

STRENGTHENING NIGERIA'S ENERGY FUTURE: Policy Recommendations for Achieving Renewable Energy and Efficiency Targets by 2030

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Policy Brief



Nigeria's energy landscape has witnessed a considerable focus on renewable energy and energy efficiency over the last decade, with the National Renewable Energy and Energy Efficiency Policy (NREAP) launched in 2015 and the National Energy Efficiency Action Plan (NEEAP) in 2016. These documents laid the groundwork for Nigeria's transition to a cleaner, more sustainable energy future. However, while significant milestones have been achieved, several challenges remain in meeting the targets set by these policies.

This episode of Nextier's Power Punch discusses key milestones achieved, challenges faced, and recommendations to fully implement the objectives of these landmark policies, ensuring that Nigeria meets its renewable energy and energy efficiency targets by 2030.

Key Milestones Achieved as of 2024

1. Renewable Energy Deployment:

- Nigeria's Rural Electrification Agency (REA) highlighted its achievements at the recent UN Climate Change Conference (COP28) in Dubai, United Arab Emirates (UAE). It announced that it has implemented over 100 mini-grids in recent years, including its first interconnected hybrid solar system, to promote electrification and economic growth in Nigeria.
- While the exact number of people or institutions trained through renewable energy capacity-building initiatives in Nigeria is not fully documented, several key programs have made significant impacts. The GIZ Nigerian Energy Support Programme (NESP) has trained hundreds of professionals in solar energy and energy efficiency technologies to provide solar power access to 100,000 Nigerians. USAID's Power Africa initiative has facilitated the training of thousands in solar energy management and maintenance. The World Bank's Nigeria Electrification Project (NEP) has indirectly reached over 5.5 million Nigerians by deploying mini-grids and Solar Home Systems, which included technical training components. Additionally, the African Development Bank (AfDB), through its African Renewable Energy Initiative, and the Global Energy Alliance for People and Planet (GEAPP), have contributed to building local capacity.

2. Energy Efficiency:

- Efficient Lighting Initiative: Significant progress has been made in promoting energy-efficient lighting, such as LED bulbs, with households and industries adopting energy-saving technologies. An example is the NESP-provided training courses on renewable energy and energy efficiency, increasing the vocational skills of more than 120 participants to encourage capacity development in the energy sector.

- Awareness and Standards: Efforts have been made to raise awareness about energy efficiency, and the Standard Organization of Nigeria (SON) is increasingly working to ensure quality standards for renewable energy components and energy-efficient appliances.

3. Grid Decentralization and Private Sector Involvement:

- The 2023 Electricity Act, which promotes the decentralization of power generation, has empowered states to generate their own electricity, which includes renewable energy. This decentralization is helping to scale up renewable energy projects, especially in rural areas.

Key Drawbacks and Unmet Targets

1. Renewable Energy Contribution to the Energy Mix:

- 20% Renewable Energy Target: The NREEEP aimed to have 20% of Nigeria's energy coming from renewable sources by 2030. As of 2024, this target appears far from being met. Nigeria is projected to generate 9,000 MW of renewable energy by 2030, but challenges in grid reliability and financing have slowed the pace.

2. Energy Efficiency Targets:

- 40% Energy Savings by 2030: The goal of achieving 40% energy savings through measures like efficient appliances and building standards remains behind schedule. Industrial and building sectors have been slow to adopt energy efficiency measures, partly due to limited enforcement and incentives.

3. Infrastructure and Technical Expertise:

- Lack of Grid Infrastructure: The underdeveloped and unreliable grid has been a significant obstacle. Efforts to modernize the grid and accommodate renewable energy have not kept pace with the sector's needs.
- Limited Technical Expertise: The shortage of skilled professionals in renewable energy deployment has delayed many projects

3. Infrastructure and Technical Expertise:

- Private sector investments in renewable energy have been limited due to regulatory uncertainty and insufficient financial incentives.

Key Policy Recommendations for Full Implementation of NREAP and NEEAP

1. Strengthen Regulatory Framework and Enforcement Mechanisms

- Adopting digital monitoring tools that ensure real-time data collection and better oversight of renewable energy standards would enhance the capacity and autonomy of regulatory bodies like NERC and SON to enforce compliance. Additionally, a transparent mechanism for continuous stakeholder consultation should be established to update renewable energy policies regularly.
- Improve feed-in tariff structures by conducting periodic assessments to ensure they remain competitive and reflect market realities. Introduce differentiated tariffs for specific renewable energy technologies to balance investment across different wind, solar, and biomass sources.

2. Enhance Private Sector Participation and Access to Financing

- Streamline access to risk mitigation instruments by collaborating with financial institutions to create standardized frameworks for issuing sovereign guarantees and low-interest loans tailored for renewable energy projects. This will reduce administrative bottlenecks and encourage faster adoption.
- Develop a clear roadmap for mini-grid and off-grid project development with government-backed incentives, including tax rebates or subsidies linked to the energy generated from renewable sources. The national platform for tracking and reporting mini-grid projects to increase investor confidence established at the Rural Electrification Agency should be more efficient and effective.

3. Strengthen Capacity Building and Technical Expertise

- Introduce sector-specific capacity-building programs that target emerging renewable energy technologies like green hydrogen and smart grid management. Collaborate with local universities and polytechnics to create specialized courses in these areas, ensuring academic training aligns with industry needs.
- Formalize partnerships with international development organizations to ensure sustained knowledge transfer by establishing centers of excellence focusing on renewable energy research, innovation, and professional certification, particularly for off-grid solutions.

4. Expand Grid Infrastructure and Support Decentralized Energy Solutions

- Prioritize expanding grid infrastructure in rural and peri-urban areas by adopting smart grid technologies to enhance load management and minimize energy loss. A phased approach should be developed, integrating renewable energy sources into grid modernization plans.
- Accelerate the development of decentralized energy solutions by offering financial incentives for community-based energy projects and setting up a dedicated government unit to integrate off-grid renewable energy solutions with national energy goals.

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