

Unlocking **Affordable Renewable Energy** for Women- Led MSMEs in Nigeria through Concessional Finance





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EXECUTIVE SUMMARY

Energy costs are rising, and access to affordable finance is scarce for women-owned micro, small, and medium-sized enterprises (MSMEs) in Nigeria. Combined with the increase in diesel prices, the phased out of petrol subsidies is causing hundreds of women-owned small-scale businesses to pay up to 20–35% of their monthly operating income for energy (GOGLA, 2024). Additionally, a few of these women-entrepreneurs have access to formal credit: 16–20% of women in Sub-Saharan Africa can secure long-term financing (AfDB, 2022). Sadly, the lack of credit history of SMEs in Nigeria and a collateralized system, coupled with the high informality of businesses, have continuously locked out women-led MSMEs from benefiting from over 90% of government and commercial financing programs (The FATE Institute, 2024). However, the potential for policy action can be achieved by devising a financial mechanism that transforms both the energy access and credit gap, respectively. This paper recommends a targeted concessional loans of ₦1 million to ₦20 million for the purchase of renewable energy assets for productive use. The government-backed guarantees, which will cover 30% of the first loss, are designed to reduce risks for financial institutions and help bring in commercial capital. It solves the energy problem for millions of poor women entrepreneurs and, at the same time, ensures widespread financial inclusion.

In a flexible financing cold chain cohort 2024–2025 in Nigeria (Data from Baobab+ Nigeria), women were able to achieve a 91.8% unlock rate with an arrears incidence of only 8.2%, more than doubling the performance in unlocking made by their male counterparts while improving overall performance considerably. This demonstrates that capital development finance in the hands and aimed at women can scale with lower credit risk, as well as cutting energy spend by c. 30–50% through solar productive assets. It is also a departure from earlier interventions with micro-credit, not gender targeted, or silo based like we have seen done between energy and MSME development. It is intentionally architected for breakthrough impact. Leveraging of global best practices, including:

- The YBI–Somo Revolving Fund in Kenya observed 78% repayment by low-income women entrepreneurs (YBI, 2023).
- India’s PM-KUSUM scheme for providing 60% subsidy on solar irrigation pumps, leading to a two-fold increase in farm incomes through concessional finance and bundling (IRENA, 2020).

This paper calls for the launch of this novel finance facility jointly by the Federal Government of Nigeria, development finance institutions (DFIs), commercial banks and off-grid energy providers. The initiative, when implemented, can drive inclusive productivity and accelerate Nigeria’s energy transition for a more gender equitable entrepreneurial ecosystem.



1. Introduction

Micro, Small and Medium Scale Enterprises (MSMEs) are a veritable vehicle for addressing some of Nigeria's economic challenges, constituting over 45% of national GDP and accounting for more than 80% of total employment (SMEDAN, 2021; the FATE Institute, 2024). The critical importance and social impact of women-led enterprises across many sectors are evident. The businesses are spread across various sectors, including food processing, tailoring, beauty services, agribusiness, and retail. But systemic barriers in the two areas that have most hampered them offer little hope: affordable energy and flexible finance.

SMEs have faced a sharp increase in operational costs since the removal of petrol subsidies in 2023. In Nigeria, for instance, the average price of petrol rose from ₦626 per litre in early 2023 to above ₦1,030 per litre by the third quarter of 2024 (NBS, 2024). Such a rise has further burdened women-led MSMEs, most of which continue to rely on small petrol generators for daily operations. Meanwhile, Band A business customers witnessed surges in electricity tariffs from ₦68 per kilowatt-hour to ₦206.8 per kilowatt-hour by mid-2024, with no proportionate increase in power supply reliability (NERC 2024). Such changes have made it even harder for small businesses to survive, particularly those that are energy-intensive and run by women.

In Nigeria, for instance, the average price of petrol rose from ₦626 per litre in early 2023 to above ₦1,030 per litre by the third quarter of 2024 (NBS, 2024). Such a rise has further burdened women-led MSMEs, most of which continue to rely on small petrol generators for daily operations.

Yet credit remains the biggest roadblock. Institutional finance is available to less than 20 per cent of women entrepreneurs across Sub-Saharan Africa (AfDB, 2022). Many women-led MSMEs in Nigeria are informal and operate without credit history or traditional collateral, making them ineligible for most financing opportunities. The fear of higher-risk classification by commercial banks and other formal lenders has thus led to a broad-based financial exclusion. While there are some public interventions — for example, the ₦75 billion MSME fund or the ₦9 billion SMEDAN-fintech initiative — they are not designed to capture informal or semi-formal women entrepreneurs. The loan amounts are mostly too small, and the application processes are either unreachable or too intricate (Moniepoint, 2024).

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And the pressures in rising costs, sanctions-barred world are beginning to show. The proportion of women-led MSMEs that reported growth in the previous year decreased from 74 per cent in 2023 to 63 per cent in 2024, according to the 2024 State of Entrepreneurship in Nigeria Report by the FATE Institute. This decrease is even more significant than the growth rate of 64.3 per cent recorded for male-led businesses in the same period. Without targeted, impactful interventions, women-owned MSMEs remain at risk of treading water or disappearing altogether, with implications beyond job security and economic stability.

This policy paper explores the role of providing concessional renewable energy finance specifically for women-owned MSMEs, accompanied by a government-backed first loss guarantee to reduce investment risk, in reducing energy prices, and enhancing business profitability, financial stability as well as job creation. It suggests a bold but pragmatic approach to overcome longstanding barriers and provides a detailed blueprint for action.

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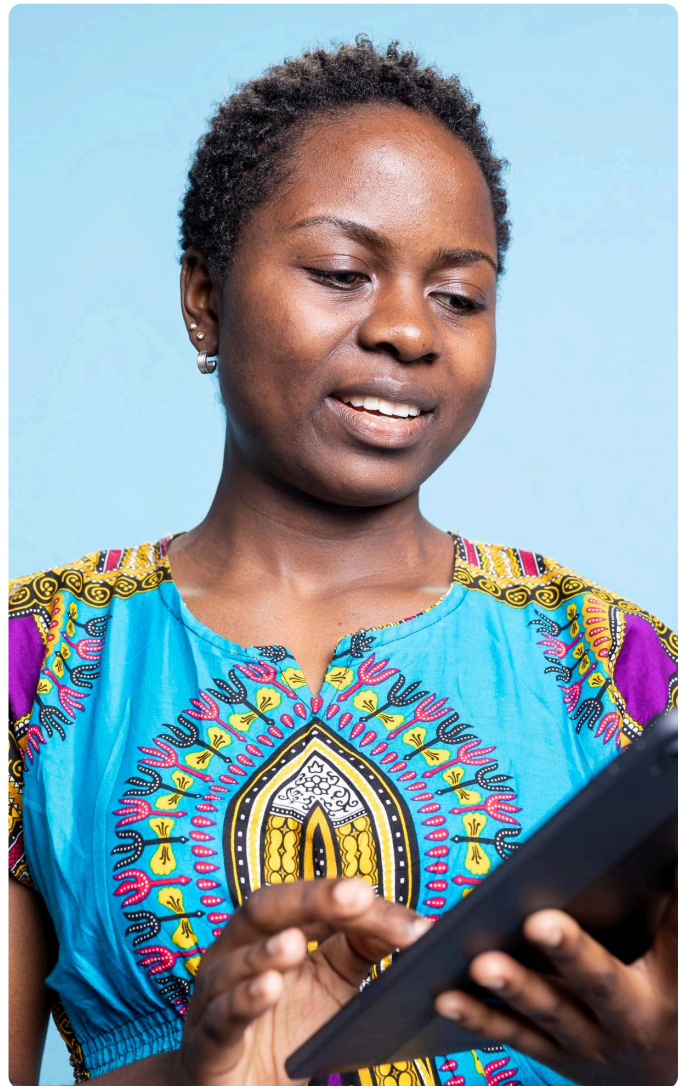


Undertaking a Mapping of the Energy Access and Finance Gaps for Women-led MSMEs.

One of the key challenges faced by Micro, Small and Medium Enterprises in Nigeria is access to affordable and reliable energy. This challenge is further exacerbated for women-led MSMEs due to its sectoral concentration, geographical diversity and financial fragility. Most of these businesses are in regions where the grid does not reach and have had to resort to using petrol or diesel generator sets for their operations. The result is that a greater percentage of monthly income is required to be spent upon energy, which degrades profitability and long-term viability.

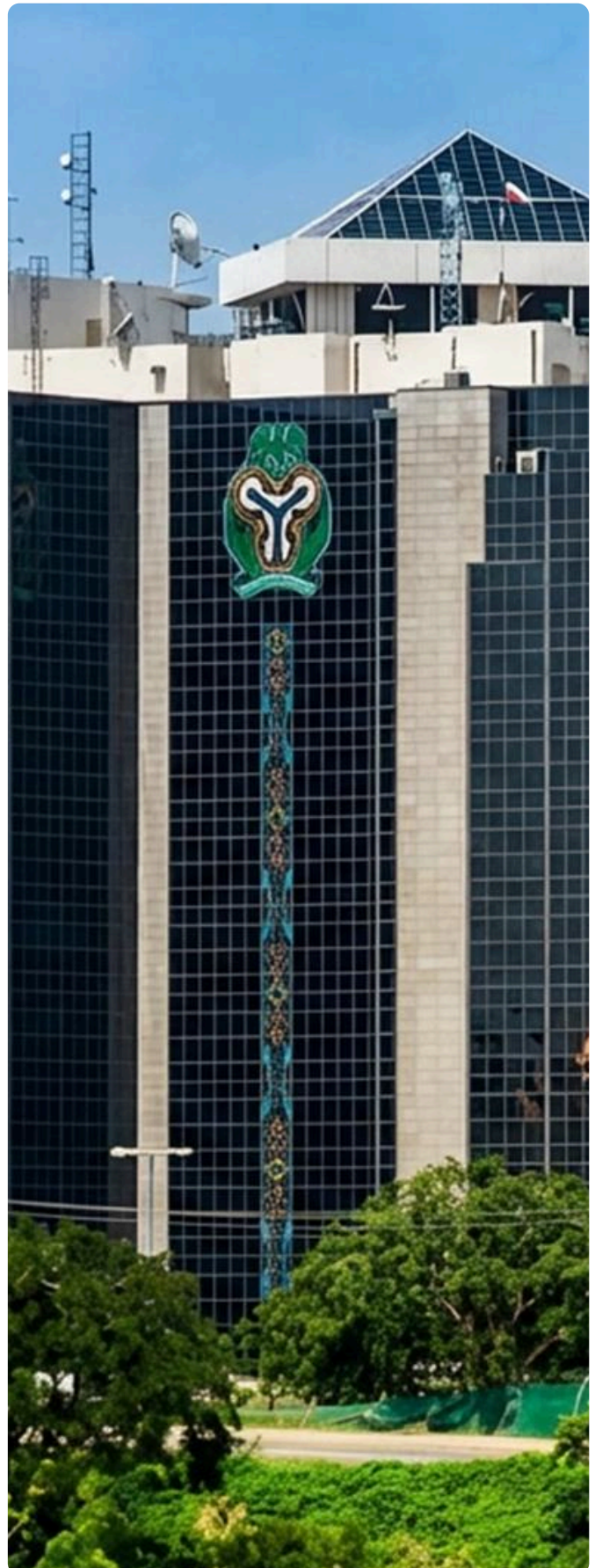
Data till date shows energy costs can be as high as 20-35% of monthly revenue and that is for MSMEs within the informal sector in Nigeria. This is above the regional and global standards for energy spending by companies (GOGLA, 2024; Moniepoint, 2024). The strain on these enterprises has only increased following the elimination of fuel subsidies and with global energy prices boosting substantially. In the third quarter of 2024, price was up to ₦1,000 per litre by NBS (2024) and electricity for Band A business customers recorded over a 200% increase in that period too according to NERC (2024). These shocks have only added further pressure to precarious small businesses, like those in tailoring, food processing, and small-scale retail sectors where women contribute the greatest amount of labor. Meanwhile, women entrepreneurs are further pushed to the margins of the financial ecosystem. In sub-Saharan Africa alone, a figure of more than 42 billion US dollars represents the known as well as the documented credit gap for women. Only 20% of the women-led firms who need long-term finance get it, in Nigeria. Which is aggravated due to the high informality prevalent everywhere. FATE Institute (2024) confirms that over 70% of MSMEs operate outside formal registration frameworks and consequently do not have qualifications such as tax identification numbers, financial statements or recognised credit histories. Women's informality is often more deeply linked to structural factors such as low asset ownership, financial illiteracy, and lack of access to formal savings or cooperative groups (CGAP 2022).

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These are the reasons that prevent Women-Led MSMEs from most of the prevailing government support programmes. The Central Bank AGSMEIS fund, ₦75 billion MSME credit scheme, and SMEDAN fintech partnerships are examples of intervention that are usually designed for formal businesses with legal registration and documented financials (Moniepoint, 2025). Even within the energy access space, programs such as Solar Power Naija have been heavily weighted toward household electrification with little consideration towards productive-use energy solutions or gender gaps. There appears an inadequate focus on the type of solar solutions availed to help women-led enterprises, like freezers, mills or industrial sewing machines. This leaves a fair massive and growing gap for MSME growth in Nigeria. Again, only 63 percent of women-led MSMEs saw growth over the prior year (The FATE Institute, 2024). This is down from 74 per cent in 2023 and a bigger fall than male-led businesses, even though women account for around half of all business owners within the nation. Fewer women-led businesses either adopted new technologies or used capacity building programmes due to high costs, not having specific support, and others. Such chronic marginalization from energy infrastructure, and from financial systems too, requires solutions that are both more systemic as well as targeted. One where the growth and survival of women-led MSMEs will continue to be limited, and so too will the broader aims of financial inclusion, enterprise development, gender equality.

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Energy and Finance Interventions in Nigeria: The Old and the New



Energy and Finance Interventions in Nigeria: The Old and the New

In responses to many from the public and private sector, a plethora of programmes designed to support micro, small, and medium enterprises (MSMEs) were rolled out in Nigeria especially because MSMEs are most vulnerable after economic shocks such as the COVID-19 pandemic and recent reforms in the energy sector. This has involved concessional loans, regional credit guarantee schemes, support for rural enterprise, and off-grid solar deployment. These efforts are praiseworthy and have yielded positive results but failed to meet the needs of women-led MSMEs, particularly for investment in renewable energy for productive use.

Positive Efforts and Initiatives

- The SMEDAN Loan Scheme — Launched in 2023, the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) launched a ₦9.4 billion loan programme for micro-enterprises and small enterprises as part of an initiative to improve access to affordable financing for small businesses across Nigeria. The loans ranged between ₦250,000-₦1.5 million and were priced at a cost-effective 9 percent interest rate in addition to capacity building support (Moniepoint, 2024).
- The AGSMEIS (full Agric-Business/Small and Medium Enterprises Investment Scheme), which was put in place by the Central Bank of Nigeria (CBN) where small businesses are empowered with loans up to a maximum limit of ₦10 million at an annual percent rate of 5. The programme, which was initially conceived as a post-COVID economic recovery initiative, has been mainly limited to business owners who are eligible and have received entrepreneurship training (CBN, 2021).
- RAPID (Rural Area Programme on Investment for Development) – The Bank of Industry is also backing the RAPID programme which is focusing on rural enterprise support and has components for off-grid energy investment. This implementation is, however, of a small scale and not wide enough as there is no cross-sectional visibility or coordination between ministries (BOI, 2023).

Solar Power Naija This programme was launched in 2020 as one of the components of the Economic Sustainability Plan with an aim to deploy five million solar lighting bulbs to about 25 million Nigerians at a cost of ₦140 billion. It is an ambitious programme designated for household energy access and not commercial energy needs. Moreover, it did not emphasize gender, nor utilize concessional loan modalities for the acquisition of productive-use solar technologies (REA, 2021).



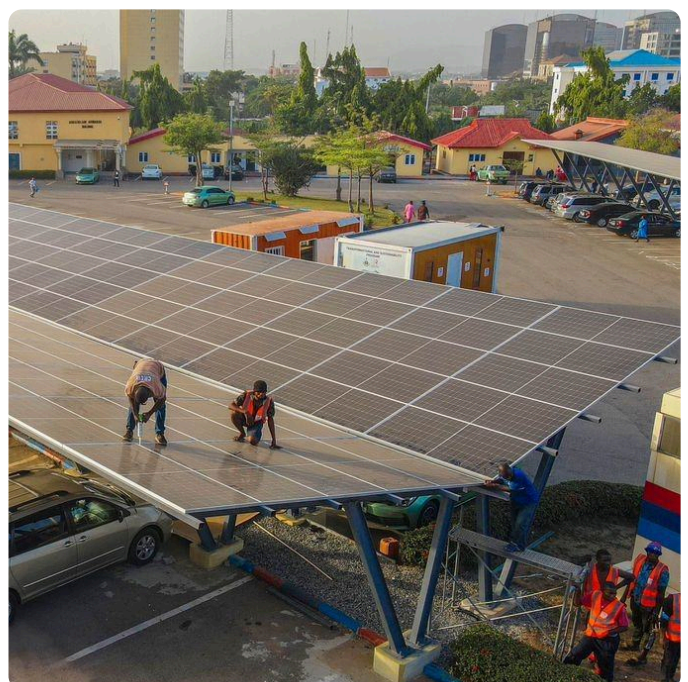
CONTINUING GAPS IN DESIGN AND DELIVERY

These have been ambitious but largely inadequate to successfully support women-owned MSMEs, with limited capacity in serving the needs of those seeking RE for income generation.

- **Limited Accessibility of Loans for Households in Need of Productive Solar-** While programmes such as AGSMEIS have the capacity to deliver loans as high as ₦10 million, another public scheme delivers disbursements at much lower rates, with most disbursed loans below ₦1.5 million (thus effectively out of reach to informal women-led MSMEs). This represents a sizable financing gap, given that an average standalone solar business asset for businesses like cold storage units, fridges or solar mills usually ranges from ₦1-15M (GOGLA 2024).
- **No Gender-Responsive Design** — Typical interventions are designed and implemented for any gender. This report has focused on bank disbursement data, while systemic barriers are expected to affect their technology adoption (although it is not possible to verify such direct links using the current dataset), on top of personal circumstances.
- **No focus on Productive Energy use:** For the most part, government energy programmes have focused on household-level electrification. Solar Power Naija, meanwhile, focused on lighting solutions and small solar kits as opposed to the more commercial-grade energy systems needed by MSMEs. This results in a mismatch between entrepreneurs' energy needs and available solutions (GOGLA, 2023).
- **Silos in Execution:** A lack of integration between energy and finance, and enterprise support. Although SMEDAN offers some business loans and training, it does not integrate with energy access initiatives. Correspondingly, the Rural Electrification Agency (REA) does not have a direct linkage between its solar programmes and MSME finance/ entrepreneurship development. Such fragmentation dilutes returns and limits impact.

- **Risk Sharing to be Catalyst for Lending:** One of the biggest impediments in lending by banks and financial institutions to women-led MSMEs is related to the absence of risk-sharing mechanism viz-a-viz first-loss guarantee. But these do little to mitigate the key factors that discourage lenders from underwriting informal, asset-light businesses without any credit history; This renders a large proportion of women entrepreneurs in a dire financial position (CGAP, 2022).
- **Unavailability to Informal Businesses:** Most schemes have been designed keeping in mind formally registered enterprises. Requirements like the Tax Identification Number (TIN), business registration with the Corporate Affairs Commission, or accredited training programs will not work for a very large number of women-led MSMEs who operate in the informal sector due to structural and social barriers (FATE Institute, 2024).

Although the Nigerian policy landscape includes various efforts to promote MSMEs and ensure greater energy access, these interventions are limited, inadequate, and unsatisfactory in addressing women entrepreneurs' specific needs. No current programmes amalgamate access and concessional finance, gender-intentional targeting and productive-use renewable energy in an integrated manner. This is a policy gap that represents an obvious opportunity for a new catalytic intervention that brings together these components at scale, with impact and equity.



Why This Intervention is Better

This new Women MSME Solar Finance Facility is a transformative model based on the most critical learnings from past energy access interventions and enterprise finance programs. This mechanism uses properly sized concessional loans to sheer scale, derisk commercial capital and improve the most marginalized segment: informal women-led micro and small businesses through a government backed first loss guarantee with a gender intentional design.

A Solar PAYGo company in Nigeria has found that on repayment, women founders outperform men in a way that could hardly happen by chance. The 2024 to 2025 cohort, with very low average arrears, has a possibility of nearly an 82 per cent difference between men and women (21.1% for men and only 8.2% for women). This creates a strong argument for us to find how we can direct concessional capital in the hands-on female entrepreneurs, who are a low-risk high impact target audience. Introducing gender-sensitive risk weights into the backstop can shorten private sector financing and deepen financial inclusion, increase energy access



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We Create Loans that Reflect the True Price of Productive Energy Assets.

Unlike previous programs that have only given out small loans or set tough eligibility requirements, this new facility provides funding of between ₦1million and ₦20 million specifically aligned with capital expenditures on solar products for productive use.

Although some public programmes such as AGSMEIS provide an utmost loan ceiling of ₦10 million, in practice most disbursements are significantly less than ₦1.5 million. Of greater concern is the impact of one targeting criteria that limits access only to formally registered businesses that have completed certified entrepreneurship trainings therefore systematically excluding most women entrepreneurs who operate informally (CBN, 2021; FATE Institute, 2024). This thereby provides a significant unserved potential for solar productive assets for larger, flexible and more accessible loans.

- Productive-use solar asset costs like the above.
- Solar powered deep freezers – 1m to 5 m
- Milling or grinding machines: N3 million to N7 million
- Solar kiosks with integrated storage (cold): ₦8–15m (GOGLA, 2023)

The credit facility enables women-led MSMEs to purchase these assets that bring in revenue, thereby transitioning from subsistence-living operations to expanding the business. Mobile instalments in partnership with energy usage will be sufficient to serve smaller loan tickets through Pay-As-You-Go (PAYGo) structures as well.

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First-loss guarantee from the government to provide risk-sharing for banks

Without access to collateral, or any way of verifying the informally earned income of MSME business owners, commercial banks and microfinance institutions normally shy away from lending to these asset-light MSMEs. This perception of risk is even stronger for women-led MSMEs with less collateral and credit history and more informality in their operations. The proposed 30% first-loss guarantee is a strong risk-mitigation measure that will cover initial losses – stemming from delayed cash flows, smaller ticket sizes and riskier profiling of formal micro enterprises and encourage lenders to lend with more diligence in the space.

It is based on tested models from around the world. For example, in Bangladesh the IDCOL solar programme stimulated more than 400 million US dollars of private lending by blending concessionary loans with donor-based credit guarantees to attain repayment rates exceeding 90 percent (World Bank, 2021). Such a de-risking mechanism is missing within the MSME finance architecture in Nigeria today. This intervention fills that gap.



Strengthening the cycle of MSME Businesses and Cycle of Women.

In fact, the bulk of MSME loans in Nigeria are mostly short-term or inflexible in terms of repayment. It does not go well with the cash flow cycles of microenterprises, especially in sectors like agribusiness, food retail, and tailoring. According to OCP Africa, the facility will provide loan tenors from 18-36 months and have optional grace periods for up to six months. Types of repayment include PAYGo, weekly MFI payments, or monthly instalments aligned with use-based revenue streams. Furthermore, the fund integrates gender-responsive elements:

- A minimum of 60 per cent disbursements to women-led MSMEs
- Gender-disaggregated data will be monitored and reported
- Informal businesses (such as those without formal registration but with verifiable business operations) will be eligible for support

This is an approach the programme says sets it aside from earlier initiatives, as traditional programmes have failed to consider real-life circumstances encountered by women entrepreneurs.



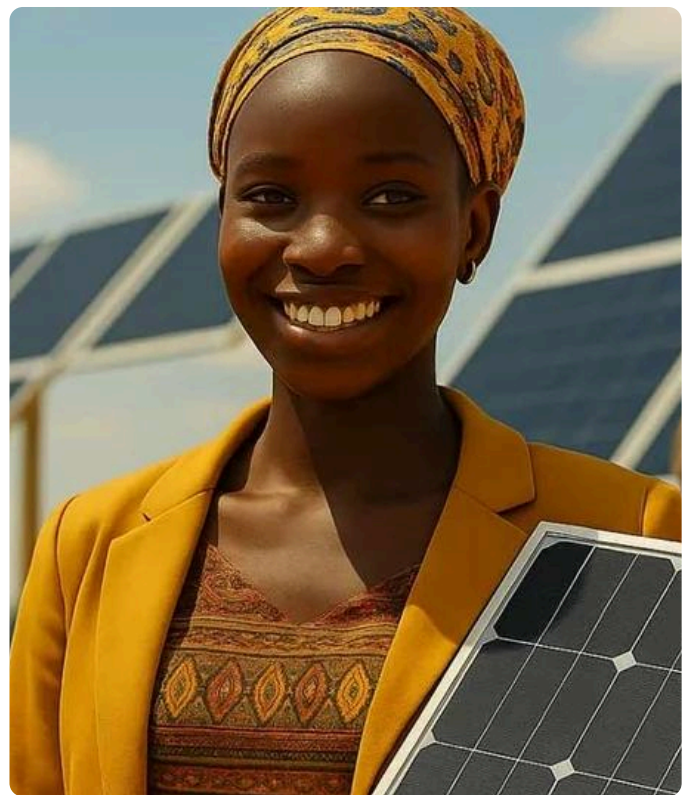
Finance, Energy, and Enterprise Support Integrated

Unlike most past initiatives, several of which had been credit-centred, others decidedly capability-constructing, one-at-a-time sorts of approaches. The Women MSME Solar Finance Facility can also serve as a holistic ecosystem solution.

For example, a woman in Ebonyi who has been running a frozen food business could:

- Get a #5Million solar-powered cold room loan
- Basic training on energy efficiency and digital finance
- Leverage PAYGo-enabled payments to form a digital credit footprint
- Benefit from top-up loans or new kit as her business grows

It's an integrated solution, so it is more cost-efficient. It makes sure that things are sustainable and not just a quick fix to then start breaking down again.



Global Case Studies: Models of Concessional Finance Driving Energy Access and Enterprise Growth



This section identifies three successful international scaling models that contribute to the case for concessional renewable energy finance with a first-loss guarantee. Every example illustrates a financing pathway that combines low-cost capital, risk-reduction efforts, and gender-informed design to achieve scale in energy access and enterprise growth.

Kenya: YBI–Somo Revolving Loan Fund for Informal Women-Owned Enterprises

The Futuremakers by Standard Chartered Foundation Funds Youth Business International (YBI) and Somo, to deliver a revolving loan facility targeted at informal female entrepreneurs between the ages of 18-35, which launched in 2023. The fund has loans for between \$1,000 and up to \$25,000 – here's the kicker – a very low annual interest (5 per cent). The blueprint includes a different approach to credit scoring, the Somo Scorecard. It takes in non-traditional data like peer networks, business activity, and mobile money transactions harvested from platforms such as DigiKua and Somolvest.

The capital model is a recycle-able one with the fund. Repayments are passed to the next set of potential candidates, and voila – a credit machine is born. In its first year, the program attained a repayment rate of 78 per cent, far above what would have been expected for informal lending. They demonstrated that data-informed underwriting, along with accurate financial literacy tied to strategy, led to better impacts for women entrepreneurs (YBI & Somo, 2023).



India: PM-KUSUM, The Pradhan Mantri Kisan Solar Pumps Yojana.

India's Ministry of New and Renewable Energy rolled out the PM-KUSUM scheme in 2019, a massive concessional financing programme that benefits solar-powered irrigation for rural agricultural producers. In the stand-alone solar pump category, up to 60% is provided by the government as a subsidy, with the balance cost provided through a bank loan at concessional rates with a credit-linked back-ended subsidy. The defragmented higher capital cost and lower O&M tariff and payment shall be released every year over the first six years. It also caters to the solarisation of existing grid-connected pumps and encourages small solar plants connected to agricultural feeders.

While PM KUSUM is not a gender-based programme, it has certainly had impacts on increasing incomes in rural communities and reducing diesel dependency. In a 2022 survey, solar pump recipients recorded higher productivity and crop yield consistency. For example, across districts women farmers were able to expand cultivable areas, and in less need for collecting water from labour intensive sources (UNDP India, 2022). This is because the bundling of subsidies, affordable credit, and decentralised solar technology allowed it to be scaled as a replicable model of productive-use finance (IRENA,2021).

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Solar Home System Programme, Bangladesh: IDCOL

Infrastructure Development Company Limited (IDCOL) in Bangladesh is one of the most successful off-grid solar finance models worldwide. The Solar Home System programme, launched in 2003, aimed to deliver clean energy to rural areas through concessional loans, targeted subsidies, and technical partnerships. The programme served over four million installations for more than fifteen years, and an estimated twenty million people.

The programme received over one billion US dollars in blended finance. The total included \$683 million from international development partners in the form of concessional funds and grants, and \$416 million from the World Bank International Development Association (IDA). While IDCOL never officially used a first-loss guarantee, its downscaling mechanism resulted in a 90+ per cent repayment rate by leveraging microfinance institutions, post-sale bundling, and fostering local supply chains (IDCOL & World Bank, 2024).

Cross-Learning for Nigeria

These case studies provide critical insights for the Women MSME Solar Finance Facility that Nigeria aims to implement:

- Kenya: Alternative Credit Scoring for Women
Kenya: Targeting Support to Informal Women Entrepreneurs
- India is a shining example of blending subsidies and concessional loans to drive national scale creation of productive solar assets.
- Bangladesh: Demonstrates how targeted blended finance, when coupled with on-the-ground implementation partnerships, can drive scale and ensure sustainability.

The Women MSME Solar Finance Facility will be based on these models, combining them to define a finance mechanism that is both inclusive and commercially viable yet suited to Nigeria's enterprise energy needs and gender inclusion priorities.

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**Policy
Recommendation:
Women MSME
Solar Finance
Facility (WMSFF)**

Goal: Introduce a specific concessional finance facility to facilitate women's access to productive-use solar energy assets among micro, small and medium-sized enterprises in Nigeria. The facility will come with a government first-loss guarantee that will help reduce risks and spur lending by commercial and development banks.

Loan Size: Loans will be between ₦1 million to ₦20 million. The figure on the right in blue is what we call productive-use solar technologies, i.e. cold rooms, grinding machines, industrial sewing equipment, solar-powered clinics, etc, and this chart reflects products made under these projects that typically cost those amounts, and the desired funding amounts were to build an inventory of these technologies for commercial distribution. Pay-As-You-Go models or microfinance institution channels will also be used as last-mile solutions for smaller loan sizes below ₦1 million.

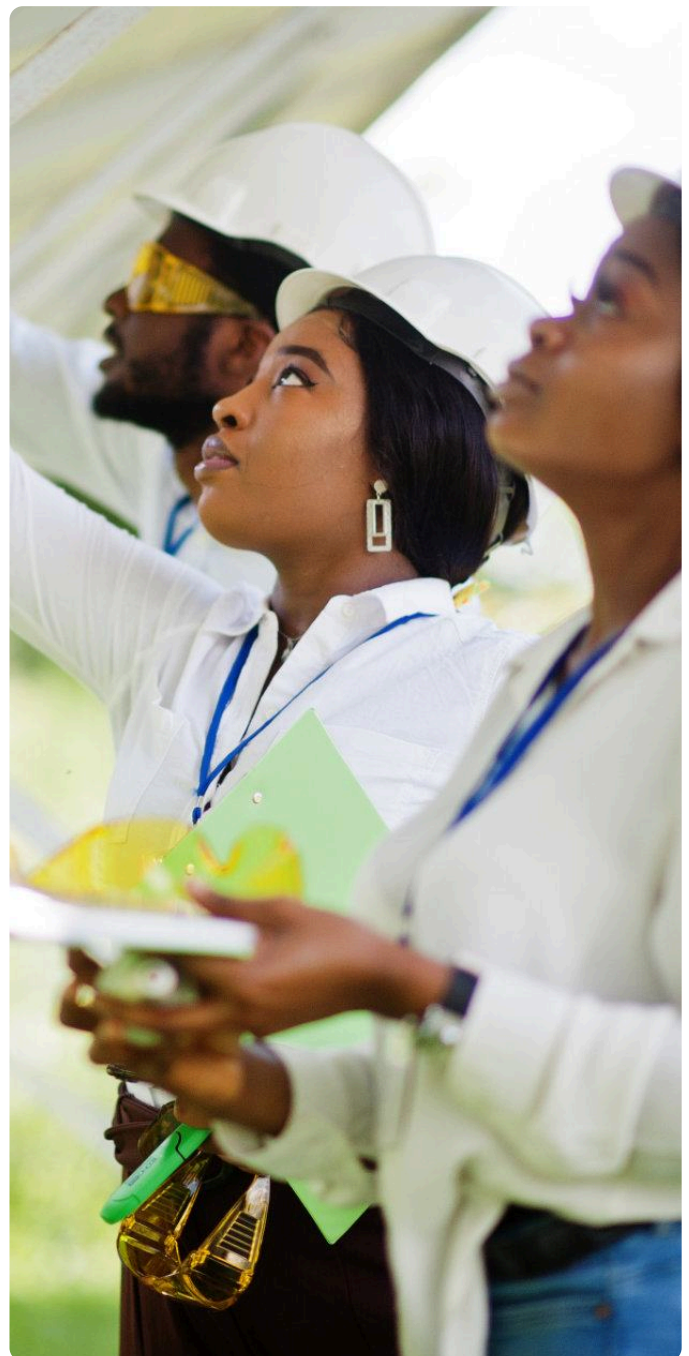
Interest Rate: 5% on an annual basis. Tenor: From 18 to 36 months. A 3 to 6 months moratorium is provided based on the borrower's business cycle, i.e., a Grace period. Repayment will be based on cash flows and flexible payments, both monthly, weekly, or mobile repayments.

Guarantee Mechanism: The facility will include a 30% government-backed first-loss guarantee scheme, managed by the Rural Electrification Agency or the Development Bank of Nigeria, in partnership with DFIs such as the African Development Bank, IFC, and the Bank of Industry. Dynamic guarantee coverage of between 20 per cent and 40 per cent is expected to be used by the facility, based on an assessment of online lender profiles, loan sizes, and geographic risks. Supplementary inducements could, in fact, be lower guarantee fees for lenders that have arrears below 10 per cent for female borrowers.

Provider Partners: The financial institutions partnering with Hexa include commercial banks, microfinance banks, and Fintech platforms such as Access Bank, Moniepoint, and LAPO. Solar providers certified by the Rural Electrification Agency, such as Baobab+ and Koolboks, will deliver be led by REA in collaboration with SMEDAN, the Federal Ministry of Trade and Investment, national women's business associations, and a central coordination unit. Energy systems with financing and after-sales services included. Facilitation of implementation will

Target Sectors: It will target sectors where women entrepreneurs operate and where solar energy can provide direct business benefits. These include:

- Food processing (bakeries, frozen food vendors, grinding mills, all kinds of mills)
- Fashion and tailoring: home sewing and embroidery machine
- Healthcare – off-grid clinics, vaccine refrigeration, lighting
- Cold chain logistics: small-scale fisheries, agro-processors, and distributors



First-Year Priority Actions:

- Establish Guarantee Fund and Governance
- Allot ₦15 billion out of the 2026 Appropriation Act to capitalise the guaranteed pool, with counterpart contributions from DFIs.
- Institute a governance and monitoring framework within REA, with specific gender-disaggregated performance indicators.

Launch Six-Month Pilot

- Pilot 1 (5 states): Ogun, Ebonyi, Bauchi, Niger and Anambra.
- Pilot to cover 10,000 women-led MSMEs. • On target for both milestones
- Loan capital = ₦20 billion — Technical assistance and independent evaluation= ₦3 billion

Policy Integration: Integrate WMSFF into Nigeria’s Energy Transition Plan and National Gender Policy to link the activity to broader development plans and ensure it continues through political cycles.

The Women MSME Solar Finance Facility represents a bankable, scalable means of unlocking inclusive enterprise growth while advancing clean energy and gender equality objectives in Nigeria.

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Projected Outcomes

The Women MSME Solar Finance Facility is designed to deliver measurable economic and social outcomes by reducing energy costs, increasing business profitability, creating jobs, and strengthening credit inclusion. Each projection below is based on benchmark data from PAYGo solar studies, national entrepreneurship trends, and repayment evidence from pilot cohorts.

- **Reduction in Energy Costs** Women-led MSMEs currently spend between ₦40,000 and ₦120,000 per month on fuel and electricity, depending on location and business type (GOGLA, 2024; Moniepoint, 2024). Transitioning to solar energy for productive use has the potential to reduce this expenditure significantly. Energy cost savings of 30 to 50 per cent are expected, based on existing PAYGo deployments across West and East Africa (CGAP, 2022; GOGLA, 2023). A frozen food vendor using diesel at ₦1,000 per litre could spend over ₦100,000 monthly. With solar, this could fall below ₦45,000 while improving uptime and product preservation.
- **Growth in Business Profitability:** Lower energy costs directly improve margins for micro and small businesses. Studies from CGAP and GOGLA show that energy improvements also reduce equipment downtime and allow longer operational hours. Profit margins are expected to grow by 20 to 30 per cent as MSMEs benefit from better asset reliability and increased output. Women who adopt solar solutions have also expanded their product offerings, such as frozen goods, cold beverages, and charging services, leading to higher daily income.
- **Job Creation Potential** Employment growth in MSMEs is closely linked to business expansion and access to reliable infrastructure. Solar energy enables more consistent production cycles and greater labour demand. Based on elasticity estimates, each MSME financed through the facility is projected to create 2.5 to 3 jobs on average. Scaling the programme to 100,000 women-led MSMEs over three years could create between 250,000 and 300,000 direct and indirect jobs. These jobs include core retail and production roles as well as positions in logistics, solar installation, maintenance, and sales.

India: PM-KUSUM, The Pradhan Mantri Kisan Solar Pumps Yojana.

- **Improvement in Enterprise Resilience and Financial Inclusion.** Energy access is correlated with stronger repayment performance and increased financial participation. Evidence from PAYGo loan providers shows significant behavioural changes following the adoption of solar productive-use technologies. In CGAP's longitudinal study, 83 per cent of women with PAYGo solar improved their loan repayment behaviour. Fifty per cent of these women opened formal savings accounts or mobile wallets, and 65 per cent increased their savings frequency.

The digital repayment infrastructure of PAYGo models also enables the collection of credit data from informal MSMEs for the first time. This enables the gradual formation of credit histories for thin-file borrowers, paving the way for future lending beyond energy assets.



Implementation Roadmap

The rollout of the Women MSME Solar Finance Facility will be gradual and grounded in public-private partnerships and sound performance monitoring to ensure targeted outcomes are achieved.

Coordinating Institution: The Rural Electrification Agency (REA) will act as the coordinating institution. REA will be responsible for fund governance, the implementation of the guarantee facility, and the alignment of energy components with REA's decentralised energy mandate. REA will oversee the technical and financial design for the programme, working with the Development Bank of Nigeria, the Bank of Industry and multilateral DFIs, including the African Development Bank and the IFC.

Key Delivery Partners

- Financial Institutions: Commercial Banks, Microfinance Institutions, and Fintech Lenders such as Moniepoint, Access Bank, and LAPO will oversee loan disbursement, underwriting, and repayment monitoring.
- Solar Providers: Certified productive-use solar systems with maintenance, customer support, and performance monitoring will be delivered by providers like Baobab+, Koolboks and Sosai.
- Enterprise Support Actors: SMEDAN, the Ministry of Trade and Investment and relevant women business associations will provide push for business onboarding, training and monitoring.

Phase One – Pilot Where: First 6 months - From MSME density and off-grid market sizing: Ogun, Ebonyi, Bauchi, Niger and Anambra, Target: 10,000 women-led MSMEs. Capital Allocation: ₦20 billions of loan capital, ₦3 billion of technical assistance and monitoring.

Phase Two – Scale-up (Years 2 & 3) - Reach to 100,000 women-led MSMEs, Attract more capital through DFI and commercial co-investment. Streamlining delivery by bringing together mobile repayment platforms, agent network, and energy consumption analytics

Tracking, measuring and evaluation of programme outcomes will be established with a multi-stakeholder M&E framework. In partnership with independent evaluation partners including the National Bureau of Statistics, FATE Institute or the Nigerian Economic Summit Group, the REA will publish biannual performance scorecards.

Key indicators include:

- Disbursement volumes and portfolio quality
- Gender-disaggregated uptake and repayment rates
- Energy efficiency and Financial Performance at the Business Level
- Employment, labour market attachment and credit history

This is a roadmap that allows the facility to expand fluidly, implement best efforts transparently, and revise in response to data based on execution. Having a phased structure also means that lessons learned from the pilot can be used to inform national rollout.



Conclusion

There have been several programmes initiated by Nigeria to fulfil the requirement of small businesses and to promote energy availability. Nevertheless, they have largely not been gender-specific, have limited the size of loans offered, and have not succeeded in bringing together energy, finance and enterprise support into one, coherent model. Nearly half of the country's enterprise landscape remains excluded from the clean energy transition or from the credit economy altogether, and these design gaps are closing the door to women-led MSMEs.

Women MSME Solar Finance Facility is a concrete, scalable solution. The facility tackles energy poverty and financial exclusion of women entrepreneurs by: (1) providing a first-loss guarantee that desegregates the cost of capital in a local currency loan; (2) delivering the loans at a lower interest rate than competing sources of finance; and (3) identifying the partner delivering these loans. With a framework that incentivizes lenders, accelerates informal actors, and significantly reduces fossil fuel dependency.

The evidence supports its viability. Researchers cite evidence that women pay their loans back more reliably than men, that solar energy reduces operating expenses, and that productive-use tech can improve profit margins and business expansion.

Similar international lessons seen in Kenya to Bangladesh demonstrate how concessional finance when combined with risk sharing and inclusive delivery can meaningfully change enterprise outcomes at scale.

As such, this policy recommendation is proposing that the Federal Government through the Rural Electrification Agency (REA), partnering with Development Finance Institutions (DFIs), banks and private energy providers should establish the Women MSME Solar Finance Facility as a national flagship programme.

If implemented, the facility can:

- Cut energy costs by 30 to 50 percent for MSMEs run by women
- Profit growth of 20 to 30 percent
- Open 250,000+ jobs over 3 years
- Create credit history for thousands of informal enterprises that will last for generations.

Investing in women-led MSMEs is not only a compelling case for gender equity but national resilience and growth become a proven possibility.



9. References

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