

The Role of Financial Institutions: Who Need Finance?

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Who Needs Finance: Everyone!

- ✓ End-users: need finance to purchase a range of energy services to meet business and household energy needs
- ✓ Distributors/suppliers: need supplier credit to purchase energy products to sell to end-users
- Energy enterprises: need different types of finance depending on their stage of development
- Retail financial institutions (banks /MFIs/ co-operatives): need finance to develop/grow energy portfolio (to finance micro-businesses, consumers and SMEs)

End-User Finance: Range of Mechanisms/Businesses Models

Microfinance organization, bank or credit cooperative provides **Microfinance** energy related financial products **Microleasing** Energy enterprise leases energy products to end-users Financing is provided through a metering system that allows the **Payment Systems** end-user to pay for energy use in small increments **Mobile Money** Bill payment/financing for energy via mobile phone Financing for energy product is provided by family members in Remittances the diaspora via cross-border money transfers **Traditional** Financing for community-based energy services is provided **Community Finance** through informal community collection mechanisms

Microfinance: Range of Financial Products for Energy

- ✓ Loans for income generating activity
- ✓ Loans to improve household quality of life
- ✓ Loans to promote improved energy efficiency (usually tied to housing improvement loans)
- ✓ Targeted savings products
- ✓ Targeted remittance products
- Microleasing products



Microfinance: Uses of Loan Products

- ✓ Retail loans for poor individuals/farmers usually for solar lamps (with cell phone charging capacity), solar home systems, improved cookstoves, LPG canisters, biogas digesters etc. for business, household or farm use – sometimes tied to micro-housing loans
- ✓ Small SME-type loans for energy-related businesses usually for entrepreneurs such as stockists, those running solar battery charging stations or LPG microfilling stations, those making locally produced biogas digesters or improved stoves, food vendors or those who are suppliers along the value chain such as battery transporters, shops/franchises selling stoves and lanterns etc.)
- ✓ SME-type loans for communities usually for microgrids

End-User Finance: Microfinance - One-Stop-Shop Model

Grameen Shakti (Bangladesh)

- Independent business within the Grameen network to provide energy solutions for off-grid Bangladeshis
- Grameen sources its own SHS components: panels, batteries, regulators, wiring (does not partner with local energy companies)
- Creates jobs though cadre of women technicians who do installation and provide after-sales service

Key Lessons

- Leverages Grameen microfinance network, but operates independently
- High rural population density enables economies of scale
- Strong attention to after-sales service by GS-trained technicians
- Low-cost financing





Results/Impact since 1996:

700,000 Solar Home Systems installed 300,000 improved cookstoves distributed

20,000 biogas digesters installed

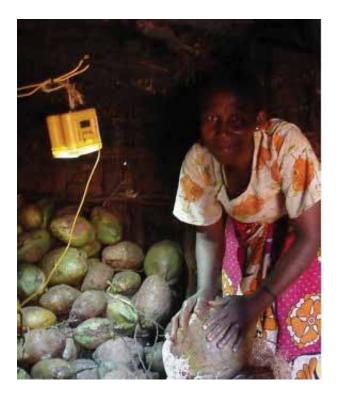
End-User Finance: Microfinance - Partnership Model

Kenya Women's Finance Trust

- Tier 1 MFI with over 400,000 women clients
- Provides both end-user finance and supply-chain finance to stockists who sell the products
- Partnered with SunTransfer, a German solar-lantern company - expanding to other suppliers
- SunTransfer trains retailers to service devices
- Prior programs failed through poor technology choices and inadequate post-loan service and maintenance

- Selecting appropriate technology level and a partner that can provide after-sales service is key
- Supply chain finance helps MFI avoid dealing with distribution directly





End-User Finance: MicroLeasing

STIMA Systems (Kenya)

- Uses affordable asset-leasing model for portable solar chargers and lights
- Has proprietary "key" that activates solar product
- Operates via a network of rural agents who distribute the chargers and collect the payments
- Partners with MFIs, churches etc. to source clients

- Manages risk though money "key"
- Uses simple, durable, portable technology suited to rural African context
- Recruitment of alpha nodes as "local agents" network to manage sales
- Leasing allows for ongoing product upgrading which is valued by poor consumers



End-User Finance: Payment Systems

SIMPA Networks (India)

- Progressive Purchase model via metered system - where each payment for energy adds up towards the total purchase price of the solar home syste.
- Customers send incremental payments using mobile phone - code entered into controller activates system and triggers energy
- Once fully paid, the solar energy system unlocks and delivers free electricity for the life of the product

- Manages risk though meter
- Target customers value ability to make flexible payments and the pay-as-you-go nature of the pricing model - similar to lessons learned in microfinance about customer preferences
- Can be used with community-based systems such as microgrids





End-User Finance: Mobile Money

M-Kopa (Kenya)

- M-KOPA's mission is to help Kenyans acquire productive assets through simple and secure mobile technology
- Uses mobile phone technology as a way to pay for clean energy (m-pesa based system)



 In markets where mobile money is gaining traction - payment for energy services via mobile phone is attractive because it is safer (cash-free) and more convenient for the consumer



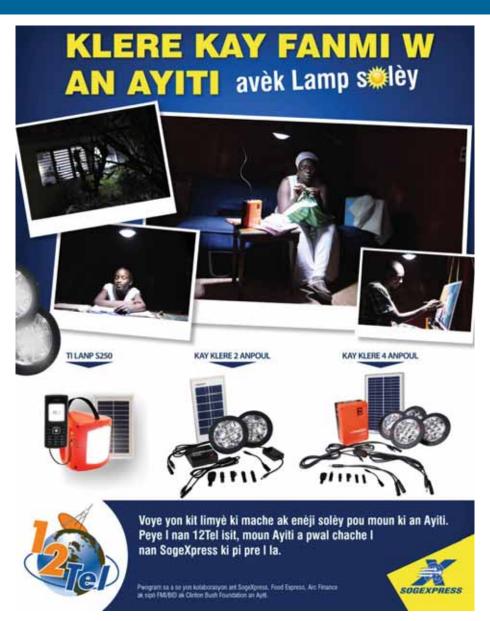


End-User Finance: Remittances

SogeXpress (Haiti)

- Families in the diaspora use remittances to pay for solar systems in Haiti
- Partnered with local Haitian distributor who imports products, deals with shipping and customs and provides warranties
- Partnered with agent network in diasora who promote project (primary buisiness phones)
- Revolving fund set up to "recycle" money received to use for future purchases
- Platform is product neutral currently used for solar devices but could support a range of other products including cookstoves

- Products that cost about the amount of the average remittance work best on the platform
- Detailed pricing and value chain cost analysis supports long-term sustainability goals
- The development of a revolving fund mitigates partner risks



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Enterprises Financing: By Stage of Development

Stage of development funding for BOP focused energy enterprises is needed to help them scale: Providing appropriate financing for the stage of development of BOP focused energy enterprises opriate financing for the stage of development of BOP focused energy enterprises is key if they are going to reach the millions of poor people who currently do not have access to energy

- Start-ups need seed funding (grants, soft loans and equity on reasonable terms)
- Mid-sized companies need specialized revolving funds to provide working capital
- Large scale companies need increased and targeted project finance

Key role for multiple players: venture philanthropists, foundations, angel investors, impact investors, multilaterals, bilaterals

Retail Financial Institutions: Portfolio Financing

Retail financial organizations (banks, MFIs, credit unions, co-operatives) need funding and technical support to develop or grow energy lending portfolios to provide enduser finance: Supporting end-user finance is essential if poor people are going to be able to pay for sustainable energy sources

- Need funding facilities for MFIs and other FIs to on-lend to clients
- Need funding for technical support
- Need loan / risk guarantee funds

Key role for multiple players: foundations, larger banks, multilaterals, bilaterals

Supplementary Slides

Arc Finance: Changing Lives Through Energy and Finance

- ✓ Arc's mission: to promote and expand access to financing for energy, water and other basic needs to build the income and assets of poor people around the world
- ✓ Innovative organization launched in 2008 in response to practitioner demand to bridge knowledge and resource gaps between the energy and finance sectors
- ✓ A neutral platform for knowledge, brokering transactions, bringing partners together, spurring investment, and incubating new business ideas
- ✓ Arc operates globally and supports the improvement of existing energy lending programs in Africa, Asia and Latin America
- ✓ Initial funding from Citi Foundation

Arc Partners

Global partners and collaborators:

- ARD, USA
- water.org, USA
- Safewater Network, USA
- E+Co, USA
- Ashden Awards, UK
- Basel Agency for Sustainable Development (BASE),
 Switzerland

Countries of operations and local partners:

- Ethiopia, Kenya, Philippines, India, Pakistan, Afghanistan, Nicaragua, Haiti, Argentina and Brazil

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