

ASSESSING THE ACCESSIBILITY OF GOVERNMENT SOCIAL INTERVENTION FUNDS FOR RENEWABLE ENERGY SECTOR:

A Sector Experience and Perception Survey



“There is so much to be done to bridge Nigeria’s energy deficit. The way credit facilities and intervention funds for renewable energy are designed and administered will go a long way to determine how we achieve this...”



“Intervention funds must be structured to allow for renewable energy’s high capital requirement, extended payback period with steps taken to de-risk the sector, otherwise the intervention will end up not achieving its goals.”

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ABBREVIATIONS

| | |
|-------------|---|
| AfDB..... | African Development Bank |
| AFC..... | Africa Finance Corporation |
| AGF..... | African Guarantee Fund |
| BOI..... | Bank of Industry |
| BOQ..... | Bill of Quantity |
| CACC..... | Commercial Agriculture Credit Scheme |
| CBN..... | Central Bank of Nigeria |
| CFA..... | Climate Finance Advisory |
| CPP..... | Captive Power Plant |
| CRAFT..... | Climate Resilience and Adaptation Technology Transfer Facility |
| DBN..... | Development Bank of Nigeria |
| DMB..... | Deposit Money Bank |
| EU..... | European Union |
| ICRESS..... | Interministerial Committee on Renewable Energy and Energy Efficiency. |
| MFI..... | Microfinance Institutions |
| NEMSA..... | Nigerian Electricity Management Services Agency |
| GEF..... | Green Energy Fund |
| LC..... | Letter of Credit |
| LE..... | Large Enterprises |
| MOU..... | Memorandum of Understanding |
| NIRSAL..... | Nigeria Incentive-Based Risk Sharing System for Agricultural Lending |
| NMFB..... | NIRSAL Microfinance Bank |
| OEM..... | Original Equipment Manufacturers |
| PAIF..... | Power & Airline Intervention Fund |
| PB..... | Participating Banks |
| PFI..... | Participating Financial Institutions |
| RE..... | Renewable Energy |
| REA..... | Rural Electrification Agency |
| REF..... | Rural Electrification Fund |
| REAN..... | Renewable Energy Association of Nigeria |
| SHS..... | Solar Home System |
| WB..... | World Bank |



FOREWORD

Despite the substantial evidence that shows the correlation between sustainable energy provision and economic development; job creation, lifestyle benefits and the facilitation of sustainable development, Nigeria still lags behind in the access to energy stakes. Electrification rate in Nigeria hovers around the 50% mark; a statistic that needs significant urgent improvement. As we enter the last decade of achieving the Sustainable Development Goals, it is ever more apparent that we need to ramp up all the necessary support to ensure that SDG 7, universal access to clean energy is accomplished.

A major barrier to the upscale of renewable energy in Nigeria, as identified by the Renewable Energy Association of Nigeria (REAN) is the limited access to finance. With the support of the Heinrich Boell Stiftung Nigeria, REAN through this study hopes to partly unveil challenges in accessing related renewable energy funding channels in Nigeria. This report focuses on the various government social intervention funds that exist for renewable energy. It analyses the availability of those funds and the various options. It also captures the experience of those who have attempted to access them. What are those financing and funding limitations, and how can they be improved? Knowledge and answers to these questions and more will aid the association, the Federal Government, Central Bank of Nigerian and other Fund managers in reviewing, designing, discussing and overall; address the barriers in more effective; transparent, accountable, progressive and impactful ways. The evidence provided in this report will help REAN target strategies and programs that will support members in the industry to better prepare and harness the required skills and network required to access these RE intervention and conventional financing for RE projects and businesses.

The overall aim of the study is to improve renewable energy development in Nigeria, by encouraging favourable energy financing policies and frameworks that works for growing renewable energy companies in Nigeria, and favour the majority of our Nigerian people that deserve cheaper, more reliable and sustainable clean energy supply.



Lande Abudu

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EXECUTIVE SUMMARY



Series of government intervention funds have been designed, and rolled out to promote the up-scale of renewable energy deployment in Nigeria. Many of these funds have been managed through specialised government banks and deposit money banks. How accessible are these government intervention funds for local renewable energy companies; especially the growing ones? Are the conditions attached to these intervention funds crowding out our indigenous renewable energy players, or are they designed to be stock vaults; never to be accessed by a majority; guided by cumbersome processes to attract shadow gains from frustrated applicants to corrupt officials? This report documents survey findings of perception and experiences of indigenous renewable energy players in Nigeria, which have attempted to and/or have accessed some of these intervention funds. The methodology used was a combination of desk review, quantitative and qualitative data analysis. The study identified, reviewed and analysed various government supported intervention funds for renewable energy in Nigeria. Targeted online survey was conducted for 50 active member of the Renewable Energy Association of Nigeria (REAN), along with random interviews with Nigerian renewable energy companies that have broad sector experience in the application for government supported funds and bank loans for renewable projects.

This report reveals that, renewable energy as a sector has emerged in the Nigerian economic consciousness in the last 5 years as a viable source of affordable clean energy to bridge the energy deficit in the country. The Federal Government established intervention funds to address the financing deficit faced by renewable energy project developers, yet the funding challenge persists, due mainly to lack of awareness of these funds, poor accessibility and lack of capacity from stakeholders in developing viable projects and correctly assessing project risk. Solar companies are capital intensive, and have a long payback period. However, high interest rates and collateral plus short tenors are key challenges solar companies face when they approach banks.

Due to the high risk perception of the sector, commercial banks offer tenors of not more than 3 years, with double digit interest rates and substantial collateral. On the part of renewable energy companies or developers, there is the issue of being unable to present bankable projects, show proper book-keeping and documentation, as well as meeting up to equity and collateral conditions attached to the loan or grant applications.

Other challenges include political manoeuvrings; influencing how government funded grants are awarded, the level of bureaucracy involved in accessing these funds, and the overall adequacy of the measures for improving financial accessibility.



The following key recommendations are proffered:

1. There is need for more policy advocacy by REAN to the Federal government and key stakeholders, to treat renewable energy as a core power sector infrastructure to meet the Nation's energy need.
2. The Federal and State Government should consider providing government backed risk guarantees on renewable energy loans at least for PPP projects.
3. CBN, BOI, DBN and other fund managers, should increase the level of awareness on available funding and financing instruments that are related to renewable energy sector and ensure the provision of clear guidelines on how these funds can be accessed.
4. CBN, BOI, DBN and other fund managers, should consider using associations like REAN as a dissemination and educational channel to raise awareness for these intervention funds, and how to apply for the funds respectively.
5. There is need for FG, NASS, CBN, BOI, and DBN to investigate and increase the level of monitoring on DMBs (Commercial Banks and other PFIs), to check their level of compliance in the disbursement of government intervention funds for MSMEs; as these funds in the hands of DMBs, if unchecked, will either be channelled to the traditional big fast moving creditors or seat in bank vaults and bond portfolio to keep the banks afloat.
6. There is need for FG, CBN, BOI and other fund administrator to explore, design and expand consumer financing instruments for renewable energy solutions for RE developer and PFI bank customers using traditional MSMEs associations, cooperatives and employee records.
7. FG, CBN, BOI and DBN should consider regulating interest rate fixing, bank handling charges and tenorship determination by PFIs on government intervention funds, to ensure that all-concessionary in-all charges of PFIs do not exceed 9.9%, with a minimum of 5 years tenorship and 6 months moratorium on principal and interest repayment.
8. FG, CBN, BOI and DBN should encourage partnerships with international companies and reduce stringent rules by banks such as minimum turnover for small companies.
9. Some project developers are not aware of the options available in applying for these loans which would reduce the cost of debt, for example applying directly to BOI gives an interest rate of 9% p.a instead of the 15% p.a obtainable from PFIs. Whilst there is room for improvement, BOI in general has a better knowledge of the RE sector, for example understanding the high capital outlay RE projects demand. Thus FG should consider rolling out more funds for RE-expansion strictly through BOI and similar knowledgeable agencies.
10. Smaller projects, <N20 million face even greater challenges accessing funding. Young companies with minimal experience face stricter rules often requiring technical partners to be eligible under disadvantageous terms. This should be discouraged, especially where young local firms are denied bids, and awarded contractors eventually outsourced the project implementation to them. It is somewhat slavery.
11. REAN in collaboration with local and international fund managers should continue to build the capacity of RE project developers and financing institutions to better understand the RE sector and how to better manage project risk and to develop bankable projects.
12. PFI need to be exposed to the knowledge along the RE value chain, so as to better understand and manage the associated risk in RE sector.



CHAPTER ONE



INTRODUCTION

1.1 Background

Renewable energy (RE) as a source of power in Nigeria has gained momentum in recent years in line with the global movement towards clean energy. Nigeria's electricity goal, Vision 30:30:30, aims to provide electricity generation capacity of 30GW by 2030, with a renewable energy contribution of 30% towards the projected total electricity generated in the country.¹

As at 2018, a little over half of the population; that is 56.5% had access to electricity, with only 31% of the rural population connected to the national grid.² Poor electricity infrastructure is a major obstacle to the economic development of Nigeria; as it halts the growth progress in all other sector such as manufacturing, agriculture, health, education, trade and services. This has for too long been the Nigerian reality. Renewable energy has been identified as that solution to make this reality history, by bridging Nigeria's electricity supply gap.

Merely 5 years ago, funders and stakeholders had little interest or awareness of the RE sector. The recognition of its importance as a clean and affordable power source plus the political backing of the government reflected in policies such as Nigeria's electricity vision 30:30:30, has opened up a whole new space for all stakeholders.

First Bank Plc for instance, has partnered with Azuri Technologies - a PayGo solar photovoltaic systems provider for rural off-grid communities, to develop a mobile payment platform for pay-as-you-go solar solutions, recognising the opportunity to enter the mobile money market and contributing to improving the financial inclusiveness of Nigerians, particularly for the rural sector. The renewable energy sector has opened up the space for reaching previously inaccessible customers, thus proving that there are opportunities for financial institutions in this sector. The combination of First Bank's Firstmonie agents with Azuri's expertise, is providing affordable and accessible payment gateways for rural clients to pay for solar power.

The receptiveness of financial institutions to finance households and small businesses with solar home solutions, is evidenced by the numerous loans on offer from microfinance and commercial banks. i.e. FCMB's Solar Energy Loan and Fortis Microfinance Bank, provide solar energy loans of up to N3million & N5million respectively. This receptiveness has however, not translated to massive financing and deployment of RE technology across the country as expected.

1. Power for All: Nigeria Call to Action {March 2017} <https://www.powerforall.org/application/files/9715/3308/4537/Nigeria-Call-to-Action.pdf>

2. Access to electricity (% of population) - Nigeria. Sourced From: World Bank, Sustainable Energy for All (SE4ALL) database from the SE4ALL Global Tracking Framework led jointly by the World Bank, International Energy Agency, and the Energy Sector Management Assistance Program. <https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS?end=2018&locations=NG&start=1990&view=chart>

1.2 The Challenge

Renewable energy companies face daunting challenges when trying to access finance from banks in the country, particularly early stage finance for project development. Like most infrastructure projects, RE projects normally require enormous upfront financial resources, risk guarantees and long-to-medium term pay back periods. Meeting the financing needs of such projects in a country with a developing financial sector is limiting.

A lack of understanding by financial institutions on how RE businesses operate, including their lending profile has led to an unwillingness to risk investing in the sector; with loan products not structured to meet the sector's lending needs. The large capital outlay and long repayment period that RE projects require further exacerbates the problem as most banks are unwilling to lend for a tenor longer than 3 years, a wholly inadequate time frame.

1.3 Funding Options

Funding options available to renewable energy companies include grants, debt financing and equity. Most of the debt financing received by renewable energy developers in the country is coming from international institutions. This source of debt financing brings with it enormous currency risk, making Naira denominated financing imperative to successful financial intervention for RE businesses.

To address these funding challenges RE projects, the Federal Government has created several intervention funds that can be accessed through Participating Financial Institutions (PFI) from the Fund administrative managers:

- Bank of Industry (BOI) and,
- Central Bank of Nigeria (CBN)
- The Rural Electrification Agency (REA) - created to specifically address electricity challenges in rural areas through offer of partial grants through its Rural Electrification Fund (REF).
- Development Bank of Nigeria (DBN), offers wholesale banking services to PFIs for credit support to Medium, Small and Micro Scale Enterprises (MSMEs) but is not an intervention fund.



How effective have these funding interventions being in widening the access to finance for RE projects in Nigeria?



1.4 Methodology

The method used for this study was a combination of desk review, qualitative and quantitative data analysis. An online survey was prepared and sent to the 50 active members of REAN.

Interviews were conducted with 3 project developers that have either attempted and/or received intervention funds. Their narratives on experiences accessing the funds formed the basis of testimonies presented. Development Finance Institutions (DFI) CBN, BOI and DBN were sourced for information. Participating Financial Institutions (PFI) were also interviewed on their lending process for these funds.

1.5 Limitations

Survey response was smaller than desired; with only 20 members responding to the survey. This accounts for 40% of the sample group. Using a margin of error of 5% and a confidence level of 80%, a response rate of 78% (39 members) was desired.

Sterling Bank PLC, a noted RE financing bank and green fund administrators Vetiva Capital Management (who signed an MOU with Climate Finance Advisory Limited (“CFAL”) and the African Guarantee Fund West Africa (“AGF”) on the Green Energy Fund (GEF) Program) were not reachable in spite of several attempts to communicate through telephone calls and via emails sent.

CHAPTER TWO



REVIEW OF RENEWABLE ENERGY INTERVENTION FUNDS

2.1 N300 billion Central Bank of Nigeria Power and Airline Intervention Fund (PAIF)



PAIF was launched in 2011 by CBN as an intervention fund for the power and aviation industry. The program was designed to address two main financing challenges faced by the sectors: lending tenorship and high interest rate charges. To partly solve these problems, the Bank of Industry (BOI) as the fund administrator, lends to deposit money banks at a maximum interest rate of 1.0 per cent, for onward lending at an all-in concessionary³ interest rates of no more than 7.0 per cent to client/creditors; for a 10 to 15 year tenor. The African Finance Corporation acts as the Fund's technical adviser.

The fund is due to round up on July 31st 2025 when the tenor of all facilities would have ended. As at June 2017, the cumulative disbursements to the power industry stood at N156.6 billion for 43 projects.⁴

Fund Information for the PAIF

Obligor type/
Eligibility



1. Any corporate entity, duly registered in Nigeria, involved in the electricity power supply value chain that includes power generation, transmission, distribution, gas-to-power projects and associated services.
2. Eligible projects can be promoted by private or public sector sponsors (or a combination of both) but must be structured either as profit-oriented business or a public service
3. The Project could be already existing and in operation, in design/development, under construction, or existing but operationally inactive.
4. The refinancing of existing loans for captive power projects for corporate entities that are not power companies will only be eligible if the investments are not older than 2 years from the date of the application.

1. No upfront fee or charges shall be deducted from any facility under the fund

2. Power And Airline Intervention Fund (PAIF) September 2016 – June 2017

<https://www.cbn.gov.ng/out/2017/dfd/paif%20cumulative%20disbursements%20&%20repayments%20sept%202016%20-%20june%202017.pdf>



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|--|--|
|  <p>Facility type</p> | <ol style="list-style-type: none"> 1. Long term loans (for new Power Projects) 2. Refinancing of existing loans (Power and Airline Projects) 3. Refinancing of existing leases (Power and Airline Projects) 4. Working capital (for existing Power and Airline Projects only) |
|  <p>Participating Banks (PB)</p> | <ol style="list-style-type: none"> 1. All Deposit Money Banks and Development Finance Institutions (DFIs) excluding the Bank of Industry |
|  <p>Pricing</p> | <p>Maximum of 7% all-in interest rate</p> |
|  <p>Amount</p> | <p>Maximum of 70% of project cost</p> |
|  <p>Security/ Collateral</p> | <ol style="list-style-type: none"> 1. The security to be provided by Participating Banks (PBs) to BOI shall be a bank guarantee backed by a payment order for the PB's account to be debited by the CBN for any amount due should the PB default 2. Legal agreement between BOI and PB for BOI to have the rights to realize security pledged by project promoters. 3. BOI to have lien on the project cash flows 4. A deed of assignment of the assets of the project in favour of BOI |
|  <p>Tenor</p> | <ol style="list-style-type: none"> 1. The Fund loans shall have a maximum tenor of 15 years as determined by the project's cash flow profile not exceeding 31st July, 2025. 2. Working capital facility shall be of one year duration with provision for roll-over but not more than 5 years. |
|  <p>Application Documentation</p> | <ol style="list-style-type: none"> 1. Loan request from the project promoter 2. Last 3 years financials of an existing company 3. Feasibility study/business plan of the project 4. Relevant permits/approvals 5. Off-take and other relevant agreements 6. Environmental impact assessment report 7. Copies of duly executed offer documents between the bank and the company evidencing existence of a facility in the case of refinancing 8. Six(6) months account statements showing the current exposure (if any) |

| | |
|---|--|
| | <p>9. Certificate of incorporation evidencing the incorporation of the company with the corporate affairs commission</p> <p>10. List of directors of the company (form co7)</p> <p>11. Other documents may be required by the TA to facilitate the appraisal process.</p> |
|  <p>Processing time</p> | <p>1. BOI shall process all applications received to confirm the completeness of the documentation and forward them to TA within 5 days</p> <p>2. The TA shall appraise the applications and provide its report to BOI within 20 working days of receipt</p> <p>3. BOI shall inform the PBs of the status of its application not later than 5 working days after the receipt of the TA's report.</p> |
|  <p>Approval Process</p> | <p>4. The recommended applications that have fulfilled all the laid down criteria shall be forwarded to the Management of the Central Bank of Nigeria for final approval.</p> |
|  <p>Website</p> | <p>1. https://www.boi.ng/power-and-aviation-fund/</p> <p>2. https://www.cbn.gov.ng/out/2012/ccd/paiftguidelines%20v5.pdf</p> |

Analysis on the PAIF

While the fund was established for airline and power projects, the eligibility profile of projects that were approved and the guidelines for administration suggest a focus on traditional power generation. The fund has been assessed as being difficult to access for the average RE company.



Advantages of PAIF

- ✓ Low interest rate
- ✓ No hidden charges
- ✓ Long term financing
- ✓ Sizable fund



Disadvantages of PAIF

- ✗ Bureaucratic approval process; too many unnecessary approval stages along the application process
- ✗ Expensive permits and license is required
- ✗ Low rate of application acceptance
- ✗ Application process is open to political manoeuvring, making it difficult to access.
- ✗ Collateral requirement is at the discretion of the Participating Bank and likely to be sizable
- ✗ Projects with likelihood of accessing the fund are the loan applicants in traditional power generation.

2.2 Bank of Industry N6billion Solar Energy Fund



Bank of Industry (BOI) commenced lending to the renewable energy sector in 2015, when it financed the installation of off-grid solar home systems in six communities in a pilot phase of its RE Partnership with the United Nations Development Programme. The Bank established a N1billion solar energy fund in 2017 which has been expanded to N6billion. Financing can be accessed directly from the Bank of Industry or through PFIs (Participating Financial Institutions).

Fund information for BOI N6billion Solar Energy Fund

| | |
|---|---|
|  Obligor type | <ol style="list-style-type: none"> 1. Project developers 2. PFIs (for on-lending to companies) |
|  End-User | <ol style="list-style-type: none"> 1. Various categories of SMEs and Large Enterprise/Clusters. 2. Clusters of Business enterprises (micro). 3. Residential estates. 4. Shopping malls and quick service centres. 5. Hospitals and educational facilities. |
|  Loan amount | <p>N5 million to N350 million</p> |
|  Pricing | <ol style="list-style-type: none"> 1. Interest rate from BOI - 9% 2. Fees: <ol style="list-style-type: none"> a) 1% appraisal fee b) 1% commitment fee c) 0.25% monitoring fee (quarterly) 3. Interest rate from PFI <ol style="list-style-type: none"> a) Interest rate and fees determined by the institution. |
|  Time frame for Approval | <p>1-3 months</p> <ol style="list-style-type: none"> a) < N10 million one month b) > N10 up to three months |
|  Tenor | <p>Maximum of 5 years</p> |



Collateral

1. For Facilities < N10 million:
 - a) 10% Cash security deposit.
 - b) Two (2) external Guarantors with Notarized Statement of net worth
 - c) Personal Guarantee of the Chief Promoter/Notarized Statement of net worth
 - d) All Assets Debenture on the equipment to be financed
 - e) Credit life insurance of the Chief Promoter.
 - f) Insurance of the financed items against burglary and theft, fire and any other hazards.
 - g) Moveable collateral to be considered upon establishment of Collateral Registry.

2. For Facilities above N10 million:
 - a) Bank Guarantee, Legal Mortgage or Mortgage Debenture (with Fixed Asset Coverage of not less than 1.5)
 - b) Personal Guarantee of the Chief Promoter/Notarized Statement of net worth
 - c) Credit life Insurance of the Chief Promoter
 - d) Insurance of the financed items against burglary and theft fire and any other hazards.



Equity Contribution

Minimum of 20%

1. Existing businesses can apply current assets.
2. New businesses must contribute to purchase of new assets.



Application documents

1. Application Letter on Company letterhead
2. Certificate of Incorporation
3. Form CAC 2.3 - Particulars of Directors (certified true copy)
4. Memorandum of Articles of Association (certified true copy)
5. Form CAC 2.5 - allotment of shares (certified true copy)
6. Pro-Forma Invoice for machinery and equipment
7. Letter of intent for Bank Guarantee (From Bank's Head Office) or title document of property
8. Company's main contact or chief promoter's means of identification
9. Shareholders' resume, ID and 8 copies of passport photograph
10. Three years of audited financial statement
11. Evidence of filed annual returns
12. Property valuation report (for collateral must be prepared by one of BOI's accredited valuers)
13. Regulatory approvals
14. 12 months bank account statement
15. Declaration of outstanding liabilities to other financial institutions and individuals
16. Business plan



Advantages of BOI N6billion Solar Energy Fund

- ✓ Facility can be accessed directly from BOI without going through Participating Banks (PFI/PBs) reducing processing time and cost of funding.
- ✓ Interest rate is attractive
- ✓ BOI is accessible with information both online and in person.
- ✓ BOI show willingness to guide applicant through the process.
- ✓ The BOI officials are fairly knowledgeable on the Renewable Energy sector
- ✓ The BOI accepts project proposals from developers that are based on aggregate requests; housing estates, shopping malls, industrial hubs, etc
- ✓ Application process has a realistic timeframe, with minimal bureaucratic steps.



Disadvantages of BOI N6billion Solar Energy Fund

- ✗ BOI prioritises high value projects of N50-100 million. Smaller projects will face difficulties.
- ✗ Early stage projects are at a disadvantage
- ✗ Applying through Participating Banks (PBs/PFIs) allows for high interest and fees, as they are set at the discretion of the PBs/PFIs.
- ✗ Participating Banks charge a higher interest rate typically 15%. This is after getting the loans from the BOI at the rate of 9% p.a.
- ✗ Direct applications to the BOI also takes a longer processing period, compared to indirect, but more costly application through the PBs.
- ✗ Collateral required at 150% of project cost is prohibitive
- ✗ The appraisal and commitment fee is relatively high

2.3 Rural Electrification Agency: Rural Electrification Fund (REF)



The Rural Electrification Fund (REF) through the Rural Electrification Agency (REA) offers partial grant to successful applications from project developers to finance capital RE projects in rural areas. The project developer are expected to provide the counterpart funds for the rest of the project through equity or debt financing or both.

The first REF (1) capital grant award process commenced in December 2017 with a total government allocation of N1.95 billion. The REA Board approved the allocation of N995.7 million to 14 solar companies for the deployment of over 19,000 units of solar home systems (SHS), while N956.9 million was allocated for 12 mini-grid projects to electrify a total of 5,272 household-connections, with a total installed capacity of 1,016kW.

The second REF grant call which was due to commence in February 2020 was delayed due to the COVID19 pandemic. Apart from budgetary allocations, REA receives allocations from international institutions such as the World Bank (WB), who allocated \$350million to solar projects through REA.

Grant Details of REF Call 1

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|--|--|
|  <p>Obligor types</p> | <ol style="list-style-type: none"> 1. Project developers for: <ol style="list-style-type: none"> I. Mini grids and II. Solar household systems |
|  <p>Eligibility Eligible entity</p> | <ol style="list-style-type: none"> 1. Free from conflicts of interest 2. Compliance with all existing business, tax, social security and related regulation 3. Free from bankruptcy or any analogous situation 4. Free from offence conviction regarding its professional conduct 5. Not subject to a 'res judicata' judgement for any illegality 6. Financially sound and qualified 7. Completion of all relevant application process and documentation. |
|  <p>Eligible projects</p> | <ol style="list-style-type: none"> 1. Financial commitment towards the proposed project 2. It should target rural areas 3. Ability to demonstrate financial sustainability and profitability 4. Not requiring a continuous subsidy covering for operational costs and/or end-user consumption 5. Technically viable 6. Ability to support and improve to rural economic development and productivity |

| | |
|---|---|
|  <p>Amount</p> | <p>1. Maximum of \$300,000.00 I. Mini Grids are eligible for funding of up to 75% of cost of project II. SHS are limited to an upper limit of 50% of project cost</p> |
|  <p>Approvals</p> | <p>1. REA Board 2. Technical (engineering) unit</p> |
|  <p>Security/ collateral</p> | <p>Equity/Debt contribution of 70%, 50% and 25% to project</p> |
|  <p>Time Frame till disbursement</p> | <p>1. Indeterminate, can be prolonged due to the number of permits, inspections and engineering design I. 3 stages of disbursement required for mini-grid, based on each laid out milestone. II. SHS receive grant upon approval only after deployment of products to site.</p> |
|  <p>Security/ collateral</p> | <p>Equity/Debt contribution of 70%, 50% and 25% to project</p> |
|  <p>Website</p> | <p>https://rea.gov.ng/rural-electrification-fund/</p> |



Advantages of REF Call 1

- ✓ Grant not a loan, so needs no repayment
- ✓ Grant size is sizable, but should grow as more projects are identified



Disadvantages of REF Call 1

- ✗ REF requires that the projects it funds be deployed across the six geopolitical zones, which involves political stakeholders. This leaves the entire process open to political manoeuvrings as politicians lobby to win grants for their constituencies.
- ✗ Solar Housing System installers will still need to obtain funding to purchase the solar systems and for cost of installation, as the grant is not disbursed until after the products are deployed following REA approval.

- X** A high number of approvals, inspection, and oversight on engineering design is required which may bring about delays in execution and meeting milestones
- X** REF Grant call is not frequent.

2.4 Green Energy Fund \$100million Partial Guarantee Programme



Green Energy Fund (GEF) is a partial risk guarantee programme that aims to ease RE project’s access to government intervention funds from development banks (CBN, BOI and DBN) via deposit money banks. Vetiva Capital Management Limited, a Nigerian venture capital firm signed the memorandum of understanding (MOU) in 2019 with Climate Finance Advisory (CFAL) and African Guarantee Fund (AGF) to facilitate funding access to clean energy generation and distribution projects in Nigeria. AGF will provide up to 50% partial risk guarantee to enable green energy project developer access up to 10 years local currency concessional loans to implement their projects. The programme’s stated objective is to “ease access to, and flow of, flexible funding/finance for clean energy developers in order to provide clean and dependable electricity to households as well as clusters of micro and small businesses, and industries.”⁵

Fund Information for the Green Energy Fund \$100million Partial Guarantee Programme

| | |
|--|--|
|  <p>Obligor types</p> | <ol style="list-style-type: none"> 1. Clean Energy Developers 2. Businesses and Industries |
|  <p>End-user</p> | <ol style="list-style-type: none"> 1. Individuals / homeowners 2. Businesses 3. Cluster(s) of micro and small businesses in a market area(s) 4. Industries i.e. manufacturing, Agro-processors |
|  <p>Eligible Projects</p> | <ol style="list-style-type: none"> 1. Hybrid Captive power plant 2. Standalone system 3. Hybrid mini-grid / off-grid 4. Energy Efficiency for industries and SMEs |

5. Climate Finance Advisory Limited (CFAL) (2020): \$100 MILLION GREEN ENERGY FUND PROGRAMME
<https://climatefinanceadvisory.com/green-energy-fund>

| | |
|--|--|
|  <p>Loan Use</p> | <ol style="list-style-type: none"> 1. Purchase / procurement of energy asset components 2. Installation costs and overheads in line with bill of quantities 3. Project working capital in line with bill of quantities 4. Professional fees (to be determined by the local commercial bank) 5. AGF's Guarantee fees (to be determined by the local commercial bank) 6. Insurance premium (to be determined by the local commercial bank) |
|  <p>Single Obligor Limit / Project Size</p> | <ol style="list-style-type: none"> 1. Maximum power generation of 2MW, or 2. Maximum of \$5million USD (70% to 80% of the project cost/value*) |
|  <p>Equity Contribution</p> | <p>Minimum of 20% to 30% (subject to the type of development fund being accessed)</p> |
|  <p>Pricing</p> | <ol style="list-style-type: none"> 1. Interest rate: To be determined (subject to the type of development fund being accessed) 2. Processing & Management fees: to be determined by the fund provider |
|  <p>Tenor</p> | <p>Five (5) years (subject to the type of development fund being accessed)</p> |
|  <p>Moratorium</p> | <ol style="list-style-type: none"> 1. Up to 6 months moratorium on principal and interest repayment (subject to the type of development fund being accessed) 2. Unpaid interest during moratorium to be capitalized |
|  <p>Asset Vendor / Purchase</p> | <p>Reputable and Experienced Original Equipment Manufacturer (OEM) partner certified as satisfactory by the technical and financial advisor.</p> |
|  <p>Security and Controls</p> | <ol style="list-style-type: none"> 1. 50% AGF's Partial Risk Guarantee Cover of the transaction size 2. Ownership of the Financed Energy Assets resides with the participating financial institution (PFIs) 3. Insurance Cover (Theft & Peril) over the financed equipment noting the local commercial bank as the first loss payee 4. Power Purchase Agreement must be executed |



Advantages of the Green Energy Fund \$100million Partial Guarantee Programme

- ✓ The 50% partial guarantee lowers the risk for local banks and should encourage lending for RE
- ✓ The guarantee mitigates the need for expensive collateral
- ✓ Up to 10 year tenor shows supports RE project lending requirements
- ✓ The provision of capacity building development support to the participating financial institutions to improve their ability to properly assess SME risks and the Small and Medium-sized Enterprises to build their capacity for easier access to finance is an important factor in the proper execution of loans.



Disadvantages of REF Call 1

- ✗ Fund is newly established and seems to still be in the development stage; ample information is not readily available.
- ✗ No option of applying for the intervention funds directly from development banks as a borrower must go through commercial banks. This can lead to high interest rates and fees.
- ✗ Conflicting information on length of tenor: 5 or 10 years.

2.5 CBN's Micro, Small and Medium Enterprises Development Fund (MSMEDF)



The MSMEDF was launched in 2013 with N220 billion, by the Central Bank of Nigeria to address the financing gap that MSMEs face. It is a fund that also aims to address gender disparity in accessing finance and allocates 60% of the fund to women owned businesses.

The objective of the fund is to channel low interest funds to the MSME sector of the economy through PFIs. It divides the fund into two components:

1. 90% constitutes the commercial component
2. 10% is in the form of grants for development projects

Fund Information for the CBN N220billion MSME Funds

| | |
|--|--|
|  <p>Obligor</p> | <p>Participating Financial Institutions:</p> <ol style="list-style-type: none"> 1. Deposit money banks 2. Bank of Industry 3. Bank of Agriculture |
|  <p>On-lend Borrower</p> | <ol style="list-style-type: none"> 1. Manufacturing & Cottage industries 2. Renewable energy, energy efficient products and technology 3. Agriculture value chain activities 4. Artisans 5. Services 6. Management experience of three years is required from borrower |
|  <p>Amount</p> | <p>Maximum of N50 million</p> |
|  <p>Interest Rate</p> | <p>9% per annum (all charges inclusive)</p> |
|  <p>Tenor</p> | <p>Maximum of 5 years</p> |
|  <p>Application process</p> | <ol style="list-style-type: none"> 1. Applicant shall provide requisite documents including collateral to PFI for SME loan <ol style="list-style-type: none"> a. Loan application letter b. Certificate of Incorporation c. Memorandum and Articles of Association d. Board resolution to borrow e. Business plan/ feasibility report |

2. PFI shall assess loan request and forward approved loan to CBN for release of funds
3. PFI shall credit the borrower's account within 5 working days upon the release of funds by MSMEDF to the PFI



Website

<https://www.cbn.gov.ng/MSME/>



Advantages of the CBN MSME Funds

- ✓ This fund has been structured to be simple and straightforward to access.
- ✓ A number of commercial banks have processed loans for their customers such as Zenith Bank PLC that declared it had accessed 3% of the N220 billion fund



Disadvantages of the CBN MSME Funds

- ✗ The size of collateral required is a potential challenge for borrowers

2.6 Development Bank of Nigeria N5 billion Fund



Development Bank of Nigeria (DBN) was established in September 2014 to provide wholesale funding to commercial banks as a vehicle to bridge the MSME financing gap identified by the government. DBN commenced lending operations in 2017 by providing N5 billion naira for on-lending through 2 micro-finance banks to MSMEs across the nation.

The number of PFIs was increased by 10 Commercial Banks and 15 Micro Finance Institution (MFIs); totalling 25 financial institutions eligible to process loans from DBN. Businesses wishing to apply for DBN loans must go through an eligible participating bank. The DBN fund is not termed as an intervention Fund.

Loan Information for the DBN N5billion Fund

| | |
|--|---|
|  <p>Obligor type</p> | <p>Eligible PFIs, Development Financial Institutions (DFI) and leasing companies.</p> <p>An ineligible PFI is one who:</p> <ol style="list-style-type: none"> 1. is under CBN's holding action 2. receives a qualified audit opinion on its most recent audited financial statements 3. if the PFI, is unprofitable for four consecutive quarters at any time following its start-up period which shall be three years from the date it commenced business 4. fails to meet its capital adequacy requirements as at the most recent examination and is unable to inject additional capital to meet the regulatory threshold; 5. is a borrower for which DBN has received a written notice from CBN expressing material concerns about the PFI's financial condition or business operations resulting from its most recent supervisory inspection. |
|  <p>On-lending profile</p> | <ol style="list-style-type: none"> 1. All MSME practising business activities that contribute to the economic and social development of the country. 2. Must be customers of eligible PFIs |
|  <p>Amount</p> | <p>Undetermined</p> |
|  <p>Application process</p> | <ol style="list-style-type: none"> 1. Approach eligible commercial bank, microfinance bank, development finance institution requesting a DBN Loan. 2. If the project is assessed as viable, the Bank applies to DBN for funding. 3. If DBN approves the loan, DBN will disburse to the Bank for on-lending to the end borrower. |

| | |
|---|---|
|  Interest rate | Undetermined (referenced to market rates) |
|  Fees | Undetermined (referenced to market rates) |
|  Tenor | Up to 10 years |
|  Moratorium period | Up to 18 months |
|  Collateral | DBN offers PFIs a partial guarantee of 50% |
|  Website | https://www.devbankng.com/get-a-Loan |

Analysis on the PAIF

According to DBN's Communications Officer, DBN lending is not an intervention fund, even though its objective is the bridging of the financing gap for MSMEs. The Bank's financing model is the provision of wholesale funds to PFIs who in turn on-lend to MSMEs. As the PFIs take the lending risk, they determine the terms of loan applications based on DBN guidelines.

According to DBN, they continually engage with the PFIs to monitor credit disbursement to ensure they are in line with intended low interest rates, and relatively better credit terms and conditions compared to the typical market rates.

Access to detailed information and awareness of DBN's financial products is very low in the RE industry. This also calls for concerns as PFIs may continually access the DBN funds and disburse funds to others sectors outside the MSMEs, especially when monitoring of these funds by DBN and CBN is very poor and not transparent.



Advantages of the CBN MSME Funds

- ✓ The partial guarantee offered by DBN should act as a stimulus for PFIs to access these loans for their customers and place less demand on them for high collateral.
- ✓ Moratorium period and tenor is very favourable to RE projects.



Disadvantages of the CBN MSME Funds

- X** Lack of transparency in the determination of lending rates and charges.
- X** Poor engagement between the PFIs (commercial banks) and customers to create awareness and promotion of the DBN lending funds.
- X** No easily accessible information on the disbursement of the Fund, to gauge the performance

2.7 Sterling Bank PLC: N10 billion solar energy fund



Sterling bank developed a tailored lending programme to the Health, Education, Agriculture, and Renewable Energy and Technology (H.E.A.R.T) sectors. The bank has a 3-pronged approach to investment in the renewable energy space:

- a) Trading: by creating a platform that enables the sale of renewable energy solutions between electricity generators, distributors and users
- b) Financing: of large projects that provide electricity to communities and Businesses
- c) Creating partnerships to encourage the flow of foreign investments into the renewable energy space.

Detail information on the Bank's application process and requirements were not accessible. However, gathered information from the respondents shows the following:

- | | |
|------------------|----------------------|
| a. Interest rate | 15% pa |
| b. Tenure | 3 years |
| c. Collateral | 150% of project cost |

2.8 NIRSAL Microfinance Bank N50 billion Covid19 Support Fund



CBN introduced this stimulus fund in March 2020, for households and MSMEs that have verifiably been affected by the Covid19 pandemic. MSMEs in renewable energy business affected by the COVID-19 are eligible to take advantage of the Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL) N50billion COVID19 support fund.

Funding for this scheme is taken from CBN's MSMEDF fund. The application process is straightforward and involves three stages as detailed on their website.

Loan Information on the NIRSAL Microfinance Bank N50billion COVID-19 Support Fund

| | |
|---|--|
|  Obligor | MSMEs and households that have been negatively impacted by the Covid19 pandemic |
|  Amount | Maximum of N25 million for businesses |
|  Interest Rate | 5% (all inclusive) until February 28, 2021 9% (all inclusive) from March 1, 2021 |
|  Tenor | <ol style="list-style-type: none"> 1. Maximum of 3 years for a term loan with one year moratorium 2. Maximum of one year for working capital |
|  Application Process | <ol style="list-style-type: none"> 1. Submit applications directly to NIRSAL Microfinance Bank (NMFB) with clear evidence of the opportunity or adverse impact as a result of COVID-19 pandemic. 2. NMFB reviews application and forwards to CBN for approval 3. CBN gives final approval and disburses to NMFB |
|  Security | <p>Shall include any or more of the following:</p> <ol style="list-style-type: none"> 1. Moveable asset(s) duly registered on the National Collateral Registry (NCR) 2. Simple deposit of title documents, in perfectible state 3. Deed of Debenture (for stocks), in perfectible state 4. Irrevocable domiciliation of proceeds 5. Two acceptable guarantors (waived) 6. Personal guarantee of the promoter of the business 7. Life Insurance of the Key-Man, with NMFB noted as the First Loss Payee 8. Comprehensive Insurance over the asset |
|  Website | https://www.cbn.gov.ng/Out/2020/FPRD/N50%20Billion%20Combined.pdf |

Analysis on the PAIF

Analysis of the NISAL Microfinance Bank N50billion COVID-19 Support Fund

The low interest rate (with no other charges) and one year moratorium period are good incentives to borrow from this fund. It is the lowest rate in the market. While the tenor could be longer, some RE projects could work within this timeline.

Current feedback on the fund however reveals slowness on the part of CBN in disbursing funds for approved applications.⁷ As a stimulus fund, the process from application to disbursement should be expeditious. The type of security demanded may pose a challenge to borrowers.



CHAPTER THREE



SURVEY FINDINGS

3.1 Survey Questions

The questionnaire asked a series of questions to ascertain the level of awareness, interest, perception and gain insight from renewable energy project developers on intervention funds, with focus on 2 areas: availability and accessibility.

Which of the following financing options available to renewable energy (RE) projects have you heard of: (Please tick all that apply)

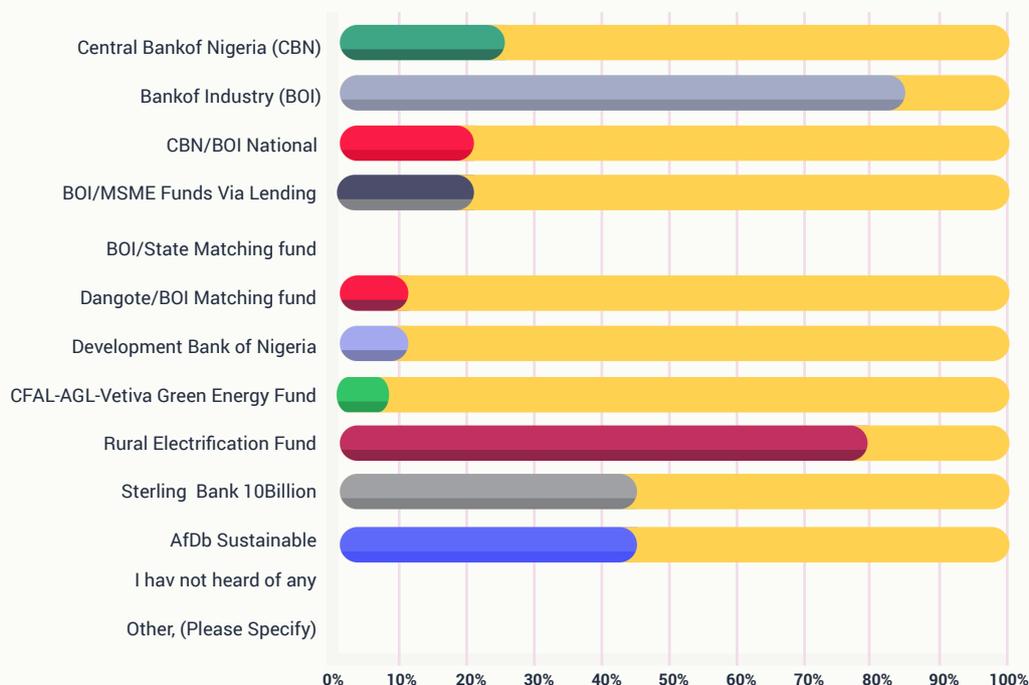
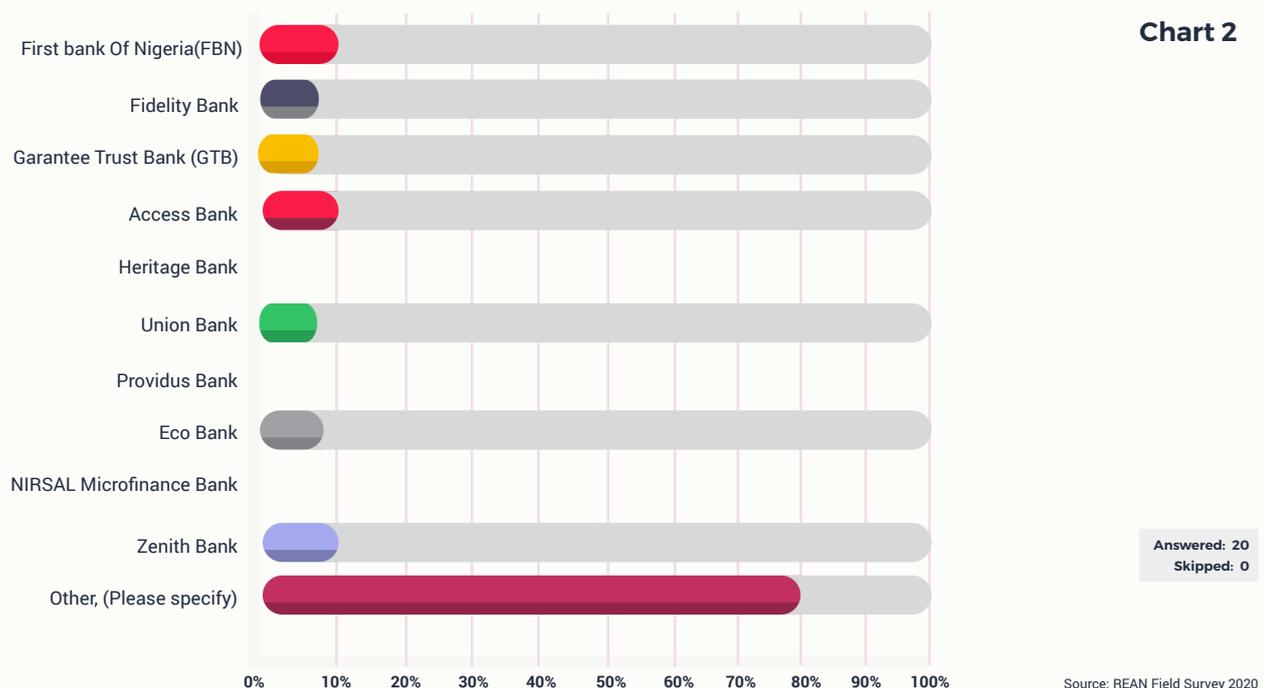


Chart 1

Answered: 20
Skipped: 0

From Chart 1 above, Bank of Industry's solar energy fund and Rural Electrification Agency's Rural Electrification Fund are the best known intervention funds available with 85% and 80% affirmative response rates. African Development Bank renewable energy fund and Sterling Bank energy fund were known by just under half of the respondents. Less well known are Central Bank of Nigeria's (CBN) PAIF fund and Development Bank of Nigeria's (DBN) intervention funds. Respondents were made aware of these funds through REAN (35%), conferences (30%) and advertisements (20%).

Demand deposit banks of which the bank your business uses will typically be one of the vehicles through which these funds are processed. From the list below, tick the bank you know that process intervention funds or financing specifically for RE:



From Chart 2, few banks advertise that they can process intervention funds for their customers, though most are eligible to. Notable exceptions are First City Monument Bank and Sterling Bank who were named by 80% of respondents in the category 'others'. Others, such as First Bank, Union Bank and Fidelity Bank all have intervention fund desks, though First Bank focuses more on agriculture loans. Commercial banks that promote their services in accessing intervention funds for customers that is relevant to the RE sector: First City Monument Bank PLC⁸, Fidelity Bank PLC⁹, Polaris Bank¹⁰, Sterling Bank PLC¹¹, and Union Bank PLC¹².

8. https://www.fcmb.com/intervention-funds?gclid=EAlaIqobChMI8uTB3L226gIVmlbVCh3dQggaEAAYASAAAEgIEMvD_BwE

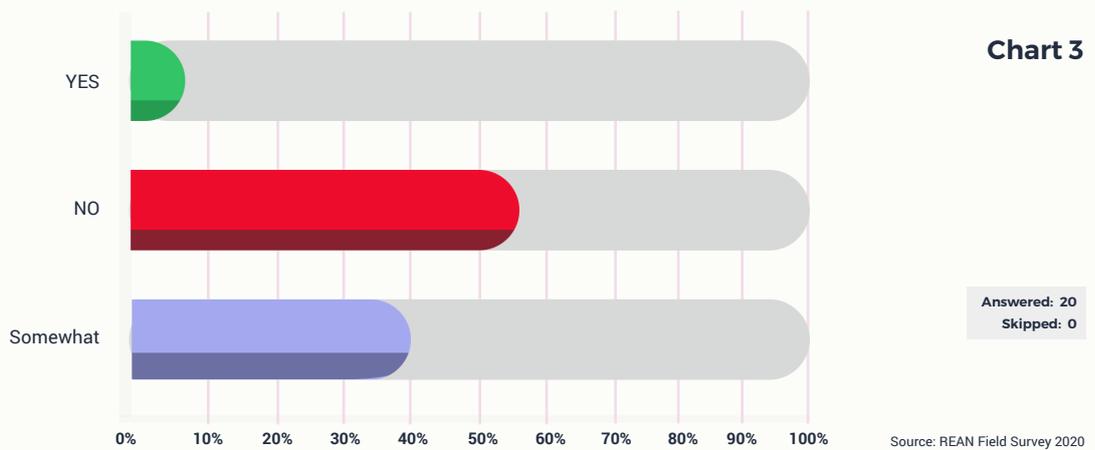
9. <https://nipc.gov.ng/2019/08/08/fidelity-bank-disburses-dbn-fund-to-smes/>

10. <https://www.polarisbanklimited.com/smes/other-services/intervention-funds/>

11. <https://sterling.ng/business/heart/>

12. <https://www.unionbankng.com/business/sme-banking/intervention-funds/>

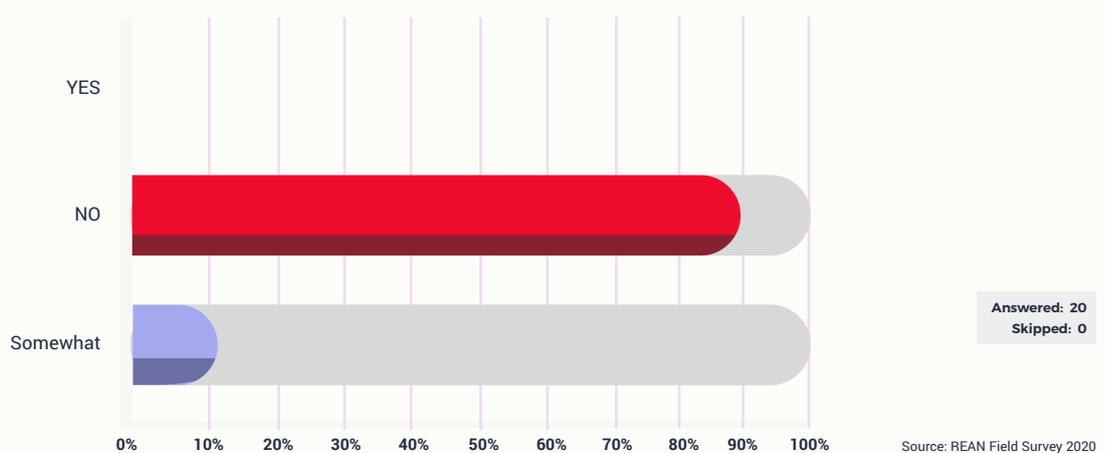
Does the Federal Government through its implementing agencies - such as BOI - engage enough with renewable energy companies (through associations like REAN for example) in raising awareness of these funds?



| ANSWER CHOICES | RESPONSES |
|----------------|-----------|
| Yes | 5% |
| No | 55% |
| Somewhat | 40% |
| TOTAL | 20 |

Chart 3 above, shows that the federal government through its implementing agencies such as the BOI that manage the disbursement of renewable energy interventions do not engage or use RE association as channels to raise awareness of these funds and how they can be accessed. 55% of surveyed respondents are of this opinion. Less than 10% of the sample think the government intervention agencies are engaging the association.

Do you agree that there is enough awareness within the industry about these funds?



From chart 4 above, 90% of the surveyed sample are of the opinion that the level of awareness of these intervention is very poor. They are of the opinion that there is not enough awareness of these funds within the industry.

3.2 Recommendations from REAN members on how to increase awareness level



01 The Federal Government (FG) and the Fund managers should run adverts on various media online, print, radio etc.



02 The Federal government and the relevant fund managers should use associations like REAN to notify and sensitize her members on the availability and ways of accessing these funds.



03 These is need to ease the accessibility channels of these funds and create more awareness for the interventions.



04 The government and fund managers should organize regular stakeholder engagement on these funds and should use the association as a medium of advertisement



05 Hold more awareness engagement meetings and expose what is obtainable



06 Grow awareness first with the point financiers; even staff of partnering organizations do not know about the funds.

3.3 Evaluating Access to Intervention Funds

Processing intervention funds was seen as cumbersome involving many stages, approvals, inspections and permits. PFIs requirements for collateral and fees were also excessively high, while only a few (10%) agreed there were hidden charges.

| EVALUATION QUESTION | AFFIRMATIVE RESPONDENTS | % |
|--|-------------------------|-----|
| The application process is Straight forward and timely | 3 | 15% |
| The information on the loan and application process was easily accessible and unambiguous | 1 | 5% |
| The processing Bank was knowledgeable about solar companies | 1 | 5% |
| The eligibility criteria was appropriate | 5 | 25% |
| The documentation required was standard practice | 3 | 15% |
| The interest rate and other fees were affordable | 4 | 20% |
| The terms and conditions of the loan were not a deterrent to applying | 1 | 5% |
| It was a struggle accessing relevant and detailed information | 8 | 40% |
| The processing bank lacked in-depth understanding of the renewable energy industry to be of effective help through the application process | 5 | 25% |
| There were too many steps in getting final approval | 11 | 55% |
| The collateral required and associated fees were too high | 9 | 45% |
| The details of the loan were not properly explained during application | 3 | 15% |
| There were hidden charges | 2 | 10% |
| The documentation required is sometimes unnecessary and expensive to obtain | 7 | 35% |
| Compulsory use of lending institution vendors/statutory officers, and others. | 5 | 25% |

When asked for insights and ideas, all respondents assert that a lot more work needs to be done. i.e.;

Key Findings:

- ✓ More of these intervention funds should be made available with less stringent terms and conditions
- ✓ Eliminate the cumbersome process and underground conditions i.e. like compulsory use of selected vendors and legal persons. This make the application process cumbersome and exorbitant.
- ✓ While these intervention funds are available, there is more needs to make the RE projects more bankable.
- ✓ Fund manager can work with the government to provide guarantee, first loss provision, or forex coverage.
- ✓ There is need for lower interest rate, and longer loan tenorship to cover solar high upfront cost and the longer payback periods for a minimum of 3 years
- ✓ We think the process should be more transparent, inclusive and attractive to all



CHAPTER FOUR



CASE STUDIES

These testimonies detail the experiences, observations and recommendations of three solar companies that have accessed or attempted to access intervention funds.

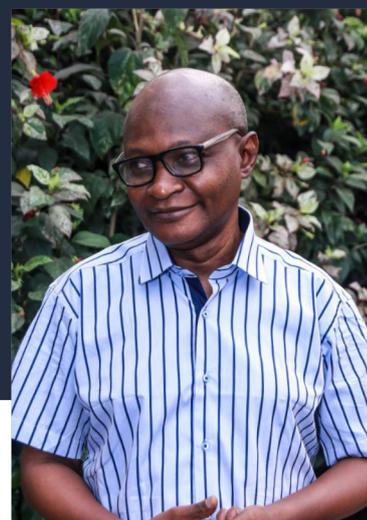
4.1

SOLARMATE Engineering Limited



Engineer Dotun Tokun, Managing Director and his team at Solarmate Engineering Limited, provide services in the design, supply and installation of photovoltaic and wind solutions, in rural and urban areas. Implemented projects by the company include:

- ✓ Installation of a 2.35MW PV-HYBRID SOLAR PLANT at Cocoa processing factory, Ijebu-Imusin, Ogun State Nigeria;
- ✓ The design, supply & deployment of 16.2kW Solar Stand-alone power package for a hospital at Fuka, Niger State.



Engr. Dotun Tokun

Managing Director
Solarmate Engineering Ltd.

At the time Solarmate was established in 1996, there was minimal interest from the government and the financial sector in financing and supporting the growth of renewable energy businesses. They were simply viewed as any other business when they applied for loans in the past from their banks, without much understanding of the nature of the RE sector and its debt financing needs. Interest rates and handling charges were high with very short loan tenors. The situation has improved in recent years with increased attention to the green sustainable sector and increasing international and local funding and technical supports.

Experience in Accessing Intervention Funds

According to Mr Tokun, international organisations have better understanding of the funding structures and the debt requirements for the renewable energy sector better than local financial institutions. This is evidenced in Solarmate's loan acquisition from Climate Resilience and Adaptation Finance Technology (CRAFT) facility, an international fund that offered favourable financing terms, like a single digit rates and a tenor of 4 years (long enough for the project recoupment).



On the other hand, while negotiating for a similar loan with Sterling Bank Plc, a Nigerian commercial bank with a funding programme for the RE sector for a project maturity that needs a 7-year tenor, the Bank was only ready to offer 3 years loan tenor at 15% interest rate.

Foreign exchange risk associated with international funding sources like CRAFT is deemed to be too high, so companies like SolarMate prefer Naira denominated credits from commercial banks, even if the interest rates are in double digits. For example, at the time Solarmate received its loan from CRAFT,

the exchange rate was N365 to \$1, and it is currently N460 to \$1 as at the time of this report. Cost of funds thus comes at a greater price than a higher interest rate would command due to the depreciating Naira.

The uncertainty over the economy and currency risk makes naira loans more favourable.

Experiences with Sterling Bank Plc

Solarmate Engineering has applied for several loans from Sterling Bank including BOI Fund. Mr Tokun found them to be fairly knowledgeable about the sector, even providing the company with potential off-taker clients for the project being financed. He found the application process was straightforward with the collateral required being the solar equipment bought, an arrangement Solarmate was happy with.

However, the tenor for the loans remain too short for a realistic repayment period. A loan application was approved with an interest rate of 15% p.a. and 18 months payback period, a very tight scenario.



Challenges

- X** 1. Sterling Bank has not been able to disburse funds.
- X** 2. SOLARMATE required funding to expand its portfolio of projects and currently has 3 pending projects - solar generation of between 100kw and 1mgw of power. It needs approximately \$1 million to execute the projects.
- X** 3. Sterling Bank processed Solarmate's loan request through the BOI solar energy intervention fund, yet while meeting conditions for the facility as requested and despite Sterling bank providing potential off-taker clients (whom Solarmate have already conducted power audits on to assess their needs) the bank has still not been able to disburse the loan.
- X** 4. No clear reason has been put forward by Sterling Bank but this might be due to them not being able to access government intervention funds as the respondent suspects. When asked if he was willing to access the funds directly from BOI, Mr Tokun stated that he was willing, and had recently partnered on an agriculture project to power a farm with funding being sourced directly from BOI, though from the agriculture intervention fund.



Recommendations

A. Quality Control

The world is opening up to renewable energy as an alternate clean source of power and are providing funds to encourage its growth.

Nigeria needs to maintain this international interest by providing top quality products and services. If projects such as mini grid installations promoted by the government and international funders, that are meant to last decades start to fail after 5 years, it will result in a loss of confidence and possibly slow or stop funding.

B. Regulation

1. Regulation of the industry must be enforced so qualified people operate in the industry can access these funds.

2. REAN should introduce a system that ensures its members have the requisite skills and training to create and maintain professional standards. This would support the work of bodies such as Nigerian Electricity Management Services Agency (NEMSA) who offer training, certification of which is required by REA before awarding solar projects.

4.2

SOSAI Renewable Energies Company

Ms Habiba Ali, is the founder of Sosai Renewable Energies. Sosai Renewable Energy Company began operations in 2010 providing solar energy solutions through sales, design, installation and service of solar energy products as well as consultancy services. The company has made several attempts to secure financing from Nigerian banks including BOI's solar energy fund, but are yet to



Ms Habiba Ali
Founder
Sosai Renewable Energies

receive any facility. Greater success came from several international organisations where the company received grants and a loan:

a. Bettervest GmbH: Sosai secured a total debt financing of 440,400 euros disbursed in 3 tranches from Bettervest, a German online crowdfunding site that finances energy efficiency projects. The Bettervest process is within a space of 4 month. The process is straightforward and unambiguous. The facility required no security and has an interest rate of 8% p.a. with a 4 year tenor. While there are no fees attached, certain due diligence requirement charges applied.

b. USAID Grant- \$150,000

c. All-On Grant- \$50,000

d. VITAL/DVF Award - \$50,000

e. DFID Grant- £25,000



View on access to finance for the Renewable Energy sector

The financial landscape has woken up in the past 2 years, with greater understanding of the RE industry. In the past, financial institutions were not interested and just did not appreciate the importance and value of the RE sector. Now mainstream banks such as Sterling Bank Plc and FCMB Plc have developed financing programmes targeted at the renewable energy sector while First Bank finances solar products for end users. The banking sector is gradually gaining a better understanding and deeper appreciation of the future of renewable energy in power generation.

Experiences accessing intervention funds through Nigerian Institutions

a. Sterling Bank Plc

Sosai applied for a term loan in 2019 at 15% interest rate p.a for 4 years which was to be accessed through the BOI solar energy intervention fund.

Collateral required was 150% of the value of the loan which they felt defeated the purpose of the loan: if they had assets worth 150% of the loan amount they would not require the facility. They believe that while Sterling Bank applied for and was able to access the funds from BOI, (BOI contacted Sosai for verification and on other queries regarding the company's application) they did not release those funds to Sosai.

b. BOI/UNDP Access to Renewable Energy Facility AtRE Grant

Sosai won a \$30,000 grant in 2012 to execute a distributed solution for rural electrification and powering small business project for Niger State. The Understanding of the grant was that the facility was to support the organisation to build a bankable business plan that would ensure that the business starts strong business activities related to RE in the State and having won for Niger state, support would come through this facility to ensure Sosai deployed across the state. The Project plan was to ensure disbursement in 3 tranches:

1. \$10,000 was disbursed directly to Deloitte (a business management consulting firm) to support Sosai in the development of a bankable business plan and this business plan was to be used to secure financing from Nigerian banks with the plan to have the USAID guarantee about 80% of the loan..
2. \$10,000 was disbursed to Sosai as office set up costs in Niger State. This was disbursed in Naira
3. The \$10,000 dollar balance was not disbursed and the company was told that the grant period had expired and funds returned.

c. EcoBank PLC

While Sosai applied for a facility from Eco bank and received an offer letter from the bank, the funds were never disbursed and they were not given an explanation as to the reason why this was not disbursed. A N20Million Naira Loan at 10% interest rate supposedly to be from the CBN MSME.



Observations and Recommendations

The terms and conditions offered by Nigerian banks for loans are still unfavourable:

- A. Security and collateral required is too high, interest rates are averagely 25% p.a with 1 or maximum 2 years tenor, which is not a feasible payback period for a renewable energy company.
- B. To encourage local financing of RE projects, the government should provide guarantees to financing institutions - similar to the International Renewable Energy Agency's (IRENA) \$50 million concessional loan where a government guarantee letter is required by the Abu Dhabi Fund for Development ADfD, the sponsors.
- C. To reduce political interference in awarded grants and projects from agencies such as REA, only RE practitioners (such as REAN members) should be eligible to apply. Right now, any company is eligible and it has become an avenue for elected officials to place political pressure for projects to be awarded to their constituency.

4.3

BLUE CAMEL Energy Limited

Blue Camel Energy Company was established 12 years ago, operating from Abuja, Nigeria to provide clean energy solutions and consultancy services.



It prides itself on the experience and expertise it has built up over the years. Through their Academy, Blue Camel has trained 300 young people on different forms of renewable energy and has developed and implemented large scale innovative projects such as being the first builders of off grid solar and wind hybrid apartments in Guzape district in Abuja - Nigeria.



Mr Pelumi
Aderogba

Customer Relations Manager/
Head of Training

Blue Camel Energy

Perception of financial institutions in Nigeria

Mr Pelumi Aderogba, Customer Relations Manager/Head of Training of Blue Camel Energy Company Nigeria is of the opinion that most banks do not even have a basic understanding of how the sector operates, this is evidence in the high capital cost, lack of technical know-how (in understanding system design, implementation and maintenance) and the too short repayment timeframe needed for renewable energy projects. Banks typically focus only on numbers and tend to offer unfavourable and unsustainable repayment terms

Funding Need

Blue Camel sourced for financing for expansion of its business operations:

- Solar systems projects in the pipeline
- Expansion of their factory assembly line
- Expansion of the training Academy to meet growing demand

Experiences accessing intervention funds

- Bank of Industry Solar Energy Fund

Blue Camel Energy applied directly and received a loan from the Fund in 2019. The application process was straightforward as they had all necessary documentation and permits in place, a situation which Mr Aderogba attributes to the fact that Blue Camel is a long standing experienced renewable energy company.





Challenges with the BOI Solar Energy Fund

- X** Restriction on what to finance: BOI restricted funding to Letters of Credit (LCs) for the purchase of solar equipment for retail sale and installation. This was the only area of their business that BOI would finance. BOI was unwilling to inject cash to fund their expansion plans, viewing this type of transaction as having greater risk.
- X** Bank of Industry appears to favour processing relatively large scale debt requests, typically between N50-N100 million, which compelled Blue Camel to incur a larger than normal expense on solar packages than they would previously have done.
- X** Verification extended processing time: as there was a cap on the amount for each LC, Blue Camel ended up accessing LCs from a number of Original Equipment Manufacturers (OEM). Having to verify each OEM took some time. This was further exacerbated when some OEMs could not be immediately located, (sometimes due to a change of address)

Challenges with Commercial banks

- X** While commercial banks are more willing to increase the scope of business operations they finance, they terms are less favourable:
 - a. Higher interest rates
 - b. Short term funding; the company's projects require longer tenors; mini-grids for example have a minimum 5 year breakeven point.

Challenges with Rural Electrification Fund (REF)

- X** Blue Camel has executed solar projects for REA such as the electrification of the isolation centre in Abuja, and are familiar with the agency. Having been selected, the solar company is currently processing the grant from REA's REF (1) to part fund its business expansion plans. REF's grant does not restrict what it funds, allowing developers to fund any part of its business operations. However REA only funds rural projects.

Challenges with the REF Process

- X** One of the major challenge in accessing the REF fund is the technical approval process. Difficulty reaching an agreement with REA's engineers on the assessment of the technical design needs of the project can be a big barrier to arriving at project cost and push through to get the funds.

The respondent's opinion is that while REA engineers have good electrical qualifications and experience, there is a dearth in solar expertise and field experience in the Nigerian context. The engineers tend to be electrical engineers not solar specialised and this is reflected in the grant conditions, one example being the preparation of the bill of quantities (BOQ) which can be inaccurate when prepared or assessed by an inexperienced engineer.



Observations and Recommendations

- A. The preference of BOI for bigger projects from well established companies put early stage companies or projects with funding requirements in the range of N10-N25million at a disadvantage in accessing the fund. They should be able to access intervention funds.
- B. Conditions are too stringent for smaller inexperienced companies otherwise they will never be able to access funding. Conditions such as high collateral, technical expertise (too much emphasis on a company's past projects as evidence of technical ability which puts smaller companies at a disadvantage) and minimum turnover exclude a large number of companies. They end up having to partner with a bigger (usually foreign) company to improve their eligibility and ability to meet conditions which ends up being detrimental to their business
- C. Some intervention funds need to strike a balance between socially inclined projects such as mini grids in rural areas (mini grids are viewed as unprofitable ventures with a long payback period - 5 years minimum) particularly when circumstances in such communities could have drastically changed before the 5 years is up (affecting cash flow of the project), and the profit driven need of private companies.

4.4

Comparison with the Agriculture Sector



There is strong political will towards the growth and development of the agricultural sector in Nigeria which has directly impacted on the development of the agriculture value chain by the government (at both Federal and State level) opening the way for financial institutions, development partners and large corporations to participate.

While Nigeria's agriculture budget still falls far short of the 2003 Maputo agreement where African Union countries agreed to allocate a minimum of 10% of each nation's annual budget to agriculture to achieve an annual sector growth of 6%, it still grew from N83.2 billion in 2013 to N135.6 billion in 2017 and was N200 billion in 2018 accounting for 2.2% of the budget.¹⁴

Financing commercial agriculture was and to a large extent still is challenging, as banks consider the agricultural sector also a high risk business. The country's inexperience in commercial agriculture, as well as the poor expertise in financial institutions and the farming community to properly understand, document and show the bankability of their projects also makes access to funding for commercial agriculture a challenge.

To mitigate against these challenges and deepen the credit market for agribusiness, the Federal Government developed finance and risk management strategies, through the Anchor Borrowers' Programme; a N200 billion Commercial Agriculture Credit Scheme (CACs), and established the Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL). NIRSAL, an initiative of CBN and Ministry of Agriculture and Rural Development is essentially a risk sharing fund program, whose primary objective is to facilitate the flow of credit to agribusiness value chain actors and address failures in the supply chains.

Between 2009 and 2016, N148 billion was disbursed to 191 businesses through CACS, and by 2014, NIRSAL had trained over 27,000 farmers across the nation. Other government funding schemes include Bank of Agriculture, Agric-Business Small and Medium Enterprises Investment Scheme (AGSMEIS), Agricultural Credit Support Scheme (ACSS), Agricultural Credit Guarantee Scheme Fund (ACGSF).

Financial institutions such as Bank of Agriculture, First Bank Plc, First City Monument Bank Plc, LAPO MFB, have agriculture desks and have built capacity in managing loans from the sector. It is worthy to note however that agriculture still accounts for a small proportion of private sector lending by commercial banks, 3.8% in 2018, trailing behind oil & gas at 23.1% but above power and energy at 2.7%.

Key development partners such as AFDB, Bill and Melinda Gates Foundation, the Food and Agriculture Organisation have contributed towards capacity development, policy development & implementation, improved farming methods and best practices.

Innovative financing has begun to make an inroad in the Nigerian agricultural scene through technology driven sites such as FarmCrowdy (a crowd funding website), and AFEX Commodities Exchange Limited providing solutions to access to finance and financial inclusion.

4.4.1



Takeaways from the Agricultural experience:

1. Strong government backing leading to actions that lowers the lending risk of the sector and, implementing financial strategies to deepen funding accessibility
2. Built capacity within the sector for all stakeholders
3. Government backed guarantee on loans
4. Engaging with development partners, financial institutions, agricultural organisations and large corporations in the food industry to strengthen value chain, build capacity and develop policies
5. Created strong economic awareness of the importance of agriculture as the driver of growth and development
6. Openness to technology driven financing
7. Development of policies and instruments that encourage investment in the agricultural sector such as:
 - a. Creation of intervention funds and risk sharing schemes
 - b. Tariffs
 - c. Tax reliefs
 - d. Public-private partnerships

The above takeaway can also be implemented in the renewable energy sector to increase the access to financing for the sector.



CONCLUSIONS & RECOMMENDATION

5.1 Conclusions

1. Accessing finance remains a challenge for renewable energy companies. Whilst the introduction of intervention funds shows that the government is aware of the financing gap facing RE projects and are taking steps to address it, there are several constraints hindering the successful execution of these interventions.
2. The lack of knowledge and experience from financial institutions on renewable energy projects has led to them being unable to adequately gauge the risk of lending to that sector; leading on strict terms and high pricing of loans with short tenors. Renewable energy projects are long term projects, typically requiring funding tenor of at least 5 years
3. A poor level awareness of other intervention funds available to the RE community such as the CBN MSMEDF fund and low cost financing from DBN. BOI's solar energy fund and the Rural Electrification Fund are well known.
4. Some project developers are not aware of the options available in applying for these loans which would reduce the cost of debt, for example applying directly to BOI gives an interest rate of 9% p.a instead of the 15% p.a obtainable from PFIs. Whilst there is room for improvement, BOI in general has a better knowledge of the RE sector, for example understanding the high capital outlay RE projects demand.
5. Smaller projects, <N20 million face even greater challenges accessing funding. Young companies with minimal experience face stricter rules often requiring technical partners to be eligible under disadvantageous terms.
6. Political interference in awards, approval and disbursement of RE funds for example the government REF; where government officials are key stakeholders representing their political zones, and the PAIF where the application seems closed except for a select few stakeholders; will sabotage the workability and sustainability of solar projects in Nigeria.
7. Technical requirements, permits and approvals, restrictions on what area of business to finance, while sometimes necessary, are seen by project developers as leading to bureaucratic delays in loan approvals and disbursement.
8. Financial institutions complain that some projects brought to them are not bankable, with some companies not properly structured and a lack of proper and adequate [financial] documentation. These constraints will limit the accessibility of RE companies in borrowing from banks.

5.2 Recommendations

1. Intervention funds must be structured to allow for renewable energy's high capital requirement, extended payback period with steps taken to de-risk the sector, otherwise the intervention will end up not achieving its goals.
2. The renewable energy sector should be given a higher profile as a priority infrastructure sector with specific institutions set up to address its unique needs, necessary to promote growth. For example, similar to the agriculture sector's NIRSAL lending system, REAN should advocate for the provision of government backed loan guarantees to encourage financial institutions to reduce the cost of borrowing by reducing rates and requiring less collateral.
3. Renewable energy intervention funds' interest rate should be single digit.
4. Advocacy should be channelled towards:
 - a. Supporting engagement between the CBN/Federal Government and RE companies to develop policies that better suits the sector's financing needs. PAIF is a fund that should have benefitted RE projects if there was inclusion at the time of its drafting.
 - b. Fund managers should increase the number of projects funded rather than focusing on a few select high value projects that excludes a large proportion of companies and makes the sector less robust.
 - c. Reducing reliance on past experience as a funding criteria for an emerging sector as RE.
 - d. Encouraging private equity investment from skilled and experienced renewable energy companies. There are a number of international companies willing to partner with Nigerian based companies.
5. Stakeholder engagement between REAN, finance providers, development finance institutions, aid agencies should be undertaken to reduce the high risk perception of the sector and to build capacity that would enable investors accurately assess risk
6. Government should introduce tax credits for RE equipment
7. REAN should work with stakeholders to increase awareness of these Funds.
8. REAN should work with its members on developing their capacity particularly in financial management and governance structure to enable project developers build bankable projects for greater success in accessing loans.

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With Support from

 **HEINRICH BÖLL STIFTUNG**
ABUJA

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The aim of this study is to improve renewable energy development in Nigeria by encouraging favorable energy financing policies, framework and administration for a growing renewable energy sector like ours”.



ABOUT REAN



The Renewable Energy Association of Nigeria (REAN) is an independent, non-profit Industry association founded by stakeholders in the Renewable Energy sector in Nigeria. REAN is dedicated to the promoting the growth and development of the industry in Nigeria by engaging with the public and private sector to guide advocacy, policy formulation and investment in the sector.

The Mission of the Association is “to be the umbrella association for all Renewable Energy promoters enabling and encouraging the sustainable development of the Nigerian economy through Renewable Energy”.

Our Vision is “to promote strategies that will improve the contribution of renewable energy up to forty percent (40%) of the National Energy Mix by 2030”.



Our Objectives

- ✓ To promote Nigerian Local content in the renewable energy industry.
- ✓ To promote the interests of members of the Renewable energy industry among Government, Donor organizations, Non-governmental organizations, General Public and any other organizations that may impact on the development and general well-being of the industry.
- ✓ To create a forum for the dissemination and exchange of information and ideas on matters relating to renewable energy development and utilization in Nigeria.
- ✓ To create increased public awareness in renewable energy through publications, advertisements, endorsements, seminars, conferences, advertising and promotional campaigns of any nature.



- ✓ To assist the Government and industry on all issues related to renewable energy technologies including energy policy formulation, standards, taxation etc and speak as one body for Renewable Energy Technologies in Nigeria.
- ✓ To identify and keep up to date contacts of all members, government policy makers, and other renewable energy interest groups, associations and a database of projects.
- ✓ To promote professionalism in the industry by encouraging the adoption of good engineering practices, standards and certification systems(quality products, design, installation and maintenance) among the members of the renewable energy industry.
- ✓ To encourage better business practices and tendering procedures by maintaining good ethical and moral standards among the members of the renewable energy industry.
- ✓ To undertake or assist in mediation of disputes between the members of the association, the public in general and consumers of renewable energy as well as any organizations directly or indirectly affected by renewable energy utilization.
- ✓ To act as a link between the industry, the government, consumer groups, international organizations, and other renewable energy associations.
- ✓ To protect the consumers of renewable energy products and services in all aspects especially by encouraging the standardization of renewable energy equipment, components and services such as installation and maintenance.
- ✓ To apply for, acquire and hold charters, legislation, privileges, monopolies, licenses, concessions, patents or other rights or powers from the Nigerian Government or local authorities or any other statutory body and to exercise, carry on and use, any powers, rights or privileges so obtained.

Contact REAN



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Poor electricity infrastructure is a major obstacle in the development of economic activity, grounding progress in all other sectors. Renewable energy has been identified as a solution to the electricity infrastructure gap.

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