

SUSTAINABLE FINANCIAL MODELS: AN EMPOWERMENT TOOL FOR WOMEN LED SMALL AND MEDIUM BUSINESSES

Results of a Workshop held in Abuja on 4 June 2024

Give Nigerian women access to clean affordable efficient energy and technologies that help them thrive and succeed, not cheap token that makes us poorer, helpless and insecure

Women in Nigeria, particularly those running small businesses, require reliable energy solutions to enhance productivity and sustain their operations. Their core business needs include access to affordable and stable energy sources that can power their enterprises effectively. Over 90% of women have expressed a desire for such sustainable energy alternatives. This commitment not only aligns with global sustainability goals but also ensures that investments in renewable energy have a ready and willing user base.



Why Invest in Women's Energy Transition

Investing in women is pivotal for achieving economic growth, sustainability, and inclusive development. The rationale for investing in women extends beyond social equity:

CREDITWORTHINESS

Women have demonstrated remarkable financial reliability, with over 90% of them known to repay loans diligently. This high repayment rate underscores their creditworthiness, making them a dependable demographic for financial institutions. Investing in women ensures that loans and financial assistance are utilized effectively and repaid responsibly, reducing the risk for lenders and promoting a culture of financial accountability. Women are generally more reliable borrowers.

PRODUCTIVITY

Women play a pivotal role in the economy, particularly in the agricultural sector. They produce over 70% of the country's food and generate more than 80% of

informal revenue. Their contributions are critical to food security and economic stability. By investing in women, we can boost agricultural productivity and informal sector revenues, leading to broader economic growth and resilience.

Membership in Support Groups & Cooperative: Many Nigerian women belong to support groups, meetings and savings cooperatives that can play a key role in their energy transition. These groups enable collective action, allowing women to pool resources, access training, and invest in clean energy solutions together.

Reinvestment of Income: Women are known to reinvest a significant portion of their income (up to 90%) back into their business, families and communities, compared to 40% by men. This behavior not only supports business and household stability but also enhances community development, making women-led businesses more sustainable and impactful.

Core Energy Needs of Women Businesses and Why?

- Lighting for shops and homes
- Operating machinery and equipment
- Cooling and refrigeration for perishable goods
- Cooking, and heating for home, business & institution
- Charging electronic devices and tools
- Irrigation for farm, community and homes
- Storage Facilities
- Access to markets with ICT
- Advertising and Logistics
- Installation of Security Surveillance

WHY:

- Reduction of Manual Labour Intensity
- Longer Work Hours & quality leisure
- Temperature Regulation
- Increased security and surveillance
- Improving nutrition and health safety
- Increase access to water in communities and homes
- Increase in financial and economic potential
- Improved mental and physical health
- Better family support

Core Energy Needs of Women Businesses and Why?

- **Agro Processing:** Baking, Drying, Mixing, Slicing, Frying, Cooking, Roasting, Bar Boiling, Milling, Threshing, Grating, Grinding, Dryers, etc
- **Crop Farming:** Egg Incubation, Brooding (poultry), Crop Storage, Farm Irrigation, Planters and Harvesters, Pesticide & Weed Control, Storage to Prevent Post-Harvest Losses etc
- **Trade & Others:** Grinding, Dehydrating, Packaging, Factory Lighting, Refrigeration, Dehydrating, Clay Processing (pug moulding), Designing, Sewing, Packaging, Weaving, Recycling Mobile Carts and Vans/Tricycle, etc
- **Fashion:** Weaving, Ironing, Stoning, Sewing, Hair and Nails Dryers, Medicare and Pedicure, Spa, etc
- **Education, ICT & Media:** Computers, Labs, Projectors, ICT, Water, Lighting, Transportation, Security Surveillance, etc

CURRENT ENERGY SOURCES

In the absence of renewable energy, women in small businesses are using:
Agro Processing: Charcoal, Generators, Kerosene, Fire Wood, Open Sun drying, Tyre Burning
Crop Farming: Charcoal, Fuel Generators, Kerosene Lamps
Trade & Others: Generators, Battery Touch Lights, Inverters, Grid Electricity
Fashion: Generators, Charcoal Irons, Stoves and Gas, Candle, Battery Touch Light, Grid Electricity
Education, ICT & Media: Generators, Grid Electricity, Kerosene Lamps, Torch Lights, Candles, Fuel and Diesel for Buses

ESTIMATED MONTHLY ENERGY EXPENDITURE (AVERAGE) ON CURRENT ENERGY USE

National Electricity grid:	₦10,000 - ₦30,000
Petrol/Diesel generators:	₦20,000 - ₦50,000
Kerosene:	₦5,000 - ₦15,000
Firewood/Charcoal:	₦5,000 - ₦20,000

WHAT THE WOMEN SAID THEY WANT TO HELP BUSINESS GROWTH

- **Agro Processing:** Suitable simple machinery to reduce manual labour, grants and single digit interest loans, capacity development, market access, storage systems and access to land.
- **Crop Farming:** Grants / Single Digit Interest Loans, Government Engagement with Women and Youth Farmers, Dedicated Access to land with working irrigation and security
- **Trade, Fashion & Others:** Funding, Capacity Building, Access to Markets, Certifications, Warehousing, Reliable Manpower Skills, Solar Energy with Flexible Payment Systems
- **Education, ICT & Media:** Lights, Resource Materials, Tablets, Training, Computers, Photocopiers, Laptops, Refrigerators, Sewing Machines, Projectors, Fans, Switches, Sockets, Electric Vehicles, Cooking Alternatives, Food and Drug Storage Systems, Practical Equipment for Home Economics, ICT, Clothing and Textile.



RENEWABLE ENERGY SOLUTIONS DESIRED BY WOMEN

Renewable Energy Solutions for Agriculture and Food Processing:

- Solar-powered systems for irrigation (solar pumps), drying (solar dryers), and storage (solar storage systems) to support agricultural productivity and reduce post-harvest losses.
- Biogas digesters for waste management, energy production, and sustainable cooking/heating.
- Efficient, low-energy agricultural tools and equipment (e.g., Simple arm held weeding machines, planters, etc powered with AC/DC power, battery, fuel, etc).

Sustainable Energy for Educational Institutions:

- Solar lighting systems to enhance security and study environments in schools.
- Clean energy-cooking solutions (clean cookstoves, efficient stoves, LPG) for school kitchens and dormitories.
- Sustainable transportation options (CNG buses, electric vehicles) for school commuting.

Energy-Efficient Technologies for Poultry and Home-Based Businesses:

- Solar-powered and biogas systems for poultry management (egg incubators, heaters, ventilators, lighting).
- Solar boreholes and water pumps for community water supply and sales.
- Solar stoves, fans, and lighting systems for home-based businesses, reducing dependence on traditional fuels.

Clean and Efficient Cooking Technologies for Various Sectors:

- Clean cookstoves, efficient stoves, and subsidized LPG for food processing businesses, home-based enterprises, and educational institutions.
- Solar-powered and low-energy kitchens, ovens, and processing tools to reduce fuel usage and enhance efficiency in food preparation and business operations.

PREFERRED PAYMENT AND FINANCING OPTIONS BY WOMEN

Women entrepreneurs have specific preferences for payment and financing which include:

1. **Flexible Payment Plans:** Women need payment plans that accommodate their cash flow patterns, which are erratic, and small on daily bases, but accumulates to substantial sums.
2. **Affordable Interest Rates:** Interest rates should be low; ideally between 5 - 8% for credit period not less than 2 years,
3. **Moratoriums:** An initial period without payments to allow savings from reduced energy costs to cover upfront cost and future payment flows (at least 3 months)
4. **Manageable Upfront Costs:** A small percentage of the total cost should be required upfront, with flexible financing for the remainder (at least between 10 – 30% of total system cost with guarantee)
5. **System Guarantee and Warrantee on System:** Ensures the system performs as expected. If it does not, the provider must repair or replace faulty components at no extra cost. 5 - 10 years warranty.



Sustainable Innovative Finance Models: Suggested by Women in Agriculture and SMEs



Microfinance Model for Renewable Energy Empowering Women through Microfinance.

Microfinance institutions can provide small loans with flexible repayment terms to help cover the upfront costs of renewable energy technologies like solar home systems or improved cookstoves this can be directly to the customers, or straight to the solar company.

Message: Access small loans to invest in solar panels and clean energy technologies. Approach a microfinance bank individually or join a microfinance savings group to pool resources and enhance energy access in your businesses.

This can enable women entrepreneurs and low-income households to afford the upfront costs of renewable energy technologies like solar home systems or improved cookstoves.

Borrowers Down Payment: 10 - 30% of system cost.

Repay Period: Over 2 years

Interest Rate: 0 - 8% interest rate.

Moratorium: at least 3 months

System Warranty: > 5 years.

Microfinance to System Provide: Interest Rate < 5% for over 4 years.





Pay-As-You-Go (PAYG) Model

PAYG models allow customers to pay for renewable energy products in small, affordable instalments over time using mobile money platforms, without the burden of high upfront costs. Customers pay for only the energy they use, improving affordability and reliability of supply. This makes renewable technologies more accessible to those without lump sum capital.

Key steps of the PAYG solar model:

- Assess & Select:** Women assess needs, choose solar system with panels, battery, appliances.
- Down Payment:** Small initial payment secures system, much lower than total cost (between 10 – 30%)
- Installation:** Trained local technicians set up solar system at customer's home.
- Mobile Pay:** System equipped with mobile money payment tech, enables/disables based on status.
- Regular Pay:** Convenient mobile money payments weekly/monthly over 6 months to years.
- Monitor & Control:** System tracks payments, sends reminders, can remotely disable if missed.
- Ownership:** After full payment, system ownership transfers to customer for free electricity.
- Community:** Women's groups provide support, training on maintenance and efficiency.
- Feedback:** User experiences improve service, inform future offerings to meet community needs.

Community Based or Cooperatives Financing Model

Community savings groups, cooperatives, and village-level funds can pool resources to finance renewable energy projects i.e. women solar dryers, women-mini hydro project, solar cold-room, solar water project, electric milling machines, women farm irrigation system, etc. This model encourages community ownership and participation, making it more sustainable. The cooperative group can access microfinance at lower interest, lease to own agreements, and even apply for grants.

Community or cooperative finance model for women's renewable energy can be structured thus:

- Form Cooperatives:** Women unite in a cooperative to pool resources and invest in renewable energy.
- Pool Resources:** Members contribute funds to finance renewable energy systems, easing the financial burden.
- Access Microfinance/Grants:** Cooperatives can secure loans or grants by leveraging their collective strength.
- Leasing/Rent-to-Own:** Implement leasing models for affordable renewable energy access with eventual ownership.
- Training:** Organize training to empower women in renewable energy installation and maintenance.
- Awareness/Advocacy:** Promote renewable energy benefits and women's involvement through community outreach.
- Revenue/Reinvestment:** Generate income and reinvest profits in further renewable energy projects.
- Monitor/Evaluate:** Track performance and impact to attract more support and investment.



Grants and Subsidies for Women-Led Projects

Government and international organizations can provide grants or subsidies specifically aimed at women-led renewable energy projects/adoption. Subsidies can be provided for renewable energy products specifically installed by women. These subsidies can significantly lower the upfront costs, making it feasible for women-led businesses to transition to renewable energy.

Eligibility criteria for women-owned businesses seeking renewable energy grants typically include:

- Ownership & Control:** The business must be majority-owned, operated, and controlled by women.
- Business Registration:** Provide proof of ownership and registration, like Articles of Incorporation or a business license, to verify business legitimacy or verified proof of membership to a registered cooperative or group.
- Business Size & Type:** Align business with grant-specific criteria for size and industry, such as small scale farmer, agro-processor, trader, etc
- Financial Need:** Show financial need with statements or tax returns to justify funding for renewable energy adoption.
- Business Plan:** Submit a business plan detailing objectives, market analysis, financial projections, and renewable energy strategies.
- Use of Funds:** Explain how the grant will support your renewable energy adoption.

Meeting these criteria allows women-led businesses to secure grants for renewable energy projects, promoting economic empowerment and sustainability in their communities.



Leasing (Rent) and Leasing to Own/Rent to Own

Leasing and rent-to-own arrangements enable customers to use renewable energy products without having to purchase them outright, spreading out payments over the lease period.

Message: Unlock Clean Energy Access: Make regular, manageable payments over the lease period, leading to ownership of solar panels, clean cookstoves, renewable technologies with ease and more.

Lease Duration: 3 – 25 years

Monthly Payment: 10 - 20% of Daily/Monthly Income

Upfront Cost: < 20 of Total System Cost if leasing to own (+ Moratorium of < 3 month)

No Upfront Cost: If the System is just on Rent/Lease

Installation and Maintenance: Leasing Company is responsible

Ownership & Incentive: Ownership & Incentives goes to Company (if rentee/lease decided to own at end of leasing period, incentive shifts to the ownership)

Escalator Rate: Only Applicable (when default limit is exceeded) to hedge inflation (btw 1- 2% increase in interest rate over a year)

Outright Purchase Before Lease: Possible at Discounted Rate

Flexibility: allow for the transfer of the lease to a new property owner if the retailer moves or sells the building. At the end of the lease term, the retailer may have the option to purchase the solar system at a discounted rate. Product Warranty for 10 years.





Crowdfunding Model for Renewable Energy:

Women can launch crowdfunding campaigns for renewable energy projects like solar irrigation, solar storage or community solar cooperatives. By sharing a compelling story and showcasing potential impact, women can attract many supporters. Crowdfunding enables women to leverage their social networks and the online community to secure funds for renewable energy adoption.

How the Crowdfunding model works:

Define the Project: Clearly outline your renewable energy initiative, like solar panel installation or a community solar cooperative.

Choose a Platform: Select a crowdfunding site that supports renewable energy, such as GoFundMe, Indiegogo, or SunFunder.

Create a Compelling Campaign: Craft an engaging campaign that highlights project goals, benefits, and community impact using visuals and storytelling.

Set Funding Goals: Determine the total funding needed and establish realistic goals, including a detailed budget for transparency.

Promote the Campaign: Use social media, community networks, and local events to spread the word. Share updates and success stories to engage potential backers.

Engage Supporters: Build a community by providing regular updates, responding to questions, and appreciating contributions.

Utilize Funds Wisely: Once funded, implement the project as planned, ensuring accountability and transparency in spending.

Report Outcomes: After completion, share results with backers and the community to showcase the impact, paving the way for future crowdfunding efforts.

Impact Investing Model

Impact investing refers to investments made into companies, organizations, and funds with the intention to generate measurable social and environmental impact alongside a financial return. It enables investors to support businesses and projects that align with their values and goals. Impact investors provide capital that can be used to finance the adoption of renewable energy technologies, such as solar panels or clean cookstoves.

Research Impact Investors: Find investors or funds focused on renewable energy and women-led projects, such as Nexus for Development.

Develop a Business Plan: Outline the renewable energy project, including market analysis, financials, and social impact.

Prepare for Due Diligence: Gather essential documents like financial statements, legal papers, and feasibility studies.

Pitch to Investors: Present your plan, emphasizing sustainability, community benefits, and alignment with investor goals.

Negotiate Terms: Discuss investment terms, including repayment, equity, and support services.

Implement the Project: Use funds to execute the project, meeting milestones on schedule.

Measure Impact: Track and report the project's social and environmental impact to investors.

Leverage Success: Use impact data to attract additional investment or crowdfunding for future projects.

