



The **RENEW NIGERIA** Sustainable Energy Revolution

Driving **NIGERIA'S ENERGY REVOLUTION**

Enabling the Renewable Energy and Energy Efficiency Ecosystem



GREEN CLEAN
INNOVATION HUB
www.greenclean.com.ng



Biomass energy



Hydro energy



Wind energy



Geothermal energy



Tidal energy



Solar energy





Background

RENEW NIGERIA initiative is the brainchild of Green Clean Innovation Hub Ltd. It aims to accelerate green clean development in Nigeria as a pathway to net zero and sustainable development.

As a pilot initiative of the Green Clean Innovation Hub **Ltd RENEW AFRICA** vision, it seeks to unlock strategic opportunities and investment for the growth and development of the green economy. **RENEW NIGERIA** also serves as a platform for finding and supporting socially responsible businesses, green products, and services through public-private partnerships.

The Vehicle: **RENEW NIGERIA - A Public-Private Collaboration**

Despite the presence of adequate technologies that harness solar, wind, and hydropower, renewables are still not being adopted quickly as the first choice by energy consumers in Nigeria. The primary barriers are policy and finance. It is too expensive for consumers to finance the heavy upfront costs required to switch to solar, wind, or hydro.

The pathway forward is Sustainable Energy as Utility. Raise enough innovative financing that allows sustainable energy and renewables to be delivered as a utility with zero upfront costs to the end user, similar to regular utilities like the old Nigeria Electric Power Authority (**NEPA**).

Public sector funds and development finance should be used mainly as bridge finance to prepare the industry to trigger private sector financing, much like Nigeria did in its telecom sector.

In 2000, it was the Telecom Revolution. In 2025, it will be the Energy Revolution. –

Objectives

1. Accelerate Nigeria's Energy Transition: Achieve sustainable renewable energy adoption in Nigeria up to 30% by 2030.
2. Enhance Pathway to Net Zero: Foster green clean development to support Nigeria's commitment to net zero emissions.
3. Promote Local Content: Develop local renewable energy technologies and manufacturing industries.
4. Foster Innovation and Entrepreneurship: Encourage energy efficiency and innovation in the renewable energy sector.
5. Create a Sustainable Energy Ecosystem: Establish a private-sector funded, technology-driven renewable energy ecosystem.



Vision & Mission

- **Vision:** To accelerate Nigeria's energy transition and unlock a sustainable energy future through strategic public-private partnerships.
- **Mission:** To connect stakeholders to opportunities in the renewable energy value chain through sensitization, training, capacity building, policy support, infrastructure development, and trade and investment promotion.



Strategic Approach

- 1 . Develop Local Renewable Energy Technologies:** Establish manufacturing industries for renewable energy technologies.
- 2 . Create an Enabling Environment:** Support and trigger a local manufacturing industry and ecosystem across the renewable energy value chain.
- 3 . Promote Innovation and Entrepreneurship:** Focus on energy efficiency and the development of innovative financing mechanisms to fund technology transfer.
- 4 . Coordinate Implementation of Nigeria's Renewable Energy Roadmap:** Fast-track the implementation with a focus on local content development.



Project Models

- Joint Ventures (JV)
- Engineering, Procurement, and Construction (EPC)
- Public-Private Partnerships (PPP)
- Project Financing
- Trade and Investment
- Infrastructure Development
- Startup Support
- Technical Services
- Manufacturing Capabilities Development
- From Warehouse to Retail



The **RENEW NIGERIA** Renewable Energy Revolution Driving **NIGERIA'S ENERGY REVOLUTION**

The Bold Idea: A local technology-driven, private-sector funded, sustainable and renewable energy ecosystem that makes power available to all Nigerians who want power.



The Target:

- 1. Phase 1:** In 2 years, contribute 4,000MW of distributed sustainable energy to Nigeria's energy mix (equivalent to the current distribution of the entire Nigerian grid).
2. Create a local-content driven multi-billion dollar industry in Nigeria by replicating the telecom revolution in the renewable energy space.

The Approach:

- **Coordinate and Fast-track Implementation:** Focus on developing local content and generating innovative financing mechanisms to fund technology transfer in the renewable energy space.

- Develop Local Renewable Energy Technologies Manufacturing Industries.
- **Create an Enabling Environment:** Support and trigger a local manufacturing industry and ecosystem across the entire renewable energy value chain.
- **Promote Innovation and Entrepreneurship:** Focus on energy efficiency improvement in MSMEs.
- **Foster Local and International Partnerships:** For the adoption, development, and deployment of renewable energy technology across the country.

Industry Focus:

- **Finance:** Develop innovative financing mechanisms to mobilize private sector funding, blended finance, micro finance, impact investing, and risk-sharing mechanisms. Leverage innovative financial instruments like securitization and develop new financial technologies (fintech) for renewable. Foster international cooperation and knowledge sharing in renewable energy finance.
- **Power:** Focus on distributed clean power - standalone solar systems and mini-grids; develop a robust database of renewable energy potentials.
- **Buildings:** Accelerate efforts to promote clean cooking, improve existing appliance efficiency, and lighting programs.
- **Transport:** Trigger faster adoption of biofuels, CNG, and methanol as alternative fuels; promote transport electrification and the adoption of Evs.

- **Agriculture:** Trigger adoption of solar irrigation, efficient pump sets, and alternative fuel tractors.
- **Industry:** Focus on developing the local manufacturing ecosystem, MSME involvement, and adoption of solar heating technologies.



Implementation Plan for **RENEW NIGERIA**

RENEW NIGERIA Renewable Energy Revolution is a powered by Green Clean Innovation Hub Ltd (GCIH)

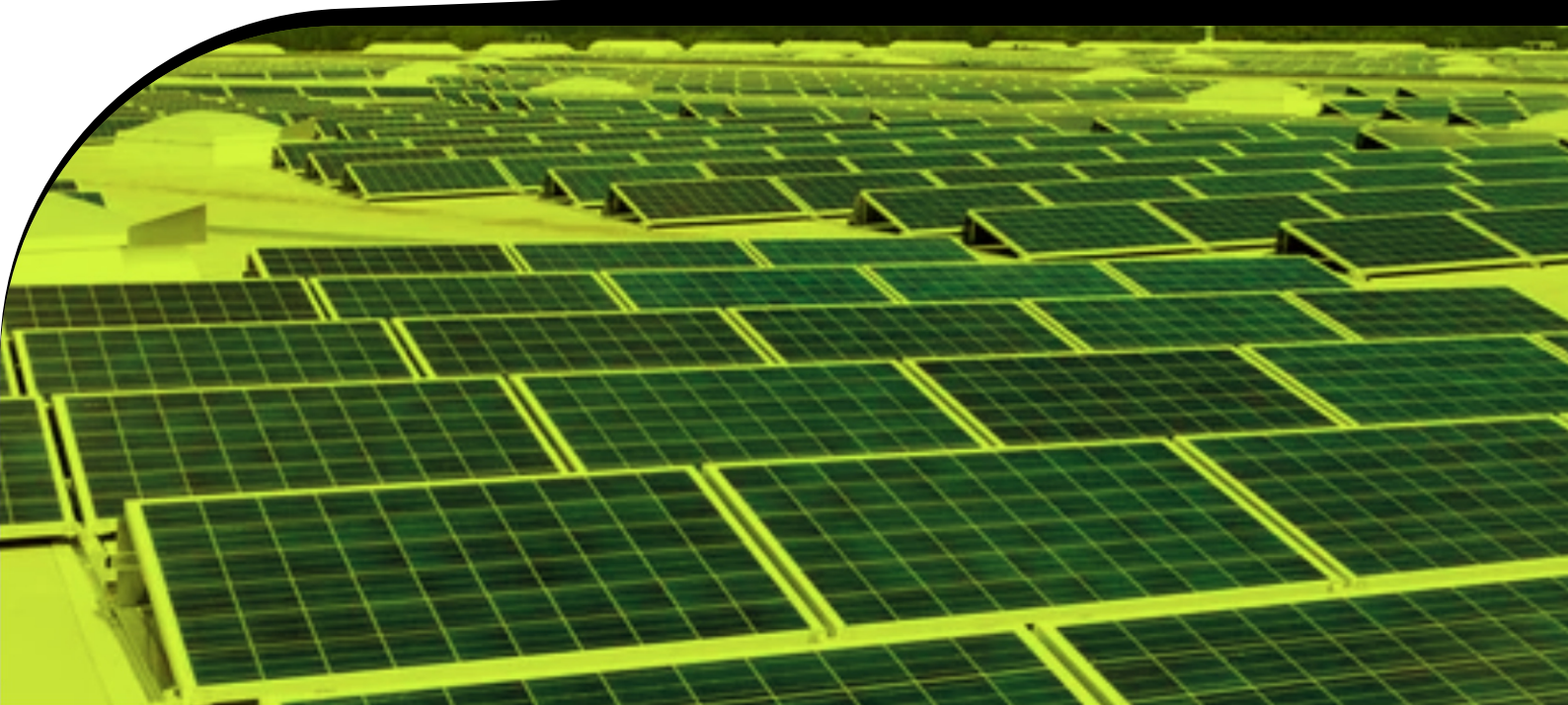
The initiative aims to accelerate energy transition and renewable energy value chain adoption in Nigeria, targeting 60% renewable energy adoption.

Strategic Action Plans

1. Sensitization and Public Enlightenment

- **Action:** Launch a comprehensive public awareness campaign on the benefits of renewable energy.
- **Timeline:** Months 1-6
- **Expected Outcomes:** Increased public awareness and acceptance of renewable energy solutions.
- **KPIs:** Number of public engagements, media coverage, and public feedback.





2. Training and Capacity Building

- **Action:** Conduct training programs for local technicians, engineers, and entrepreneurs.
- **Timeline:** Months 3-12
- **Expected Outcomes:** Enhanced local capacity to develop and maintain renewable energy systems.
- **KPIs:** Number of training sessions, participants trained, and certification rates.

3. Renewable Value Chain Development and Investment Facilitation

- **Action:** Identify and develop key segments of the renewable energy value chain.
- **Timeline:** Months 6-18
- **Expected Outcomes:** Established local supply chains for renewable energy components.

- **KPIs:** Number of local suppliers, volume of local content, and investment attracted.

4. Trade and Investment Promotion

- **Action:** Organize trade fairs and investment forums to attract investors. -
Timeline: Months 6-24
- **Expected Outcomes:** Increased investment in renewable energy projects.
- **KPIs:** Number of events held, investor participation, and investment commitments.

5. Pipeline Project Development

- **Action:** Develop a pipeline of renewable energy projects ready for investment.
- **Timeline:** Months 6-24
- **Expected Outcomes:** A robust portfolio of bankable renewable energy projects.
- **KPIs:** Number of projects developed, project readiness, and funding secured.

6. Project Financing

- **Action:** Secure financing for renewable energy projects through innovative mechanisms.
- **Timeline:** Months 12-36
- **Expected Outcomes:** Adequate funding for project implementation.
- **KPIs:** Amount of financing secured, number of projects financed, and financial sustainability.

Expected Outcomes

- Renewable Energy Adoption: Achieve

60%

renewable energy adoption in NIGERIA/FCT.

- Investment Attraction: Unlock over

\$80

million in renewable energy investments.

- Capacity Building: Develop local expertise and enhance the renewable energy value chain.

- Economic Impact: Create a multi-billion-dollar renewable energy industry in NIGERIA.

Key Performance Indicators (KPIs)

- **Public Awareness:** Number of public engagements and media coverage.
- **Training and Capacity Building:** Number of training sessions and participants trained.
- **Value Chain Development:** Number of local suppliers and volume of local content.
- **Investment Promotion:** Number of trade fairs and investment commitments.
- **Project Development:** Number of projects developed and funding secured.
- **Project Financing:** Amount of financing secured and number of projects financed.





The financing models for the renewable energy projects under the **RENEW NIGERIA** initiative are designed to attract both public and private investments, leveraging innovative financial mechanisms to ensure sustainability and scalability.

Here are some key financing models:

1. Blended Finance: Blended finance combines public and private funds to reduce investment risks and attract private sector participation. This model uses concessional finance from development banks and grants to leverage private capital. - Example: The Nigeria Distributed Access through Renewable Energy Scale-up (DARES) project, which uses \$750 million from the International Development Association (IDA) to leverage over \$1 billion in private capital.

2. Public-Private Partnerships (PPP): PPPs involve collaboration between government entities and private companies to finance, build, and operate renewable energy projects. This model helps share risks and benefits between the public and private sectors. - Example: The joint venture between Green Clean Innovation Hub Ltd (GCIH) and NIGERIA Investment Company Limited (AICL) for the **RENEW NIGERIA** project.

3. Innovative Financing Mechanisms: These include securitization, green bonds, and impact investing. These instruments help mobilize large-scale investments by providing attractive returns to investors while supporting sustainable projects. - Example: Green bonds issued by financial institutions like Providus Bank, Zenith Bank, and SunTrust Bank to fund renewable energy projects.

4. Results-Based Financing (RBF): RBF provides funding based on the achievement of specific outcomes or results. This model ensures accountability and encourages efficiency in project implementation. - Example: The DARES project uses a results-based approach to attract donor contributions and private investments.

5. Microfinance and Pay-As-You-Go (PAYGO) Models: These models provide flexible financing options for small-scale renewable energy solutions, making them accessible to low-income households and small businesses. - Example: PAYGO platforms for solar home systems and mini-grids, enabling users to pay for energy services in small, manageable installments.

6. Development Finance Institutions (DFIs) and Multilateral Development Banks (MDBs): DFIs and MDBs provide long-term, low-interest loans and guarantees to reduce investment risks and attract private sector funding. - Example: Financing from institutions like the African Development Bank (AfDB) and the World Bank to support large-scale renewable energy projects.

7. Crowdfunding and Community Investment: These models involve raising funds from a large number of people, typically through online platforms, to finance renewable energy projects. Community investment allows local stakeholders to invest in and benefit from renewable energy projects. - Example: Community solar projects where local residents invest in and share the benefits of solar installations.





These financing models are crucial for the successful implementation of the RENEW NIGERIA initiative, ensuring that the projects are financially viable and sustainable. By leveraging a mix of public and private funds, innovative financial instruments, and community involvement, the initiative aims to unlock significant investments and accelerate the adoption of renewable energy in NIGERIA.

The **RENEW NIGERIA** initiative will implement several specific Pay-As-You-Go (PAYGO) models to ensure affordability and accessibility of renewable energy solutions for end-users, particularly in rural and underserved areas.

Here are the key PAYGO models to be implemented:

1. Solar Home Systems (SHS) PAYGO Model

- **Description:** This model allows households to acquire solar home systems with minimal upfront costs. Users make regular payments through mobile money or other digital payment platforms.

- **How It Works:** - Users pay a small deposit to receive the solar home system. - Regular payments are made over a specified period (e.g., weekly or monthly). - Once the total cost is paid off, the user owns the system outright.

- **Benefits:** - Affordable access to clean energy. - Flexibility in payment schedules. - Ownership of the system after the payment period.

2. Mini-Grid PAYGO Model - Description: This model is designed for communities served by mini-grids. It allows users to pay for electricity based on their consumption, similar to traditional utility billing but with the flexibility of PAYGO.

- **How It Works:** - Users are connected to a local mini-grid.

- Electricity usage is metered, and users pay for what they consume.

- Payments can be made via mobile money or prepaid cards.

- **Benefits:** - Pay only for the electricity used. - No large upfront costs. - Encourages efficient energy use.

3. Productive Use Equipment PAYGO Model:

- Description: This model targets small businesses and agricultural users, providing them with renewable energy-powered equipment (e.g., solar water pumps, solar refrigerators) on a PAYGO basis.

- **How It Works:** - Businesses receive the equipment with a small initial payment. - Regular payments are made based on usage or a fixed schedule. - Ownership is transferred after the payment period.

- **Benefits:** - Enhances productivity and income generation. - Reduces operational costs with renewable energy. - Supports economic development in rural areas.

4. Community Solar PAYGO Model: -

Description: This model involves community-owned solar projects where members collectively invest in and benefit from solar installations. Payments are made collectively or individually based on usage.

- **How It Works:** - Community members contribute to the initial cost of the solar installation. - Regular payments are made to cover maintenance and operational costs. - Surplus energy can be sold back to the grid or used for community projects.

- **Benefits:** - Shared ownership and benefits. - Lower individual costs. - Strengthens community ties and collective responsibility.



- 5. **Hybrid PAYGO Model:** - **Description:** This model combines elements of the above models to cater to diverse needs. For example, a hybrid model might offer solar home systems with the option to upgrade to mini-grid connections as the community grows.

- **How It Works:** - Users start with a basic solar home system on a **PAYGO** basis. - As the community develops, users can opt to connect to a mini-grid. - Payments are adjusted based on the chosen service.

- **Benefits:** - Flexibility to adapt to changing energy needs. - Scalable solutions for growing communities. - Continuous access to affordable energy.

These **PAYGO** models are designed to make renewable energy solutions affordable and accessible to all segments of the population, particularly in rural and underserved areas.

By leveraging digital payment platforms and flexible payment schedules, the **RENEW NIGERIA** initiative aims to overcome financial barriers and promote widespread adoption of clean energy.

"Renew Nigeria Benefits Bag" that highlights the advantages of transitioning to renewable energy:

Benefits for State Governments



- 1. Job Creation:** Renewable energy projects can create jobs in manufacturing, installation, and maintenance.
- 2. Economic Growth:** Renewable energy can attract investments, stimulate local economies, and increase tax revenues.
- 3. Improved Air Quality:** Renewable energy can reduce air pollution from fossil fuels, improving public health and quality of life.
- 4. Enhanced Energy Security:** Renewable energy can reduce dependence on fossil fuels, enhancing energy security and reducing price volatility.
- 5. Compliance with National Policies:** State governments can comply with national policies and regulations promoting renewable energy.

Benefits for Local Governments



- 1. Increased Property Values:** Renewable energy projects can increase property values, attracting new businesses and residents.
- 2. Reduced Energy Costs:** Local governments can reduce energy costs by investing in renewable energy projects, such as solar panels on municipal buildings.
- 3. Improved Public Health:** Renewable energy can reduce air pollution, improving public health and quality of life.
- 4. Enhanced Community Engagement:** Local governments can engage with communities in promoting renewable energy, fostering a sense of ownership and responsibility.
- 5. Access to Funding Opportunities:** Local governments can access funding opportunities, such as grants and loans, to support renewable energy projects.

Shared Benefits

- 1. Reduced Greenhouse Gas Emissions:** Both state and local governments can contribute to reducing greenhouse gas emissions, mitigating climate change.
- 2. Improved Energy Efficiency:** Renewable energy can promote energy efficiency, reducing energy consumption and waste.
- 3. Enhanced Energy Independence:** Renewable energy can reduce dependence on fossil fuels, enhancing energy independence and security.
- 4. Support for Economic Development:** Renewable energy can support economic development, attracting businesses and investments.
- 5. Environmental Protection:** Renewable energy can protect the environment, preserving natural resources and ecosystems.

Here are the benefits for the private sector (local and international) in promoting renewable energy:

Government Benefits

- 1. Increased Revenue:** Renewable energy can increase government revenue through taxes and royalties.
- 2. Improved Energy Policy:** Renewable energy can improve energy policy in Nigeria, promoting sustainability and reducing dependence on fossil fuels.
- 3. Enhanced International Cooperation:** Renewable energy can enhance international cooperation and investment in Nigeria's energy sector.



Benefits for Local Private Sector

- 1. New Business Opportunities:** Renewable energy presents new business opportunities in manufacturing, installation, and maintenance.
- 2. Job Creation:** Renewable energy projects can create jobs in various sectors, contributing to economic growth.
- 3. Increased Competitiveness:** Companies that invest in renewable energy can enhance their competitiveness, reducing energy costs and improving profitability.
- 4. Improved Brand Reputation:** Companies that adopt renewable energy can enhance their brand reputation, demonstrating commitment to sustainability.
- 5. Access to Funding Opportunities:** Local private sector companies can access funding opportunities, such as grants and loans, to support renewable energy projects.



Benefits for International Private Sector

- 1. New Markets and Customers:** Renewable energy presents new markets and customers, particularly in emerging economies.
- 2. Diversification of Portfolio:** International companies can diversify their portfolio by investing in renewable energy, reducing dependence on fossil fuels.
- 3. Access to New Technologies:** International companies can access new technologies and innovations in renewable energy, enhancing their competitiveness.
- 4. Compliance with Global Standards:** International companies can comply with global standards and regulations promoting renewable energy, enhancing their reputation.
- 5. Opportunities for Partnerships:** International companies can partner with local companies, governments, and organizations to develop and implement renewable energy projects.

Shared Benefits

- 1. Reduced Energy Costs:** Renewable energy can reduce energy costs, improving profitability and competitiveness.
- 2. Increased Energy Security:** Renewable energy can enhance energy security, reducing dependence on fossil fuels and price volatility.
- 3. Improved Environmental Sustainability:** Renewable energy can contribute to improved environmental sustainability, reducing greenhouse gas emissions and pollution.
- 4. Enhanced Corporate Social Responsibility:** Companies that invest in renewable energy can demonstrate their commitment to corporate social responsibility and sustainability.
- 5. Access to Government Incentives:** Companies can access government incentives, such as tax credits and grants, to support renewable energy projects.

Economic Benefits

- 1. Job Creation:** Renewable energy can create up to 200,000 new jobs in Nigeria by 2030.
- 2. Increased GDP:** Renewable energy can increase Nigeria's GDP by up to 10% by 2030.
- 3. Reduced Energy Costs:** Renewable energy can reduce energy costs for Nigerian businesses and households by up to 30%.



Environmental Benefits

- 1. Reduced Greenhouse Gas Emissions:** Renewable energy can reduce Nigeria's greenhouse gas emissions by up to 50% by 2030.
- 2. Improved Air Quality:** Renewable energy can improve air quality in Nigerian cities, reducing respiratory diseases and other health issues.
- 3. Conservation of Natural Resources:** Renewable energy can help conserve Nigeria's natural resources, including water and land.

Energy Security Benefits

- 1. Reduced Dependence on Fossil Fuels:** Renewable energy can reduce Nigeria's dependence on fossil fuels, improving energy security and reducing price volatility.
- 2. Increased Energy Access:** Renewable energy can increase energy access for Nigerian households and businesses, particularly in rural areas.
- 3. Improved Energy Reliability:** Renewable energy can improve energy reliability in Nigeria, reducing power outages and increasing economic productivity.

Social Benefits

- 1. Improved Health and Wellbeing:** Renewable energy can improve health and wellbeing in Nigerian communities, particularly in rural areas.
- 2. Increased Education and Economic Opportunities:** Renewable energy can increase education and economic opportunities for Nigerian women and youth.
- 3. Enhanced Energy Literacy:** Renewable energy can enhance energy literacy in Nigerian communities, promoting energy efficiency and sustainability.



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