

ACCELERATING RENEWABLE ENERGY ADOPTION IN NIGERIA

Legal Framework, Fiscal Incentives, And Practical Solutions.



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BARRISTERS, SOLICITORS AND ARBITRATORS

Dear Sir/Madam,

Thank you for taking out time to participate in our webinar titled '**Accelerating Renewable Energy Adoption in Nigeria: Legal framework, fiscal incentives, and practical solutions.**' Your active engagement and insightful contributions made the session truly enriching and dynamic.

As we journey together towards a sustainable energy future for Nigeria, we understand that the discussions may have sparked numerous questions and thoughts. This e-book is curated to address your enquiries and provide a resource on the topic.

Our goal is to ensure that the insights shared during the webinar are not only preserved but also expanded upon, giving you a deeper understanding of the legal frameworks, fiscal incentives, and practical solutions driving renewable energy adoption in Nigeria.

We trust that you will find this e-book both informative and inspiring, serving as a valuable tool in your endeavours within the renewable energy sector.

Thank you once again for your engagement and commitment to advancing renewable energy in Nigeria.

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THE PANEL DISCUSSION

What is the existing legal framework on renewable energy and what key incentives are available to support growth in this sector?

Chiagozie Hilary-Nwokonko



The legal framework for renewable energy is under the rubric of the Electricity Act 2023, recognizing renewable energy as a key component of the national energy mix; empowering and authorising NERC to promote the use of renewable energy in Nigeria. There are also policies by the government via the Ministry of Power on renewable energy and energy-efficient policies over the past 20 years as well as NERC regulations which encourage and facilitate the use of renewable energy. With recent changes to the 1999 Constitution and with the enactment of the Electricity Act 2023, there are provisions for sub-national regulators to promote renewable energy.

On incentives, there are tax holidays for renewable energy companies operating on a commercial level. In addition, a 5% custom duty is levied on products like finished voltaic panels, while no duty is paid if these panels are imported to be fitted in the country. Furthermore, funds have been set aside to support the growth and adoption of renewable energy. There is still more to be desired on incentives, but it is a work in progress.



What are the barriers impeding a wider adoption of renewable energy across Nigeria?

Abraham Mohammed



Energy generation of the country is roughly 5,000 megawatts with about 4% in solar and 15% in hydroelectricity. The solar numbers are very low compared to South Africa which has 6,000 MW of solar, Egypt has 1,000/2,000 MW of solar while Nigeria has less than 300 MW. Three main reasons:

1. Customers cannot take on the high capital expenditure (capex) of solar as there are not enough customer or financial incentives to transition to solar, whereas other countries provide direct subsidies for the switch to solar.
2. There is the utility scale of solar; Nigeria's largest solar deployment is just 10 MW and Sierra Leone's is on a GW' scale. This is because there are no utility scale solar providers in the country, and this is caused by the lack of large-scale government off-takers.
3. Upfront cost for solar home systems is too expensive and there are no subsidies on rural scale solar systems.



¹ 1GW = 1,000MW

Generally, there are no large-scale solar deployments and there are not enough government-run incentives for the end customers; these factors hinder the adoption of solar energy despite Nigeria's energy crises.

How has the deployment of the Electricity Act 2023 and state regulators impacted the deployment of mini grids in Nigeria?

Onyinye Anene-Nzelu



The Electricity Act not only seeks to decentralize power and its generation, transmission and distribution but to decentralize the powers of the regulatory agencies. Each state should have its agency regulating the generation, transmission, and distribution of electricity in the state while NERC remains the apex regulator for cross-state transmission.

The Act prescribes that mini grid development of the state remains with NERC until the state meets all the requirements for the state -regulatory commission to be set up. There are some state regulatory provisions – Ekiti, Ondo, Enugu, Imo – which are still in their early stages. They now have the right and

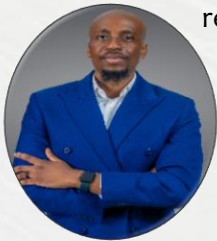


responsibility as granted by NERC over the state electricity board, to grant mini grid licenses and maintain independent electricity distribution networks and the framework for operating such licenses.

There is currently no significant impact in the market, but it is expected that in the coming months, states will begin to develop frameworks and fiscal policies that will incentivize more private developers to invest in their states.

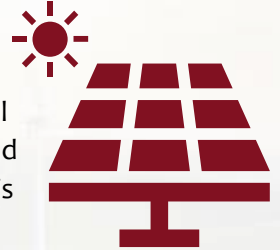
What are the evolving trends in the development of mini grids in Nigeria and across other African countries?

Olamide Niyi-Afuye



The mini grid sector has evolved over the years. The first generation largely focused on fossil fuels and diesel till recently, where we saw a blend of fossil fuels and renewable energy. **Renewable energy is now the dominant source of energy in the mini grid space with sources like solar and hydro.** In terms of trends in Nigeria and other African countries, there are interconnected mini grids which are mini grids connected to the national grid or utility to take advantage of any shortfalls from both sides.

The first interconnected solar mini grid was facilitated by Powergen Nigeria Limited in collaboration with Abuja Electricity Distribution Plc and commissioned in Toto, Nasarawa State. Mini grid companies are also taking advantage of Artificial Intelligence (AI) to streamline operations and gather aggregated data while saving costs, and this leads to sustainability of the infrastructure.



Rural Electrification Agency (REA) is also promoting the concept of renewable service companies promoting utility-scale projects. We are also seeing the emergence of metro grids in countries like DRC to power cities in large parts of DRC.

The Nigeria Electrification Project has been largely successful, providing more incentives for development partners to blend financing with commercial finance providers. This promotes the view of mini grids more as infrastructure than projects.

What are the Key differences between mini grids and isolated Independent Electricity Distribution Networks (IEDNs)?

Kabir Garkuwa



NERC is licensed to market participants and the Electricity Act emphasizes the importance of licensing of power projects. The key differences between mini grids and IEDNs are the activities that are required to be licenced by NERC and the requirements to obtain these licenses are clearly provided for by the Electricity Act as regards licences for generation, transmission, distribution, and trading. These are regulatory activities.

A distribution licence authorizes a distributor to distribute electricity above 100 KW and, there are 11 distribution companies.

The Commission passed a regulation known as the Independent Electricity Distribution Network Regulation in 2012 which authorizes the Commission to license companies that have purpose-built distribution systems apart from the 11 distribution companies already licensed by the Commission. It is through this framework that companies like Geometric, Aba Power, Island Power and other independent distribution companies are licensed. These licenses are not issued with permits because their activities fall under the



statutory requirement of acquiring a license i.e. distributors of power above 100KW.

The Commission also has broad powers to issue different authorizations like permits or certificates to importers of meters. Mini grids fall under this classification, as operators of mini grid systems will be given permits under the Commission's Mini Grid Regulation of capacities not above 100 KW (not licenses) to accelerate the adoption of renewable energy on a small-scale investment in the power sector.

What fiscal incentives have you accessed and its impact on your business operation and growth?

Abraham Mohammed



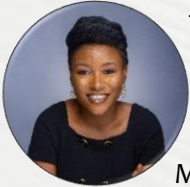
When importing for a power project, there is the IDEC incentive. There are also fiscal incentives removing duty fees and VAT payments, which reduce the company's capex and allow the company to offer its energy services at a more competitive rate.

There is also no VAT in solar sales which benefits the end customer as well. There is the Pioneer status which grants tax holiday for some years to companies working in and leading specific industries with advanced technology, among other qualifications. These cumulative incentives allow growing companies to stay competitive and

expand at an accelerated rate, though there is room for more incentives.

What fiscal incentives are available for deployment of mini grids and what is the ease of accessing these incentives in day-to-day business?

Onyinye Anene-Nzelu:



The mini grid sector enjoys similar incentives as above. In terms of ease, there is a well-delineated application process with timelines which makes it easier for companies to apply for these incentives which are typically granted if all measures are adhered to. Regarding legal incentives, the Mini Grid Regulation provides significant incentives to mitigate some of the risks faced by investors especially concerning compensation.

There is also the Tariff Calculating Methodology by NERC which is easy to use and allows you to calculate your tariffs and determine regulated asset bases. The REA also encourages mini grid businesses and partners with the World Bank on projects such as the Nigerian Electrification Project which gives performance-based grants to developers on a per connection basis which allows you to earn a certain amount of money after the project is built.



This is to incentivize private sector players to invest in the sector by building a mini grid where the requirements of presenting significant documentation and evidence committee engagement amongst others are met.

What are the similarities and differences in Nigeria's regulatory framework and that of other countries?

Olamide Niyi-Afuye



Nigeria and countries such as DRC have taken the lead on the ability of MG (mini grid) companies on their own to reach out to communities and sign an agreement to electrify them. Whereas in some other countries, you have to go through the government, which does not necessarily help business. The direct interaction between the communities and the companies is ideal. Governments have incentives to ensure electrification, but in practice, the Nigerian model has been efficient as it makes it easy for communities and service providers to agree on electrification and a level of protection for the communities. NERC comes in where you have to seek approvals and licences for the mini grid.

I push for the mini grids to be reclassified beyond the 1MW limit. 80+million people are still unelectrified in Nigeria, so there

might be a need to set aside the rule book to be more innovative to make quicker changes, rather than be dogmatic.

Abraham noted that Nigeria currently has only 300MW of solar for a country with almost half of its people unelectrified. The peak demand for electricity in the country is about four times what is currently being provided, while the potential is about double that. While Nigeria is taking the lead, there is a need for innovation, challenging ourselves.



From the most recent Benchmarking Africa's Mini Grids Report, Nigeria's performance in terms of licensing is actually impressive compared to other markets. About 38 weeks to get full approval in Nigeria, compared to 50 weeks in Kenya, 65 weeks in Sierra Leone, 55 in Tanzania, and even more in some other countries, although, we can do better.

Some organisations have established mini grid regulation generation tool, which helps drastically shorten the time where mini grid regulations are developed. It is hoped that this will lead to increased improvement in the overall regulatory landscape.

Are there any areas that you have seen licensees struggle and what advice would you offer to an interested player to help them overcome these challenges?

Kabir Garkuwa



The job of the regulator goes beyond issuing regulations.

The capacity for mini grids has caused a conversation as to the need to increase it. One challenge is the issue of sourcing money from local banks, it is usually difficult. There is therefore a reliance on grants which are not available for everybody.

There is also a difficulty with finding viable sites due to the capacity issue. Customers are low-income earners, so despite the subsidy, owing to the fact that off-grid power is more expensive, paying tariffs is usually difficult and this is factored into the investment decisions. The struggles are not usually due to licensing or regulatory issues. The issues are usually post-licensing and NERC readily grants licenses. **World Bank and NERC are trying to do solar auctions in the country, so interested parties can come to develop power projects.**

Are there legal obstacles hindering the growth of the renewable energy industry?

Chiagozie Hilary-Nwokonko



We are in a relatively better place than we were, owing to the Electricity Act, sub-nationals able to contribute, the World Bank helping out, funds, pioneer status, etc. The challenges are less legal. Nevertheless, there are things that can be done from the legal aspect. The legal framework could be tweaked to make things better. For example, the cap on the definition of mini grids. Communities are important and can be utilized in the increase of adoption of renewable energy. The pioneer status terms may also be improved to 10 years instead of the 5 years as available in some other industries. Accessibility of the grants should also be eased, as there is a power emergency.

What are the critical factors to consider when evaluating opportunities in Nigeria's renewable energy sector?

Abraham Mohammed



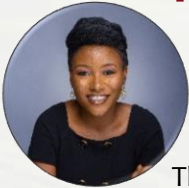
It is not really a legal issue, as even when there is a licence, it is usually hard to get financing. The factors to consider are:

1. A strong pipeline;
2. The bankability of the pipeline. For example, if a contract is signed, is it protected against inflation? Are there dollar provisions to hedge against the naira devaluation risk when raising dollar financing? Is the customer viable?
3. The internal rate of returns (IRR); and
4. The impact of the project in terms of creating a greener environment.



What challenges have you faced in deploying mini grids and what actions would you like the government to take to solve them?

Onyinye Anene-Nzelu



There is a need to streamline processes, particularly the stress of finding customers, which increases the cost in the mini grid sector, which ends up having to be recovered in the tariff.

There is also a need for bulk applications for licences to be allowed, as it is cumbersome applying one after the other. While the new mini grid regulations allow for this, it is yet to be operationalized.

There should also be security for investors when the grid finally arrives, as it is provided for in the law.

It is our appeal that in the implementation of the Electricity Act, state regulatory agencies should be coherent and uniform in their framework, to ease deployment in various states.

QUESTION AND ANSWER SESSION

1. Is the Nigerian government being engaged to adopt innovative policies of other African countries?

Indeed, the Nigerian Government is building institutional capacity. The processes need to be clear, that is, transparent and enforced properly by ensuring that the judiciary understands the intent behind the policies and regulations and is independent enough to preserve the integrity of the policy.

There is a need to create a platform where government to government can speak to each other as well as company to government. The government is working closely with the Rural Electrification Agency and the Renewable Energy Association of Nigeria to replicate that model in different countries where they have membership wherein these constant dialogues can ensue. This helps with making sure everybody is getting the same level of information at the same time.

2. What are the challenges that states might face as they take charge of certain regulations and what to look out for in attracting investments into renewable energy?

Electricity Act gives states power to regulate electricity within the state. However, the biggest challenges investors will face is, the issue of capacity and the issue of funding. Renewable energy is capital intensive. The best way to go about it is to look to NERC to see what they have done on renewable energy.

3. *How can foreign private corporate investors participate in the development of mini/micro-grids on the continent? AMDA registration is very prohibitive and somewhat excluding. AMDA leadership is very unresponsive to requests and to my opinion its lack of consideration contributes to these challenges. Significant capital can be made available however more inclusive policies should be implemented especially by the leadership at AMDA.*

Thanks for sharing your concern.

I note that we have recently expanded our membership to be more inclusive. Please send an email to membership@africamda.org and you will be provided with the requirements for membership.

4. *What is green finance and green bond? Was it mentioned or envisaged in the last budget?*

Green Finance are financing instruments (equity or debt) that are designated for sustainable projects such as clean energy. A green bond is a type of green finance issued as a corporate or government debt but restricted to sustainable projects. Green bonds typically attract more discounts as there are a lot of impact investors in the space. From a Nigerian budget perspective, Nigeria has issued a number of green bonds over the years, raising money for sustainable projects.

5. *Poor purchasing power, and low connection rate due to poor socioeconomic status in most rural areas can affect the viability and sustainability of mini grid projects in rural areas,*

is this a problem to the investors and the developers? How do you think this can be mitigated?

Indeed, it does affect viability, and it is a major problem that investors and developers try to solve. In summary, proper due diligence, community engagement, demand analysis, understanding willing to pay and ability to pay, technical design (to match supply and demand and reduce capex cost), and building exceptional customer experience, and demand stimulation help mitigate these risks.

6. What about including wind energy into the mix? Are there any initiatives to support wind projects as mini grids?

Mini grids can include wind energy. There is no regulatory limitation to this happening.

7. Although there are a number of regulations from NERC, but we don't have an Energy law in Nigeria, do you think the National Assembly needs to enact a law for the energy policies formulated to be enforced to accelerate energy security?

We have the Electricity Act 2023.

8. Given that NERC regulates renewables, does the licensing regulations of 2010 regulate generation of solar power exceeding 1MW or are there separate regulations for renewables generation? Additionally,

does NERC regulate vendors of solar panels and equipment?

NERC's Application for Licence Regulation caters for and covers all types of licence applications, including electricity generation, transmission, distribution, trading). This Regulation covers all fuel sources used for generation of electricity. Specifically, Schedule 1 B (3) (ii) (Specific Requirements) of the Regulation details requirements for obtaining solar power licences. The Commission has issued several solar licences to companies/applicants that met its licensing requirements.

As for the regulation of solar panel and equipment vendors, NERC does not currently regulate the sale of solar panels and equipment. However, for the installation of solar panels in systems exceeding 1MW for the purpose of electricity generation or mini grids of 1MW or below, the authorisation of the Commission is required.

9. The Electricity Act 2023 provides for the promotion of electricity generation via renewable energy sources by NERC, and equally mandates NERC to license, provide fee structure and other functions. Ironically, most lawyers are not aware of some of these provisions. What is NERC doing to involve NBA across the country, judges, and all stakeholders towards the implementation of those wonderful provisions?

NERC recognises the complex nature of electricity regulations and transactions and aims to deepen the understanding of transactional, regulatory, and technical

issues in the power sector. NERC has done a lot in providing guidance and information on its activities and operations of the utilities/licensees that operate in the Nigerian Electricity Supply Industry. Of the roles and contribution of NERC in engaging stakeholders, the following are some of the engagements of the Commission with different strands of stakeholders in the sector –

- NERC has a robust website that provides critical and most up to date information in the Nigerian power sector. The information on the website includes factsheets that simplify regulatory/legal instruments of the Commission. Importantly, as the Commission adopts an open, transparent, credible, and public-driven rule making process, all draft regulations of the Commission are published on Commissions’ website in order to obtain spectrum of opinions, contributions, input, and criticism of stakeholders.
- The Commission has established a beneficial relationship with the Nigerian Bar Association in order to engage members of the legal profession with the fast development of the sector. In early 2024, the Commission organised a capacity building program at its headquarters where important and high stakes topics in the development of NESI were delivered to participants (physical and virtual) the topics include–

a) The Nigeria’s Electricity Sector Reform Journey

- b) Decentralisation of the Nigerian Electricity Market
 - c) Compliance Requirements in NESI
 - d) Framework for Tariff determination in the NESI
 - e) Metering Initiatives
 - f) Protecting the Rights and Interests of Consumers in the Electricity Act.
- Similarly, the Commission organised Judges Seminar to bring members of the judiciary up to speed on emerging legal issues relating to the NESI and to apprise the judiciary on all the development and changes in the regulatory landscape. This is an ongoing regulatory initiative, as it forms part of the strategic goal of the Commission.
 - Town Hall Meetings: Regular town hall meetings are held to educate the public on their rights, demand-side management, and to address complaints.

These are but few areas the Commission engages different strands of stakeholders on emerging areas in the power sector.

10. Can you share what the key conditions that states must meet before NERC can approve the setting up of the state regulatory commissions? Are there any conditions that are specifically related to separation of powers from a corporate governance perspective?

The Electricity Act 2023 specifies conditions for transferring regulatory authority to states:

- 1) **Establish State Legislation:** States must create laws to establish a state electricity market.
- 2) **Form a Regulatory Authority:** States must set up a state electricity regulatory authority with an appointed governing body and staff.
- 3) **Notify NERC and Successor Licensees:** States must formally notify NERC of points 1) and 2) and request the transfer of regulatory authority.
- 4) Notify the relevant successor electricity distribution licensee with a copy to the NCP and the BPE.
- 5) States must comply with these conditions before NERC drafts an order for the transition of regulatory responsibilities. Please refer to Sections 230 (2-9) of the Electricity Act for detailed provisions and guidance on conditions for transfer of regulatory functions to State regulator.

11. What are the procedures for NERC licenses?

One of the central and regulatory thrust of the power sector reform process is licensing of electricity market participants. The Act pays close attention to the licensing process, as this is the gateway to act in a functional way in the regulated electricity market. Licences are required for all generation, transmission, system operation, distribution, supply, and trading in electricity. Please see sections 65-69 of the Act for licensing/regulated activities.

The licensing of market participants is process based and rule based, as the detailed documentary and procedural requirements are well articulated in section 71 of the Act and the NERC Application for Licence Regulation. The first procedure for any intended applicant is to visit the NERC website to obtain relevant information relating to the type of licence a prospective licensee is interested in. The procedures vary with the particular type or nature of licence, and this cannot be exhausted in this response. Suffice to wrap this up, applicants are to note that the licensing requirements pivot around technical data, commercial/financial information, and legal documents.

12. Kindly highlight the challenges states might face as they take charge of setting regulations and what should they look out for in attracting investors to develop their renewable energy resources?

States may face challenges similar to those encountered by the federal regulator, including capacity limitations, funding issues, tariff management, demand-side management, and data management.

13. Solar panels have a life span of about 25 to 30 years. With the gradual transitioning from fossil fuel related alternatives of renewable energy and its current use by both individuals (solar home systems) and mini grid operators, solar panels that need to be disposed of will litter the environment within the next couple of years. Is there any legislation on proper disposal of solar panels in Nigeria?

Currently, there is no specific legislation in Nigeria regulating the disposal of solar panels. As solar panels have a lifespan of 25 to 30 years, proper disposal and recycling practices will become increasingly important as their use grows. NERC does not regulate this aspect, as noted in the response to Question 8.

***Please Note**

The Panel Discussion and the Question & Answer Session included in this e-book may have been modified for clarity and coherence purposes only. We have also maintained the original responses and views of our panellists.

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