IAP ENERGY DIALOGUE SERIES (SECOND EDITION)

WEBINAR REPORT

Closing Africa's Energy Access Gap: What are African Governments Doing?

CONVENER & MODERATOR:

Dr. Chigozie Nweke-Eze. - Founder of Integrated Africa Power (IAP)

PANELISTS:

1. Jacqueline Rono - Member, Kenya Mission 300 Compact Secretariat
2. Dr Musiliu Oseni, PhD, - Chairman, Nigerian Electricity Regulatory Commission (NERC)
3. Arnold Milner Simwaba - Permanent Secretary - Electricity, Ministry of Energy, Zambia
4. Solomon Adjetey Sowah - Chief Director, Ministry of Energy and Green Transition, Ghana.

1. Overview of the energy access gap in Africa

The webinar opened with an overview of Africa's energy access gap. While renewable energy investment and capacity have grown across the continent over the past decade, this progress has not sufficiently closed the energy access gap, particularly due to population growth outpacing new connections. Over 600 million people in Africa lack access to electricity, with many others facing issues of unreliability, low quality, or unaffordability. Regional disparities were highlighted, noting that fewer than one in five African countries possess a credible plan to reach universal access by 2030.

Against this backdrop, the webinar examined how African governments are responding to the access challenge, drawing particularly on experiences from Kenya, Nigeria, Ghana and Zambia. The discussion focused on four broad areas available to governments: **policy and regulatory reform, financing mechanisms, technology choices between centralized and decentralized systems, and regional and international partnerships.**

The following questions guided the panel discussions:

1. What policy or regulatory reforms in each of these country case study countries have genuinely moved the needle on access and why does it work?
2. Where has financing been the binding constraint and what mechanisms are closing this gap?
3. How are governments balancing grid extension against centralized solutions given their own country's geography and demand patterns and what role are regional international partnerships playing that domestic policy alone cannot deliver?

2. Key takeaways

- **Political commitment is fundamental, but it must be sustained**. Kenya and Ghana demonstrated that major improvements in electricity access are the result of long-term government commitment, institutional continuity and deliberate resource allocation rather than short-term projects.
- **Electricity access goes beyond connecting people.** A connection has limited value if electricity is unreliable, unaffordable or cannot support meaningful household and economic activity. Access should therefore be assessed in terms of quality, affordability and socioeconomic use.
- **The productive use of electricity is central to sustainable access.** Electricity that supports farming, fishing, businesses, industry and other income-generating activities strengthens consumers' ability to pay and improves the commercial sustainability of electricity projects.
- **Public finance cannot close the access gap alone.** Governments must create bankable and predictable regulatory frameworks that attract private capital. Blended finance, guarantees, grants and other risk-sharing mechanisms can help bridge viability gaps, but their design and implementation must avoid creating additional liquidity constraints.
- **Affordability and financial sustainability must be addressed together.** Subsidies, cross-subsidies, connection financing and targeted tariffs can protect vulnerable consumers, but governments must simultaneously address utility efficiency, network losses, generation costs and the long-term fiscal burden of broad subsidy regimes.
- **Grid strengthening is as important as expanding generation.** Additional generation will have limited impact where transmission and distribution networks cannot carry power. Access planning therefore needs to cover the entire power value chain.
- **Regulation must evolve as electricity markets change**. Policies and regulations must address new technologies, larger mini-grid systems, private investment, decentralization and emerging market structures. Continuous reform is therefore part of the access journey rather than a one-off exercise.

3. Panel Discussion

How would you assess the current state of energy access in Kenya and across Africa, and what progress has been made towards achieving universal energy access? – Jacqueline Rono

She began by acknowledging that energy access is increasingly being treated by African governments as a national necessity rather than a policy preference, particularly because of its importance to economic development. In Kenya, the energy access journey has spanned more than two decades, with significant acceleration over the past ten years driven by sustained government commitment. She stressed that this commitment goes beyond financial resources to include technical capacity, monitoring, policy reform and regulatory support. Drawing on her experience with the last mile electricity access program, she emphasized that access should not be measured by connections alone. A household may be connected but receive unreliable supply or face costs that make electricity unaffordable, limiting the socioeconomic value of that connection.

She further explained that electrification strategies must reflect differences in geography, settlement patterns and lifestyles. Kenya's early gains were easier to achieve because much of the grid already served urban centers, towns and industrial areas, making household connections relatively straightforward. As expansion moved into more remote and sparsely populated areas, progress became slower and required different solutions, including standalone and solar home systems for communities where conventional grid connections are impractical. Affordability also remains a key challenge, prompting the use of government subsidies and cross-subsidies to reduce connection barriers. Overall, she concluded that African governments have made meaningful progress, but achieving universal access will require appropriate structures, continuous adaptation and policy evolution as new challenges emerge.

What is government doing in terms of policies reforms, are there barriers and would you say that we've moved the needle in Nigeria as well or would you say that we are yet to? – Mr. Lanre Elatuyi

He commenced by explaining that one of the key weaknesses identified under the Nigeria Electrification Project (NEP) was the limited attention to long-term project sustainability. The Distributed Access through Renewable Energy Scale-Up (DARES) program is intended to address this by increasing the participation of private investors and local communities, thereby strengthening ownership and sustainability. He noted that the program is expected to reach about 80 million Nigerians, while more than 5 million solar home systems are also planned for rural and commercially less viable communities. Greater emphasis is being placed on the productive use of energy, particularly in agriculture and other rural economic activities, so that access can support income generation rather than serving primarily lighting needs.

On the grid side, he noted that Nigeria has about 13,000–14,000 MW of installed capacity, although only around 4,500–5,000 MW is currently distributed because of network constraints. He also highlighted ongoing efforts to reform electricity subsidies and the decentralization of the power sector, which has given states greater regulatory responsibility over electricity distribution. According to the panelist, about 16–17 states had already established regulatory autonomy, creating greater scope for state governments and private investors to participate in expanding electricity access, while government support remains necessary for communities that are not commercially attractive to private capital.

What has Ghana done to expand energy access, and what key barriers remain? – Mr. Solomon Adjetey

He reported that Ghana currently has an electricity access rate of 89.14%. He explained that this progress stemmed from a policy initiated in 1989 to extend electricity nationwide over a 30-year period which was to have produced a 90% access rate by 2020 but was not achieved. The expectation is to reach this goal by 2030. Initially only 15% of the population had access to electricity and only 5% rural access.

Ghana's electrification strategy began by extending the national grid to district capitals, followed by the Self-Help Electrification Program (SHEP), which encouraged community participation to extend power to remote areas. This sustained effort increased national energy access from the population, with solar home systems now being deployed to reach the remaining "last mile" populations. Reaching universal access requires very strong government commitment and in Ghana all the governments since the inception have showed very good commitment towards achieving this.

4. Follow-up questions

Reflecting on the last mile connect connectivity project earlier mentioned, what worked well? What happened? Which tools did the government deploy to achieve that?

Jacqueline Rono explained that Kenya's progress in expanding electricity access was supported by the transition from a vertically integrated utility to a more specialized sector, with generation, transmission and distribution treated as distinct and investable segments. This restructuring also enabled the creation of a dedicated rural electrification institution, helping to extend access beyond urban areas. To address high upfront connection costs, the government partnered with development banks to implement the last mile connectivity project, allowing households to spread connection payments over time. Public institutions such as schools, hospitals, police stations and social halls were also electrified as anchor points, making it more viable to connect surrounding households.

As the programme expanded into harder-to-reach areas, Kenya introduced off-grid solutions, including mini-grids, solar home systems and distributed renewables, while continuing to review policies to reflect changing market conditions. Private-sector participation also increased, supported by blended finance, government guarantees and local

content requirements that strengthened domestic capacity. She noted, however, that the expansion also revealed important lessons. Rapid connections placed pressure on grid infrastructure, while large procurement packages initially limited participation by local contractors. Results-Based Financing also created liquidity challenges because of delays in verification and reimbursement. These experiences prompted greater attention to grid strengthening, smaller procurement lots, faster verification processes and bridge financing for private operators

Reflecting on the complexity of Nigeria's electricity access challenge and the growing role of state governments, what key lessons have been learned from past approaches, and how are they shaping current reforms?

Mr. Lanre Elatuyi explained that Nigeria's recent reforms are aimed at improving the viability of both grid and off-grid electricity access. The 2026 regulations increased allowable capacities to 5 MW for isolated mini-grids and 10 MW for interconnected mini-grids to support economies of scale. At the same time, greater emphasis is being placed on the productive use of energy, particularly in sectors such as farming and fishing, to strengthen local incomes and improve communities' ability to pay for electricity. Nigeria is also trying to balance reliability and affordability through tariff classifications that require customers receiving 20–24 hours of supply to pay more cost-reflective tariffs, while gradually reducing dependence on a subsidy regime that reached ₦1.9 trillion in 2025.

He also highlighted the persistent constraints within the national grid. Although Nigeria has an installed capacity of about 13,000–14,000 MW, only around 4,500–5,000 MW is distributed because of transmission and distribution bottlenecks. Investment is therefore being directed towards strengthening network capacity, alongside measures to reduce high commercial and technical losses, including meter relocation and the emerging use of artificial intelligence to detect electricity theft. While off-grid renewables and mini-grids remain important, their costs can exceed grid tariffs, making grid strengthening the preferred option where it is technically and economically feasible.

Reflecting on how Ghana went from 15% in 1989 to 66.7% in 2000, and currently stands at 89.14%, how was the government able to navigate some of these processes to achieve universal electricity access, and is it reliable and affordable?

Mr. Solomon Adjetey noted that Ghana has shifted towards full government financing for recent last-mile electrification projects, moving away from the earlier model that required communities to contribute towards the cost of electricity poles. The country is now at the most difficult stage of its electrification program: reaching the remaining unconnected communities. To accelerate this process, the government has allocated substantial funding to extend access across several of Ghana's 16 regions, with the aim of achieving universal electricity access as quickly as possible.

For areas where grid extension is less practical, Ghana is also investing in mini-grids and solar home systems, supported by financing from the African Development Bank for the construction of 35 mini-grids and the deployment of several solar home systems. He stressed, however, that public finance alone will not be sufficient to close the access gap. Government must therefore establish bankable regulatory frameworks that can attract private capital while safeguarding affordability for vulnerable consumers.

Ghana is also leveraging the West African Power Pool to trade electricity with neighbouring countries and access lower-cost power where available. To protect low-income consumers domestically, the country maintains a flat-rate tariff for low levels of consumption, capped at 30 kWh per month. Consumers who exceed this threshold no longer qualify for the flat rate, ensuring that support remains targeted at those with genuinely low electricity consumption.

5. Question and Answers

Addressing a question about the key financial hurdles preventing Sub Saharan African countries from treating mesh grids as a distinct infrastructure category and how can policy accelerate their deployments, **Mr. Lanre** emphasized that the primary hurdle is a lack of robust industrial economies in many African nations. Because local populations often use electricity only for lighting rather than industrial purposes, the path to cost recovery is unclear, making it difficult to attract private investment without government subsidies, which many governments cannot afford.

He argued that the energy sector suffers because electricity is not universally viewed as a life-essential service in Africa as it is in Western nations, where power outages are treated with higher urgency. He also stated that this lack of prioritization leads to insufficient government commitment and incomplete policies. He emphasized that until there is a clear, legally backed policy framework, the region will struggle to see the necessary changes, noting that progress toward 24-hour access depends on improvements in economic activities, industrialization, and poverty alleviation.

Addressing a question on what the Kenyan government is currently doing that could be done differently and what should be the government's focus for the next two years, **Jacqueline Rono** concluded by stating that for the next two years, Kenya will focus on increasing market competitiveness through energy auctions, net metering, and open access. The government also intends to make energy planning more holistic by integrating electricity with clean cooking and productive use initiatives, and by leveraging regional integration to transfer load across time zones to optimize energy costs. She proposed that countries in the continent should focus on creating innovative mechanisms for internal trading and infrastructure development rather than looking outside the continent for solutions.

Addressed the final question regarding the viability of second-hand solar panels, arguing that grid extension is insufficient for universal access, **Mr. Solomon** proposed that mini-grids, standalone solar storage, and distributed renewable energy must become mainstream solutions. He stated that energy access strategies must move beyond connections to support productive uses and argued that public finance alone cannot close the energy gap. He advised that governments must establish bankable regulatory frameworks that crowd in private capital while ensuring affordability for vulnerable users. He concluded that the primary challenge for Africa is the mobilization of financing, technology, institutional capacity, and political commitment to ensure universal access.

6. Conclusion and Future sessions

The country experiences presented during the webinar demonstrate that Africa's energy access challenge is not simply a question of installing more electricity capacity. It is equally a question of how electricity systems are governed, financed, expanded and used. The issue is no longer how many people have been connected but what kind of access are people receiving, can they afford it, and can they use it productively.

The moderator informed the participants that the third episode of the energy dialogue series will focus on international cooperation for energy development.

7. Acknowledgement

IAP extends heartfelt appreciation to all speakers, participants, and partners for their valuable contributions toward shaping Africa's sustainable energy future.

Integrated Africa Power

Thank you for joining us

Watch the full replay of the second edition of the IAP Energy dialogue series here

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See you in the third episode.