

RURAL ELECTRIFICATION STRATEGY AND IMPLEMENTATION PLAN (RESIP), 2016

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Federal Ministry of Power, Works and Housing
for Implementation by Rural Electrification Agency (REA)

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Simplified Summary

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EXECUTIVE SUMMARY

The Rural Electrification Strategy and Implementation Plan (RESIP) was developed in line with the federal government's plan for rural electrification and provides the implementation framework and measures for driving rural electrification across the country by means of - on and off-grid energy solutions.

This guide provides a simplified summary of the RESIP. It provides context to the plan, goal, strategy, objectives, barriers, incentives, key provisions, key stakeholders, related policy and regulatory documents, and current implementation status.



CONTEXT

The Federal Government of Nigeria has outlined its commitment and approach to rural electrification in a number of official documents, including the National Electric Power Policy (NEPP) 2001, National Energy Policy 2003, the Electric Power Sector Reform Act (EPSRA) 2005, and the Rural Electrification Policy 2009.

The Federal Government's Rural Electrification Policy outlines the Government's objectives, goals, and policies regarding rural electrification. The policy, in addition to other key documents on regulation, funding and institutional development, details the institutional framework and procedures to be pursued in order to achieve the objectives of Government's rural electrification program.

The primary objective of the Nigerian Rural Electrification Policy and by extension this Rural Electrification Strategy and Implementation Plan (RESIP) is to expand access to electricity as rapidly as possible in a cost-effective manner.

This implies full use of both grid and off-grid approaches, with subsidies being primarily focused on expanding access rather than consumption. The EPSRA requires the Minister of Power to submit to the President - a Rural Electrification Strategy and Plan for Nigeria.

RESIP sets forth the Government's strategy to accomplish the goals established in the EPSRA 2005 and Rural Electrification Policy, and was prepared through input from past work carried out by various rural electrification stakeholders in Nigeria.

The Rural Electrification Strategy, together with the Rural Electrification Policy, together form the framework through which the expansion of electricity services to rural areas will be achieved.

RESIP supports public and private stakeholders in the power sector primarily the REA in attaining its target for 100% rural electrification. It supports on-grid and off-grid players including the Transmission Company of Nigeria (TCN), distribution companies, electricity project developers - implementing rural electrification projects such as mini-grid developers and stand-alone solar technology enterprises, RESIP also supports the electricity market regulator, the Nigerian Electricity Regulatory Commission (NERC), private sector investors including donor/development partners, community based organizations, non-governmental organizations, and ultimately the rural electricity consumer.

LEGAL FOUNDATION

RESIP was developed as set out in Section 88 of the Electric Power Sector Reform Act (2005) which mandates the establishment of the Rural Electrification Agency (REA), and a Rural Electrification Strategy and Plan. It is currently the strategy document used by the REA in its on-going rural implementation initiatives across the country.



TARGET RURAL ELECTRIFICATION PROJECTS



GOALS

The goal of the Federal Government of Nigeria is to increase access to electricity to **75% and 90% by 2020 and 2030** respectively with **renewable energy contributing at least 10% to the energy mix by 2025** as contained in the National Electric Power Policy (NEPP) of 2001 and the Rural Electrification Policy of 2005 respectively.

The national target of 75% can be achieved only if urban electrification reaches 95% and rural electrification reaches 60% by 2020. This will only happen by connecting more than 10,000,000 additional rural households (assuming 7 persons per household).

OBJECTIVES

- Promote economic and social activities in different sectors of the economy.
- Improve standard of living of rural population.
- Promote the use of affordable clean energy appliances to reduce hard monotonous routine work typically allocated to women.
- Encourage the adoption of clean energy to protect national health and environment by mitigating indoor pollution and other energy related environmental problems.

STRATEGY

- Promote clean energy sources for on-grid and off-grid rural electrification.
- Align rural electrification with national economic development.
- Promote inclusion by all relevant stakeholders in driving rural energy access.
- Provide enabling environment to encourage investment and private sector participation.



- Encourage provision of steady, reliable and affordable power supply for personal and commercial uses.
- Facilitate efficient availability of power supply across the borders of the country.

IMPLEMENTATION PLAN

- Implemented through a Rural Electrification Fund (REF) through open competitive bids, and operated by the Rural Electrification Agency (REA).
- Involves on- and off-grid rural electrification
- Utilizes a multi-stakeholder approach, involving government and private sector players.
- Implemented through Public-Private Partnership and co-investment/co-financing.



HIGHLIGHTED BARRIERS TO DECENTRALIZED RURAL ELECTRIFICATION

Central Planning & Coordination

While projects will be established in response to demand, rather than top-down government planning. Coordination of the activities within the sector must take place at the federal, state and local government levels.

Demand

Rural electricity demand and willingness to pay due to rural perception of electricity as government's responsibility that should be highly subsidized.

Supply

The supply of rural electrification schemes under a decentralized, demand-driven system will depend on the interest of project promoters. Their participation will be forthcoming only if it is financially attractive for them to participate.

HIGHLIGHTED BARRIERS TO DECENTRALIZED RURAL ELECTRIFICATION (Cont'd)

Economics

Typically, rural electrification schemes have high costs relative to the consumers' willingness and ability to pay for service. Many rural electrification programs have proven unsustainable overtime, as operation and maintenance costs were not fully accounted for in project cost estimates.

Financing

In addition to high initial costs, rural electrification schemes are also characterized by long pay-back periods. More commonly, they do not offer a payback at all. Financial institutions and investors will offer funds only where it is commercially viable to do so.

Technical Capacity

While there are many engineers and other technical professionals in Nigeria, there is a scarcity of qualified personnel for renewable and off-grid renewable energy applications. In particular, there is a lack of commercial and financing skill experienced in putting together investment worthy projects.

INCENTIVES

Capital Cost Subsidies

Subsidies towards the initial capital costs associated with establishing rural electrification schemes will be granted in order to lower the economic barriers to entry. These will be offered by the REF as capital grants based on an allocation method that is transparent, competitive, and sustainable.

Subsidies for rural electrification, in this case, will also be used as tools for social justice. The FGN has identified alleviating poverty and addressing the needs of rural populations as a matter of equity.



Promoting Efforts to reduce Equipment Cost

The REA will advocate for tax incentives, investment capital allowances, and low-interest loans for local producers of rural electrification equipment and materials.

In the meantime, the import taxes levied on renewable electricity generation equipment and low-cost supplies must be reduced. While the Nigerian industry prepares to compete in this area, rural electrification schemes must have access to imported materials, components and equipment for rural electrification systems – all without paying exorbitant import taxes.

KEY PROVISIONS

Support Policies, Plans and Framework for Implementation



Shift to a combination of centralized and decentralized approaches. The Federal Government will promote a centrally coordinated, but demand-driven approach that is also market-oriented towards achieving rural electrification.

The REA will not define individual projects, conduct feasibility studies, or raise RFPs for defined projects. The REF will invite bids for projects that are defined by developers. It will allocate funds to those that best meet the obligations of the REF as defined by the Act.

Encourages participation of non-traditional operators including community-based organizations, private sector entities, NGOs, and others. The power market rules will permit a range of industry and ownership structures to accommodate public, private, and co-operative entities.

Promotion of the use of low-cost (but high quality) options for rural electrification. These include the use of renewable energy technologies (e.g., solar, wind, hydro, biomass), where appropriate.

In accordance with the Rural Electrification Policy and international best practice, cost reflective tariffs for rural electricity services will be established and regulated by NERC in order to ensure more even handed regulation for rural electrification particularly in the area of tariff. Tariffs will be reviewed annually and recorded in the Electricity Supply Contract between consumers and rural electrification service providers after obtaining NERC approval.

A single national sector wide roadmap developed by the Ministry of Power that identifies the least-cost electrification solution for every community.

Support Policies, Plans and Framework for Implementation (Cont'd)

In the event that a rural electrification frontier meets the advancing urban electrification frontiers (DisCo) asset, several alternative paths can be followed to ensure an orderly and efficient process.

The selected process requires careful consideration, including respect of the legal rights of private asset ownership, technical compatibility, and mis-aligned incentives for DisCos to unfairly force free acquisition of assets.

REA will encourage the use of local content and local participation in rural electrification (including community ownership of stocks).

This includes the involvement of people and material through the planning, establishment and operational phases of rural electrification projects in order to encourage the use of local content and local participation in rural electrification.

Finance & Investment



Public-private partnership will be encouraged between the private sector and community-based organizations that are responsible for majority of the service delivery. This will be done with minimum necessary financial support from the public sector.

In accordance with the Rural Electrification Policy and international best practice, tariffs for rural electricity service will be cost-reflective. They shall account for the average annual cost of fuel, operation, maintenance, safety, generation, distribution, revenue collection, spares, equipment and operator fees, expected sales of electricity, generator capacity, number of connections, volume of consumption, and level of service.

Finance & Investment (Cont'd)

Rural electrification project development will be supported by REF using capital subsidies, supplementing private funding of the projects.

Stand-alone or captive generation systems will be unaffected.

REA (as per the EPSRA 2005) shall develop, for the approval by the Minister, the methodology for selection and funding of constituency projects to ensure they meet the overall objectives of RESIP with respect to economic sustainability of the projects. The National Assembly will be involved in the process of identifying candidate projects.

NERC will also allow a second approach to setting tariffs for new projects. This would allow developers to set the tariff outside of the tariff model, provided that prospective consumers for at least 60% of the proposed output have signed acknowledgements that they are willing to pay this tariff.

The Federal Government may continue to implement a limited number of constituency projects for rural electrification. These will be high priority projects promoted by political leaders. Constituency projects will be implemented under the REF which may receive special budgetary allocations for that purpose.

To increase the supply (and decrease the cost) of more affordable, high quality products, the FGN will support the participation of new market entrants and the continued development to local ventures whose activities may include the production, installation, operation, maintenance, and the distribution/sale of equipment, systems, and services related to rural power supply.

The Federal Government and the REA in particular will endeavour to secure the funds required to reach the government's electrification targets.

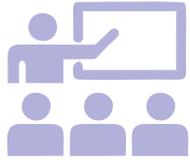
REA is to develop a comprehensive implementation plan, giving details of projects to be implemented and the budgetary requirements.

In relation to projects that fall within the NERC licensing requirements, tariffs will be regulated. In order to ensure light-handed regulation for rural electrification, the approach taken will be gentler for rural areas than for urban areas particularly on the issue of tariffs.

Tariffs will be reviewed annually and recorded in the Electricity Supply Contract between consumers and rural electrification service providers after obtaining NERC approval. In case of capacity stipulated in the EPSR Act 2005, NERC will retain responsibility for monitoring and enforcing agreed-upon tariffs.

In dealing with the problems associated with completing legacy rural electrification projects, the REA will engage all relevant stakeholders including the federal MDAs involved in rural development and in particular those involved in rural electrification project implementation. REF will be used to provide finance.

Education, Research, Training & Capacity Development



Proper and effective capacity building exercises to be conducted for potential candidates to improve their understanding and operation of rural electrification schemes including electrical safety, lower cost renewables and clean energy technologies.

RURAL ELECTRIFICATION FUND

Selection Criteria

Selection criteria for funding rural electrification projects will be made based on the following criteria:

- Economic and financial viability, with the initial capital subsidy
- Promotion of social and economic objectives
- Choice of technology to be used (e.g. preferential scoring of renewable energy rural electrification projects)
- Cost effectiveness
- Nature and extent of community support (e.g. consumer buy-in, willingness and ability to pay for service)
- Investor commitment (i.e. significant capital investment).

Funding Principles

The objectives are to:

- Achieve more equitable access to electricity across regions.
- Maximize the economic, social and environmental benefits of rural electrification subsidies.
- Promote expansion of the grid and development of off-grid electrification.
- Stimulate innovative approaches to rural electrification.
- The Fund will provide subsidies towards the initial capital costs of rural electrification schemes. Funding will take the form of grants to be applied to project start-up costs. Grants will not be made for operational or maintenance costs.

Fund

Rural electrification expansion in Nigeria will be achieved through the support of a Rural Electrification Fund. The criteria the Fund will use will be developed by the Rural Electrification Agency (REA) and approved by the Minister of Power in charge of rural electrification. These criteria will have to give due weight to development benefits and cost effectiveness as well as to equity and regional balance. The implementation of rural electrification programmes should as far as possible encourage the combination of centralized and decentralized configuration approaches and diversity and make use of all resources (financial, technical and human) available at federal, state and local levels.

RURAL ELECTRIFICATION FUND (Cont'd)

Sources of Fund

In accordance with the ESPRA (2005), the fund will consist of capital and assets as follows:

- Any surplus appropriated pursuant to the EPSR Act 2005 (Section 53).
- Any fines obtained by NERC pursuant to the EPSR Act 2005.
- Any donations, gifts, or loans made by international agencies, state governments, the federal government, local communities, businesses or any other entity.
- Any contribution that may be made pursuant to the EPSR Act 2005, and interest and other benefits accrued to the Fund
- Monies appropriated by the National Assembly/Special Intervention fund.
- To cover any short fall in the capital and assets, NERC may determine contribution rates to be sent to the fund by market participants.
- Contributions from domestic and international parties such as commercial banks, NGOs, bilateral and multilateral donors and development banks, project sponsors and end-users, as well as other relevant groups.



Key Features

To make the Rural Electrification Fund work well, the key features shall be:

- Clear policy guidelines within which the Fund must operate, particularly the criteria for selecting between applications;
- Transparent procedures for the operation of the fund and its bidding process; and
- Proper accountability of the Fund e.g., independent audit, proper monitoring and reporting procedures, etc.

Fund Management

The REF will be administered by the REF Management Directorate, comprised of selected REA staff at the Federal and Zonal level, working together to establish and implement policy, subject to the Board's approval. The REF Management Directorate will be responsible for establishing eligibility requirements, evaluation criteria and procedures, and guidelines for the size of grants to be issued. The REF Management Directorate will develop a detailed list of criteria and a relevant scoring system to rank eligible rural electrification project applications, upon which funding decisions would be made in line with this strategy document.

IMPLEMENTATION

Key National Public Institutions involved in RESIP Implementation

1

Federal Government of Nigeria (FGN) through the Federal Executive Council (FEC) and the Presidency

2

Federal Ministry of Power, Works and Housing

3

Rural Electrification Agency and its Board

4

Nigerian Electricity Regulatory Commission

ROLE OF STAKEHOLDERS INVOLVED IN IMPLEMENTATION

Rural Electrification Agency (REA)

- Coordinate rural electrification activities in Nigeria. The legal framework for the REA is outlined in the ESPRA (2005).
- Continually engage state governments, state rural electrification boards and local governments on a quarterly basis in capacity building and outreaches to assist them to develop their project proposals, and on how to leverage the REF to support their projects.
- To achieve the decentralized demand driven approach under the central coordination by REA, the REA will maintain offices in each geopolitical zone of Nigeria.

The Ministry of Power, Works and Housing

- Responsible for laying down policies on increasing access and rural electrification, setting out policy guidelines, monitoring and evaluating the performance of the programme and its agencies.
- Through the REA, play a leading role in encouraging capacity building. This may include engagement with universities, industry, research institutes, and training organizations.

Nigerian Electricity Regulatory Commission (NERC)

Regulatory powers over rural electrification in Nigeria, without prejudice to the provisions of EPSRA (2005) which exempts rural electrification schemes whose generation capacity at a single site is 1 MW and below, or whose distribution capacity is 100kW and below from the need for a license.

Project Sponsors will play an important role in the development of rural electrification in Nigeria in order to achieve universal access to electricity in rural areas. Projects led by the private sector, communities, and government will be encouraged to apply for capital subsidies to establish operations to provide rural electricity service.

Institutions involved in setting rural electrification policy

- Federal Government of Nigeria
- Federal Ministry of Power
- Rural Electrification Agency
- Nigerian Electricity Regulatory commission (NERC)

IMPLEMENTATION PLAN

Steps to implementing RESIP are outlined by the following milestones and indicative deadlines:

- Presidential approval of the FGN's Rural Electrification Strategy and Plan.
- Establishment of the Board of the REA.
- Strengthening of the REA management, including appointing a Managing Director and three Executive Directors together with Four Directors.
- Procuring suitable premises and recruiting staff for the Central REA, and strengthening of the six zonal REA offices.
- Securing the REA's minimum annual operating budget.
- Approaching donors to secure firm pledges to the REF.
- Concluding with NERC the application of levies and fees on power sector participants and consumers to be applied to the REF, as provided for in the EPSR Act 2005.
- Contracting a Trust Agent to manage the REF disbursements.
- Meeting with NERC to discuss regulations for rural electrification schemes above 1MW generation and 100kW distribution capacity.
- Sensitization campaign to raise awareness of and interest in REF-funded rural electrification schemes.
- Implementation of the rural electrification program will proceed in parallel with broader power sector reforms within Nigeria. To the extent possible, the implementation of RESIP must be coordinated with wider sector reforms.

RELATED REGULATORY POLICY & RESEARCH DOCUMENTS



- National Electric Power Policy (NEPP), 2001
- Reports of the national workshop on "Energizing Rural Transformation in Nigeria: Scaling-Up Electricity Access and Renewable Energy Market Development", March 19–20, 2001 in Abuja
- National Energy Policy, 2003
- Draft Renewable Energy Master Plan, 2005
- Rural Electrification Policy, 2005
- Electric Power Sector Reform Act, 2005
- Rural Electrification Strategy and Implementation prepared by Econ One for the Bureau of Public Enterprises (BPE), 2006
- A 2006 Report On Nigeria's Electricity Sector by The Sub-Committee of The Presidential Advisory Committee On 25 Years Electric Power Supply Projection
- Draft Renewable Energy Master plan by the Energy Commission of Nigeria (ECN), 2006
- Proceedings of the International Conference On Making Renewable Energy a Reality facilitated by One Sky November 21-27, 2006 in Calabar
- JICA Report on a Master Plan Study for Utilization of Solar Energy in the Federal Republic of Nigeria, 2007
- Rural Electrification Policy, 2009

RESIP IMPLEMENTATION STATUS



As for the 3rd quarter of 2019, -- key provisions of RESIP are being implemented significantly by the the Rural Electrification Agency (REA). For instance:

- The Rural Electrification Fund (REF) has been set up and is operational following guidelines stipulated in the plan; there is an inclusion of mini-grids and stand-alone systems as part of the rural electrification mix; there are however no provision for subsidies through REF.
- The Nigeria Electrification Project (NEP) with support from the World Bank and the African Development Bank; the selection of rural electrification projects follows the laid down criteria as stipulated in RESIP, and there is provision of education and technical capacity programmes by the REA.

The Nigerian Electricity Regulatory Commission also allows the mini-grid developers to adopt cost-reflective tariffs which could either be fixed or variable in line with the Mini-Grid Regulations.

The Commission also monitors the output and revenue from the mini-grid based on the report submitted quarterly by the permit holder to determine if the tariffs are favourable based on the return on investment. Having established the framework and committed funds for rural electrification, the Federal Government is now calling upon state and local governments, the private sector, NGOs, community-based organizations, donors, and other relevant parties to participate in the rural electrification agenda with the goal of achieving universal service coverage by 2040.



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