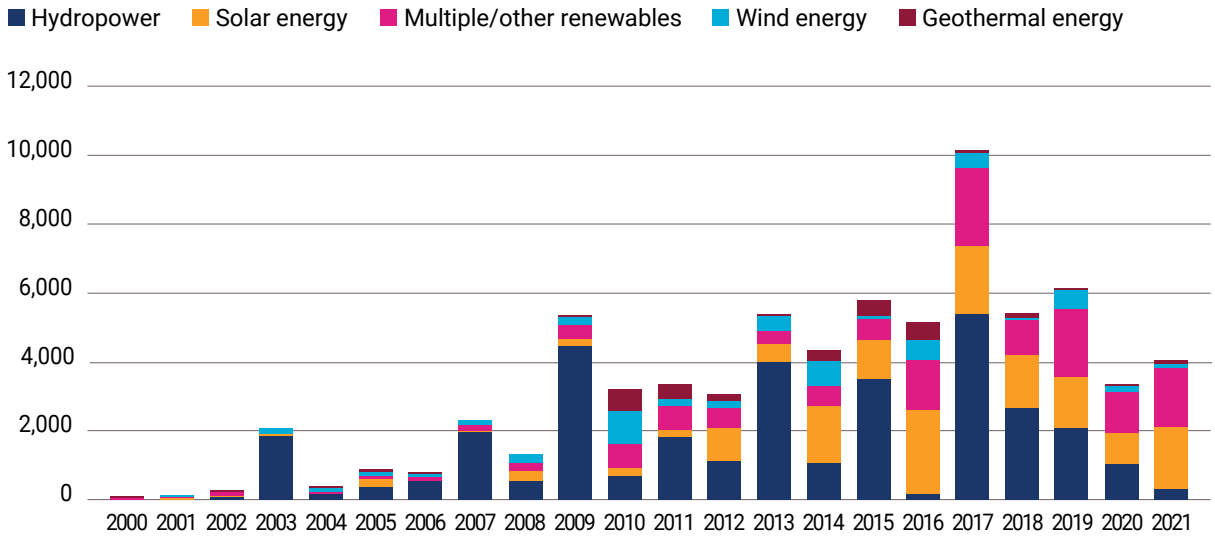
PROGRESS AND PROSPECTS WITH SDG7 INDICATORS

Since the start of SDG tracking in 2015, it has been clear that meeting the SDG goals would necessitate massive efforts by African governments, development partners and other stakeholders. While some milestones have been achieved, the gap in renewable energy investments between Africa and other parts of the world is increasing.

Given the current political climate, over 670 million people worldwide will continue to lack access to electricity, with 600 million residing in Africa. Low access rates pertain in the Democratic Republic of the Congo, Nigeria, Uganda, and Sudan. Similarly, by 2030, about 1 billion of the 2.1 billion people without access to clean cooking options worldwide are expected to reside in Africa.

More positively, substantial progress has been made in proactive policy development, energy infrastructure resource mobilisation and enhanced independent power production. Renewable energy investments are beginning to bear fruit in several countries.

FIGURE 6. Annual international public financial commitments to renewable energy in Africa, by technology, 2000–2021



Source: IRENA and OECD 2023.

However, the continent is not on track to meet all its SDG7 targets. Africa must look beyond 2030 as a goal while using 2030 to accelerate planned initiatives.

KEY CHALLENGES

- **Insufficient action from local and foreign governments and a lack of international collaboration.** These remain significant barriers to sustainable energy and cooking solutions in Africa. In addition, an over-reliance on private actors who perceive investments as high risk – and therefore come at high cost – means that the poorest people often pay the most for basic energy. Therefore, more public policies and funds are needed for energy access, reliability and affordability.

- **New economic, social, and political challenges have been negatively impacted.** These challenges include the COVID-19 pandemic, Russia's invasion of Ukraine and growing debt burdens.

- **Higher prices for oil and oil products further restrict the fiscal space available in energy net-importing countries.** With this space already severely circumscribed, these higher prices result in a balance of payment issues for most African nations that rely heavily on imported refined petroleum products.

- **Balance of payments problems further reduce the availability of already-scarce public resources.** These resources are also required to mobilise the enormous sums necessary to bridge development gaps in energy and other sectors and promote economic growth while mitigating climate change. In contrast, Africa's oil-exporting countries have benefited from higher oil prices. To some extent, they have also benefitted from renewed interest from Europe in natural gas and hydrogen from Africa to compensate for supply cuts in Russian gas. This has also given rise to increased debate within African countries over their right to develop their fossil fuels in the face of expected demand from Europe, in contradiction to parallel calls to curb investment in new fossil fuel production.[8]

- **High cost of capital and lack of affordability among users, weak grids, and limited baseloads remain major hindrances to access.** The ramping up of renewables from a wealth of solar and wind power resources is severely hampered by persistent underinvestment in Africa's energy systems, including renewable-based power generation, power grids, interconnections, and electricity generation capacity. These have high transmission and distribution losses due to the technical state of many African power grids, which sometimes also suffer from design flaws and a lack of preventive maintenance, further harming supply security. Sub-Saharan Africa, for example, received less than 1.5 per cent of the amount invested in renewable energy globally between 2000 and 2020.[9]

- **A low level of investment in mini-grids and individual home systems.** These technologies are increasingly viewed as practical solutions to the problems associated with rural electrification. Yet, in 2021, investments in off-grid companies and projects across Africa were just US$ 558 million, a figure far short of that necessary to achieve universal access to energy.[10] While the bankability of these projects and companies has significantly improved in the last decade, sufficient policy support must exist to support projects that are not bankable but are essential for development if investments are to reach the necessary scale and scope to meet the SDG7 targets.[11]

- **Policy and regulatory barriers make investment unattractive to the private sector.** Reducing Africa's energy deficit requires increased funding from the private sector, which in turn requires a higher flow of public investment, domestic and international, as well as a favourable business climate and increased investor confidence. To make this possible, nations should dedicate more public funds to reducing the energy deficit. They should also increase their efforts to eliminate legislative and administrative obstacles to investment by ensuring the electricity market is open, attractive and prepared for private-sector investment.

- **Inadequate public intervention to ensure the electricity sold is affordable to end users.** This covers policy support for investments in clean cooking fuels, technology, transmission, distribution and on- and off-grid power systems. Innovative finance tools, contemporary procurement procedures – such as feed-in tariffs and auctions – financial guarantee programmes, and financially stable power producers and system operators are all essential to an enabling environment, whenever applicable. In Africa, these measures are either largely absent or need to be stronger. In some cases, such devices might not be an option, creating a need to look beyond the existing pool of solutions.

- **A lack of cost-reflective tariffs in most African countries.** Energy tariffs are sometimes below cost-reflective levels or below the electricity costs to produce, transport and distribute to customers. Service providers are rarely fully compensated for this revenue shortfall, which has several adverse effects. These include a lack of incentive and financing to connecting new consumers; a high off-taker risk for private electricity generators; and, consequently, underinvestment in the generation and grid. In cases where cost-reflective tariffs are not affordable to users, public funds can be mobilised to support a system of subsidies, for example.

- **Geopolitical challenges in balancing access, development and the transition.** As the momentum towards net-zero greenhouse gas (GHG) emissions has grown, calls to rapidly phase out fossil fuel investment have also increased. As a result, short-term investments in energy access in Africa will likely become even scarcer. As outlined in the AU's "Common Position on Energy Access and Just Energy Transition" and the "Kigali Communique on a Just and Equitable Energy Transition,[12] "African nations have received growing calls for a practical strategy utilising all the continent's energy resources. This is seen as the best way to swiftly close the long-standing energy access deficit and gaps in development while concurrently stepping up efforts toward a green energy future. In this context, the increased natural gas investment could provide flexibility for variable renewable energy alongside a wide range of other instruments, including demand side management, storage, interconnection and sector coupling. At the same time, the use of liquefied petroleum gas (LPG) as one of the cleaner energy sources to replace traditional biomass for cooking can also be promoted. Critically, this would avoid saddling African countries with stranded assets and uneconomic and expensive infrastructure.

- **Emerging human rights and land tenure issues.** Much of the land needed for further renewable energy deployment in Africa will not be built on empty land but on land inhabited by people, many of them nomads/pastoralists and other Indigenous groups. How this land is being claimed, leased and sold is often not very transparent and, more often than not, involves evicting people from their ancestral homes. Therefore, sustainable energy development in Africa must acknowledge these problems and find practical solutions and safeguards. The Lake Turkana Wind Farm in Kenya exemplifies the worst practice. This project was implemented under very disadvantageous contract terms for the East African nation, leading to the World Bank leaving the project and significant human rights violations.[13]

CLOSING THE GAP TO ACHIEVE SDG7

Focus on quick wins

Efforts to increase energy and power connectivity must be expedited. Such measures include the African Single Electricity Market (AfSEM) and the AfDB's High Five strategy. The Programme for Infrastructure Development in Africa (PIDA) has also launched a second priority action plan (PAP) for infrastructure development in Africa, known as PIDA-PAP II, for 2021–2030. Numerous ground-breaking initiatives accompany these efforts at the national and regional levels, such as the Continental Power System Master Plan and the Africa Working Group of the Green Grids Initiative.

African governments have realised the need to update their legislative and regulatory systems and have implemented initiatives and incentives to encourage investment in cutting-edge power sector projects.

Although projects by development finance institutions (DFIs) and multilateral programmes are crucial in bridging the energy gap, their implementation typically requires a lot of time and resources. This is because they depend on specific structures that are only possible with the help of these organisations. More locally driven sector growth is still required, supported by the right tools and resources. The good news is that independent power projects (IPPs) are Africa's fastest-growing energy sector structures. As private sector investors become comfortable with the continent's liberalising power markets, IPPs can attract more investments.

Address and prioritise clean cooking

The SDG7 target of access to clean cooking fuels and technologies still needs to be addressed in many African countries, despite its importance to the livelihoods of most of the population.

While there was a slight improvement in clean cooking technologies across Africa after 2010, this has now regressed, owing mainly to indifference at the regional and national levels. Even where clean cooking strategies exist, implementation could be more robust and provided with more finance – without which, even modest gains are hard to obtain. Raising the priority, profile and ambition of clean cooking goals will help governments attract the development financing necessary to support this SDG7 target.

Policies and financing for clean cooking should therefore be integrated into poverty alleviation and health strategies at the national level. The gender element is also crucial, as engaging women in clean cooking businesses will boost results and make such endeavours more lasting. Addressing this should range from awareness-raising campaigns to directly engaging women as champions and entrepreneurs.[14]

Increase national and regional private sector participation in the clean energy supply

Between 2000 and 2020, Africa attracted just 2 per cent of global renewable energy investment.[15] Moreover, between 2013 and 2020, about 56 per cent of the renewables investment in Africa came from private sources, compared to a global average of 75 per cent.[16] Africa's private sector and capital need to be mobilised to lead the clean energy transition on the continent, while at the same time, more public investment is also required. African governments must collaborate with the private sector and other stakeholders and utilise local and international resources to accelerate energy investments, particularly in clean cooking, where the most significant deficit exists.[17]

Increase investment in renewable energy technologies

International public funding flows must go beyond the need to promote clean and renewable energy investment in developing nations, particularly given the declining trend in global public flows and limited private investment described above.

Multilateral development banks (MDBs) must prioritise boosting financial flows to Africa and transforming lending. They must facilitate concessional financing to Africa and strategically employ it to leverage private capital better to mobilise the envisioned investment. In this regard, development partners must strengthen and scale up existing funds and facilities with a track record of delivery, such as the Sustainable Energy Fund for Africa (SEFA). This fund includes the requirement for the size of domestic financial markets to double.

Emerging sources of capital, such as climate finance, institutional investment and carbon credits, can bring more significant international financial flows to bear. Cross-cutting investment hazards, including high debt levels, continue to be complicating factors.[18]

Accelerate African energy interconnection

Despite possessing abundant clean energy and rich mineral resources, power shortages mean many African countries can only engage in primary mining of those minerals, not their deep smelting and processing.

Meanwhile, a lack of technology and capital hinders the development of major clean energy projects, further constraining Africa's power supply.

Therefore, accelerating African energy interconnection is a fundamental solution to Africa's energy dilemma. Developing large hydropower bases in the Congo River basin and significant wind and solar power bases in northern and southern Africa requires strengthening domestic power grids and support for cross-border power interconnection. This would create an Africa-wide 'power highway' and ensure a clean and sustainable power supply across the continent.

Based on African energy interconnection, the co-development model of electricity, mining, metallurgy, manufacturing, and trade will leverage the advantages of clean energy and mineral resources. Under this model, renewable energy will support mining, metallurgy processing and various industries. In this way, it will support trade transformation from exports of primary products to higher value-added products. An integrated electricity-mining-metallurgy-manufacturing-trade industrial chain will be created, advancing Africa's industrialisation, electrification and low-carbon, sustainable development. In this model, power producers, transmitters and consumers jointly invest in clean power generation and transmission along with mineral and industrial projects to share benefits and risks. With a good return on project investment, market-oriented financing can follow, guaranteeing project implementation and boosting economic prosperity and sustainable development.

PRIORITY ACTIONS TO ACCELERATE SDG7 IMPLEMENTATION

Step up action to support energy access and clean cooking solutions for all. Due to a significant energy access gap, there will be a growing need for clean, affordable energy in African nations in the coming decades. Africa has a unique opportunity to transform these challenges into unprecedented development opportunities, placing the continent at the centre of the global energy transition.

Accelerate power sector reforms. Efforts should also focus on advancing power sector reform, including supporting cost-reflective tariffs. Sector reforms should aim to accelerate moves by African power utilities towards creditworthiness, thus ensuring the sustainably and financial viability of the sector. This will increase the utility-based provision and attract private sector participation in energy infrastructure. Power sector reforms – such as better regulation, incentives, market development and business support – are also needed to realise Africa's vast potential for off-grid or decentralised renewable energy technologies.

Enhance the linkages between energy and agri-food systems. Investing in renewable energy solutions and adopting new, holistic approaches can directly advance energy and food security. These holistic approaches include integrated food-energy systems and the water-energy-food-land nexus. These minimise competition and leverage synergies in water and land use while also contributing to job creation, gender equality and climate resilience and adaptation.

Use Africa's vast mineral resources to anchor the energy transition. The push for net zero and the global energy transition allow Africa to be at the forefront of the electric future. Several countries on the continent each possess critical minerals required for the transition. For instance, the Democratic Republic of the Congo supplies more than 70 per cent of the world's cobalt but accrues only 3 per cent of its value.

In the longer term, by employing the continent's plentiful renewable energy resources, nations like the DRC, Zambia, South Africa, Morocco, Madagascar and Zimbabwe could develop production facilities to transform essential minerals into battery precursors by leveraging the Africa Continental Free Trade Area. They could move away from merely providing raw materials to supplying and exporting higher-value products. According to a multi-partner-backed study in 2021 by Bloomberg New Energy Finance (BNEF), battery precursors could be manufactured in the DRC three times cheaper than in the United States and with 30 per cent fewer emissions than in current supply chains based in China.[19]

Strengthen safeguards for human rights and the environment. As the continent develops those mineral resources during the energy transition and deploys utility-scale renewable energy, increasing safeguards for human rights and the environment is also crucial.[20] This includes a reform of land tenure rights, recognition of the rights of indigenous peoples and local communities over traditionally held land, meaningful consultation processes and the application of free, prior and informed consent (FPIC). It also includes stricter standards for social and environmental impact assessments and the protection of environmental defenders. Only if the energy transition protects these rights and avoids, many of the past pitfalls of the fossil fuel and other extractive industries can such activities promote a just transition.

Take the opportunity to invest in pursuing stronger regional power transmission interconnectors, power pools, and trading. Many African countries are working to improve their power infrastructure and grid connectivity via regional initiatives that aim to increase the cross-border electricity trade. The equalising of resource access and providing affordable and dependable electricity for the industry can benefit significantly from a linked African power system.

Increasing off-grid and micro-grid renewable energy solutions to meet household electricity demand could free up traditional grid energy at the pool level for industrial uses. Interconnecting the continent's power supply through these power pools can efficiently integrate green energy into the continent's overall energy consumption. Countries must still build, rehabilitate and strengthen national grids for regional integration and renewable energy absorption.

Benefit from green jobs. By preserving or regenerating ecosystems and biodiversity, lowering resource consumption and inefficiency, decarbonising the economy and minimising or eliminating all forms of waste and pollution, green jobs contribute to a sustainable environment.

Green jobs produce or support people's well-being while generating or providing goods or services that benefit the environment, such as green buildings or clean transportation. They could also be jobs that contribute to more environmentally friendly processes, like lowering water consumption or enhancing recycling systems.[21]

Africa, however, only accounts for 3 per cent of all the renewable energy jobs worldwide.[22] Far-sighted industrial policies will therefore be necessary to help the continent overcome historically ingrained structural dependencies, create local and regional value, and move supply chains towards more significant value-added. The labour market, skills and education policies will also be crucial. This includes technical and vocational education and training, public-private partnerships for skills delivery, national skills standards and diversity and inclusion measures that can ensure opportunities for all.

Increase funding and finance. Africa, home to many of the world's poorest countries, needs funds, not only finance in the form of loans. The continent also needs government structures enabling domestic businesses to access finance, such as the Green Climate Fund and the Loss and Damage facility. Other measures could include increasing the international community's role in facilitating domestic banking products and providing debt relief to over-indebted countries.

Enhance climate action through SDG7. Two African countries still need to ratify the Paris Agreement, while 47 have already submitted updated NDCs. These national goals include clean energy initiatives regarding end uses and technology selection. Countries can improve the number of bankable clean energy initiatives in their NDCs with international help, improving sustainable energy access. Indeed, increased access to finance is a precondition for enhancing sustainable energy uptake at the required pace.

ENDNOTES

[1] In the multi-tier framework (MTF) concept, electricity access refers to sufficient electricity for all required power demands across households and community institutions. This supply must be reliable, of good quality, inexpensive, legal, convenient, healthy and safe.

[2] See: www.worldbank.org/en/news/press-release/2023/02/26/solar-mini-grids-could-sustainably-power-380-million-people-in-afe-africa-by-2030-if-action-is-taken-now, accessed on 13 May 2023.

[3] The WHO defines clean cooking fuels and technologies at the point of use as solar, electric, biogas, natural gas, liquefied petroleum gas (LPG) and alcohol fuels, including ethanol.

[4] See: www.iea.org/reports/africa-energy-outlook-2022, accessed on 13 May 202.3

[5] www.seforall.org/clean-cooking accessed on 14 June 2023.

[6] Energy intensity is a measure of the energy inefficiency of an economy. It is calculated as units of energy per unit of GDP. High energy intensities indicate a high price or cost of converting energy into GDP. Low energy intensity indicates a lower price or cost of converting energy into GDP.

[7] This is according to data supplied to UNECA by IRENA and the OECD, 2023.

[8] See, for example, www.theguardian.com/world/2022/aug/01/african-nations-set-to-make-the-case-for-big-rise-in-fossil-fuel-output accessed on 19 May 2023

[9] See IRENA/CPI 2023, "Global landscape of renewable energy finance 2023", IRENA/Climate Policy Initiative, Abu Dhabi, www.irena.org/Publications/2023/Feb/Global-landscape-of-renewable-energy-finance-2023, accessed 9 June 2023.

[10] See footnote nine above.

[11] www.irena.org/Publications/2023/Feb/Global-landscape-of-renewable-energy-finance-2023.

[12] See https://au.int/en/pressreleases/20220722/africa-speaks-unified-voice-au-executive-council-adopts-african-common, accessed 9 June 2023.

[13] See Anne Waters-Bayer and Hussein Tadicha Wario (2022), "Pastoralism and large-scale Renewable energy and green hydrogen projects: Potential and threats," Heinrich Böll Stiftung/Brot für die Welt, www.boell.de/en/2022/05/18/pastoralism-and-large-scale-renewable-energy-and-green-hydrogen-projects, accessed 9 June 2023, and Right Energy Partnership (2021), https://rightenergypartnership.org/the-impact-of-the-lake-turkana-wind-power-project-on-kenyas-indigenous-peoples/, accessed 9 June 2023.

[14] See Jan Corfee-Morlot and others (2019), "Achieving Clean Energy Access in Sub-Saharan Africa", OECD/ENEP/World Bank, www.oecd.org/environment/cc/climate-futures/case-study-achieving-clean-energy-access-in-sub-saharan-africa.pdf accessed 9 June 2023.

[15] See IRENA (2022), "Renewable energy market analysis: Africa and its regions", IRENA, Abu Dhabi, www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Jan/IRENA_Market_Africa_2022.pdf?rev=bb73e285a0974bc996a1f942635ca556, accessed 9 June 2023.

[16] See IRENA/CPI 2023, "Global landscape of renewable energy finance 2023", IRENA/Climate Policy Initiative, Abu Dhabi, www.irena.org/Publications/2023/Feb/Global-landscape-of-renewable-energy-finance-2023, accessed 9 June 2023.

[17] One example of private sector funding for clean cooking is the Spark+ Africa Fund. It is a US$ 70 million impact investment fund that offers next-generation, distributed cooking energy solutions to the mass market in sub-Saharan Africa. Spark+ is the first fund of Luxembourg-based Spark+ General Partner Sàrl, a joint venture between the fund's exclusive advisor, Swiss impact investment advisory firm Enabling Qapital (EQ) and Netherlands-based foundation Stichting Modern Cooking (SMC). The fund invests debt and mezzanine capital in leading companies throughout the value chains of various cooking fuels, including LPG, biofuels such as ethanol and pellets, electric appliances and efficient biomass stoves (see www.sparkafricafund.com, accessed 9 June 2023).

[18] See IEA (2022), "Africa Energy Outlook 2022", IEA, Paris, https://iea.blob.core.windows.net/assets/6fa5a6c0-ca73-4a7f-a243-fb5e83ecfb94/AfricaEnergyOutlook2022.pdf, accessed 9 June 2023.

[19] See www.uneca.org/stories/producing-battery-materials-in-the-drc-could-lower-supply-chain-emissions-and-add-value-to, accessed 9 June 2023.

[20] See Colombia Center on Sustainable Investment (2023), "Enabling a just transition: Protecting human rights in renewable energy projects," CCSI, New York, https://ccsi.columbia.edu/sites/default/files/content/docs/publications/final_RenewablesAndHumanRights%20(Brief).pdf, accessed 9 June 2023.

[21] https://fundforyouthemployment.nl/wp-content/uploads/2022/10/Green-Jobs-For-Youth-in-Africa.pdf

[22] See IRENA (2022), "Renewable energy market analysis: Africa and its regions", IRENA, Abu Dhabi, www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Jan/IRENA_Market_Africa_2022.pdf?rev=bb73e285a0974bc996a1f942635ca556, accessed 9 June 2023.

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