Rethinking Nigeria's proposed solar panel import policy

Balancing industrialisation and energy access

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Introduction

Nigeria faces severe energy poverty, with over 85 million people lacking access to electricity[1]. To bridge this gap, especially in underserved communities, renewable energy solutions have become increasingly vital, with solar technologies such as Solar Home Systems (SHS) and mini-grids playing a significant role among other alternatives.

In 2023 alone, Nigeria imported over 4 million solar panels, valued at more than $200 million[2]. This reliance on imported technology reflects Nigeira's urgent energy needs and the absence of an adequate local manufacturing capacity. As a result, the country is also exposed to foreign exchange pressures, supply chain disruptions, and lost job creation opportunities.

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In response, the Federal Government through the Ministry of Science and Technology, proposed a solar panel imports restriction policy. The proposed policy is anchored on the government's objective to localise solar panel production, conserve foreign exchange, and stimulate job creation within Nigeria's manufacturing sector. By reducing reliance on imported solar panels, the policy aims to enhance domestic capacity and ensure greater control over the energy transition process.

Furthermore, the government intends to use the policy as a catalyst for developing a robust solar manufacturing ecosystem. This includes incentivising the establishment of local assembly plants, attracting foreign direct investment and technology transfer, and fostering backward linkages within the supply chain, from raw materials to distribution. The policy is expected to create thousands of skilled and semi-skilled jobs, reduce project costs over time through economies of scale, and improve the sustainability of Nigeria's clean energy efforts. By fostering local industry, the government aspires to meet growing energy demands and stimulate long-term economic growth.

What are the implications to this proposed policy?

This article explores the opportunities and risks of the proposed policy. It evaluates the potential impact on energy access, affordability and local capacity development. It also considers how Nigeria can balance its industrial ambition with the urgent need to expand access to clean and affordable electricity especially for its most vulnerable communities.

Setting the context

Nigeria has made steady progress in expanding access to electricity, particularly through off-grid solar solutions. The Rural Electrification Agency (REA) reports that in 2023 alone, over 1.4 million Nigerians benefited from solar interventions including standalone Solar Home System (SHS), mini-grids, and street lighting across all six (6) geopolitical zones.

A cornerstone of this progress is the $750 million World Bank-funded Distributed Access through Renewable Energy Scale-up (DARES) programme, which aims to deliver off-grid solar electricity to 17.5 million Nigerians.

To support local content and industrialisation and as specified in the Electricity Act 2023, the Federal Executive Council (FEC) approved the National Integrated Electricity Policy (NIEP) in May 2025. Among other reforms, NIEP proposes fiscal incentives for local solar assembly plants, the creation of renewable energy industrial zones, and global partnerships for technology transfer. If implemented effectively, the policy could stimulate domestic production, increase job creation, and reduce Nigeria's vulnerability to foreign currency exposure.

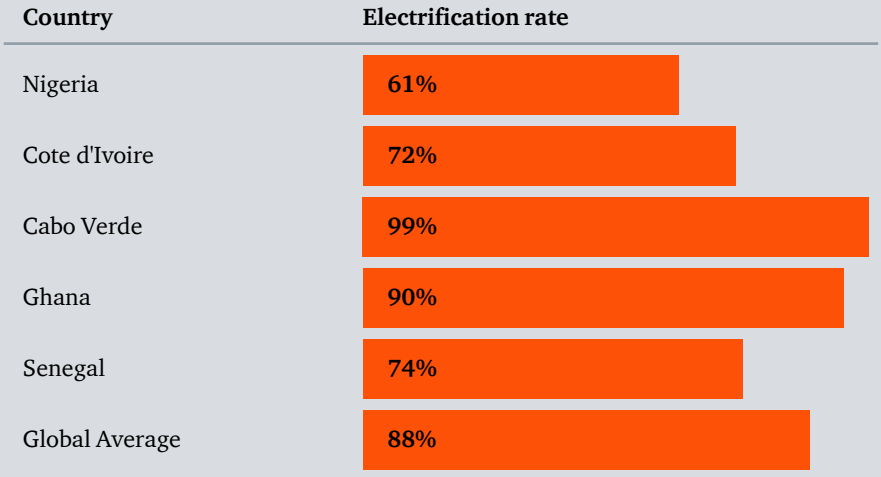
The following sections examine the potential implications of the proposed solar panel import policy for the energy sector, analysing both the potential challenges and the strategic pathways available to ensure that industrial policy supports Nigeria's clean energy transition.

Potential implications for the energy sector

Higher energy costs

Solar remains unaffordable for many, especially in rural areas. With electricity tariffs reaching ₦220/kWh for Band A class of customers, most households may be unable to afford these rates. An import restriction could lead to further increases in solar prices, making off-grid solutions less affordable and accessible.

Electrification gap 2023



Nigeria trails behind several peer West African countries in electrification effort, with only 61% of its population having access to electricity. This highlights the urgent need for targeted investments and policies to close the country's electrification gap.

Source: IEA, IRENA, UNSD, World Bank, WHO. 2023. Tracking SDG 7: The Energy Progress Report. World Bank, Washington DC

Reduced energy access

Off-grid solar programmes backed by the REA have powered over 1.5 million households and created thousands of jobs, demonstrating the vital role solar importation currently play in scaling access. However, an import restriction could disrupt this momentum. These projects depend on timely and cost-effective access to imported solar panels and components. Without a well-established local supply chain to fill the gap, developers may face delays, increased costs, or shortages of critical equipment, slowing deployment and jeopardising project timelines. This could reverse recent gains as population grows and undermine Nigeria's ability to meet Sustainable Development Goal 7 (SDG 7) on achieving universal access to affordable, reliable, and modern energy by 2030.

Investor uncertainty

The lack of clarity around timelines, exemptions, or quality standards for local production creates regulatory risk, which can deter both foreign direct investment and local capital formation in renewable energy projects.

For example, initiatives like the $750 million DARES project rely on cost-effective imports and predictable supply chains. A sudden restriction could destabilise business models for mini-grid developers and clean energy startups, deterring investment and stalling electrification efforts.

Local manufacturing readiness

While the intent to develop local capacity is commendable, Nigeria currently lacks the scale, technological sophistication, and financing ecosystem required for mass production of high-efficiency photovoltaic modules. Without parallel support mechanisms such as Research and Development (R&D) investment, tax incentives, and access to financing, the local industry may struggle to meet demand both in volume and in quality.

Local manufacturing without strong oversight risks flooding the market with substandard products. In the absence of clear certification standards from Standard Organisation of Nigeria (SON), Nigeria Electricity Management Service Agency (NEMSA), and Nigeria Electricity Regulatory Commission (NERC), poor-quality panels could erode consumer trust and compromise safety, efficiency, and long-term adoption.

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Way forward: A balanced energy strategy

The proposed import restriction policy reflects Nigeria's ambition for energy security and industrial growth. Albeit a measured and strategic approach is needed to avoid unintended disruptions. The goal should be to scale local manufacturing without compromising access to affordable solar energy.

Phase the import policy

Rather than an instant restriction, Nigeria should adopt a three to five year phased reduction in solar panel imports. This would give local manufacturers time to:

- Build capacity,
- Establish quality control systems, and
- Meet growing market demand.

A tiered strategy that may include import quotas, progressive tariffs, or blended procurement (import + local) would ensure supply continuity and attract long-term investment under a stable regulatory framework.

Strengthen incentives for local manufacturing

To make local solar panel production viable and competitive, the government must provide a coordinated package of fiscal, industrial, and infrastructure-related support. Fiscal policy should include expanded tax reliefs and customs incentives, while industrial policy should focus on enabling domestic value chains, technology transfer, and skills development. On the infrastructure side, manufacturers need robust access to efficient transport logistics, and proximity to ports or special economic zones to reduce production and distribution costs.

Currently, a number of incentives exist to promote renewable energy manufacturing in Nigeria. However, uptake remains limited due to bureaucratic hurdles, inconsistent application across agencies, and lack of awareness among potential investors. The table below outlines key existing incentives and the institutions responsible.

Incentive	Description	Authority
Pioneer Status Incentive**	3–5 years tax holiday for eligible Renewable Energy (RE) manufacturers.	Nigerian Investment Promotion Commission (NIPC)
Import Duty Waiver	Duty-free import of machinery and raw materials for Renewable Energy production.	Nigeria Customs Service; REA; NIPC
VAT Exemption	VAT exemption on solar panels and inverters under approved tariff codes.	Federal Inland Revenue Service (FIRS)
Capital Allowances	Accelerated depreciation for qualifying Renewable Energy assets.	FIRS; Ministry of Finance
Green Finance Instruments	Access to concessional loans, green bonds, and blended finance for Renewable Energy projects.	Central Bank Nigeria; Development Finance Institutions; Green Bond Programme

**Pioneer Status incentive (PSI) was changed into Economic Development Incentive (EDI) by the recent Tax Acts signed into law

While these incentives are positive steps, they require better implementation, streamlined approvals, and stronger inter-agency coordination. Strengthening these tools through single-window applications, clearer eligibility criteria, and dedicated renewable energy desks in key ministries can unlock investment and speed up factory development.

In addition, there is need to establish renewable energy industrial zones to serve as manufacturing hubs.

These zones could offer:

- Shared infrastructure (e.g. warehousing, internal power generation),
- Streamlined regulation and permitting processes, and
- Strategic access to transport corridors and ports.

By aligning policy and infrastructure in this way, Nigeria can create an enabling environment for solar manufacturers to scale quickly and sustainably for a robust, competitive local solar industry.

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Build skills for a renewable workforce

Manufacturing solar panels isn't just about equipment, it requires a skilled workforce. Government should partner with universities, polytechnics, technical colleges, research institutions and development agencies to create a national renewable energy skills framework. Programmes in PV design, assembly, quality testing, and installation will help develop a pipeline of technicians, researchers and engineers to support industry growth. Investing in workforce development now ensures that Nigeria has the human capital to sustain a clean energy transition.

Enforce quality standards

To protect consumers and build trust in local products, Nigeria must implement robust quality assurance and certification systems. The SON, in collaboration with NEMSA, NERC, and others, should adopt International Electrotechnical Commission-aligned standards (IEC-aligned standards) for solar modules, inverters, and batteries.

Introducing mandatory product certification, factory audits, and independent testing labs will prevent the market from being flooded with substandard goods. For example, India's Quality Control Order (QCO) offers a proven model Nigeria can replicate to ensure product reliability and safety.

Expand access to finance

Access to capital remains a major barrier for both consumers and manufacturers. Financial institutions should scale up:

- Special Low-interest loans for manufactures
- Green bonds instruments for manufacturers
- Pay-As-You-Go (PAYG) models for end users

Institutions like the Bank of Industry (BoI) and Central Bank of Nigeria (CBN) should offer dedicated long-term green finance facilities to manufacturers for factory development and equipment acquisition.

Engage stakeholders

Broad consultation with private sector actors, development partners and donors such World Bank, Africa Development Bank and civil society can help create a more coherent renewable energy policy landscape and prevent policy shocks. Establishing a feedback mechanism could also help stakeholders to provide input to post-implementation and support continuous policy refinement.

Monitor and evaluate policy outcomes

A strong monitoring and evaluation (M&E) framework is critical to track the performance of Nigeria's solar manufacturing policy. Clear, measurable indicators like the number of jobs created, cost reduction per panel, local solar panel produced as a percentage of total panels will help assess progress, identify gaps, and guide policy adjustments.

Annual progress reports could be published to ensure transparency, drive public-private alignment, and inform investors and development partners of Nigeria's clean energy trajectory.

Conclusion

Nigeria's proposed solar panel import policy reflects a drive to stimulate local industrial development. However, a careful implementation is important to avoid slow momentum in the country's clean energy transition and damping investor confidence. A recalibrated policy approach rooted in strategic sequencing, quality assurance, and supply chain realism can ensure that Nigeria's industrial policy objectives aligns with its clean energy and development goals.

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