

## INCLUSIVE INNOVATIONS

# Innovative Consumer Finance

*Improving access to quality goods and services through consumer financing*

### HIGHLIGHTS

- The model involves making goods and services more affordable to low-income consumers by spreading out the total cost to the consumer over a period of time while allowing them to use the product or service immediately.
- Financing is provided by setting up an in-house credit facility or by partnering with local microfinance institutions.
- Consumers pay an affordable price that would have been out of reach to them or would have left them in higher debt without consumer financing.



### Summary

One of the main reasons why people in developing countries lack access to good quality, essential goods and services is that they simply do not earn enough to pay for these up front. They have to settle for either using free resources, such as defecating in open space rather than buying a toilet, or spending their income on low-quality, harmful products, such as kerosene instead of clean, renewable sources of energy. They also have little access to affordable credit for purchasing these goods or services as financial institutions often only offer loans with high rates of interest and unfavorable terms. Inclusive businesses that provide good-quality product alternatives to low-income people are overcoming this challenge by creating innovative consumer financing models by setting up in-house credit facilities and facilitating access to credit through partner organizations.

### Development Challenge

Lack of access to finance is one of the key challenges to development and growth. Access to finance enables the poor to increase and diversify incomes, build human, social and economic assets, and improve their lives in ways that reflect the multidimensional aspects of poverty.

### Business Model

#### Components of the Model

This model aims to make goods and services more affordable to low-income consumers by spreading out the total cost to the consumer over a period of time while allowing them to use the product or service immediately. Consumers are required to make a down payment up front and then pay daily, weekly, or monthly installments to pay off the remainder of the cost, including interest. At the end of the payment period, customers own the product outright. For example, customers purchasing WaterSHED toilets in Cambodia pay a small up-front fee for the latrine, followed by regular, fixed payments at a monthly interest rate of 2.8 percent for the next 18 months, after which they gain full ownership of the toilet.

Other examples include Smart metering and pay-as-you-go plans (PAYG), which are being used mostly by companies operating in the energy sector where customers pay installments that cover usage as well as the cost of the product. Azuri, for example, offers a small solar home system (SHS) to customers in Sub-Saharan Africa for an up-front cost of around US\$10. Customers then purchase a scratch card through their mobile phones or from an Azuri agent every week for around US\$1.50. They type the scratch card code

into their SHS, which activates the system for a week. After an average of 18 months, they have paid off the full amount and now own the system to use as and when they want to (Ashden, 2013).

The high capital costs involved in building a new house have led companies in the housing sector to develop a savings-credit system. In this model, customers are required to save a percentage of the cost of the product before they can receive credit and start a payment plan. This is being implemented by inclusive businesses working in the self-build housing sector in Mexico such as CEMEX and ¡Échale! a Tu Casa. To be eligible for CEMEX's Patrimonio Hoy initiative, the customer must save money for five weeks before receiving the first five weeks of credit to purchase building materials.

Companies provide this financing either by setting up an in-house credit facility or by partnering with local microfinance institutions (MFIs). Those that have an in-house facility arrange loans from banks to cover the capital requirements. They earn revenue on the interest rate charged to the customer. ¡Échale! a Tu Casa, for example, has a bank loan at 8 percent to cover its working capital and it charges its customers an interest rate of 12 percent.

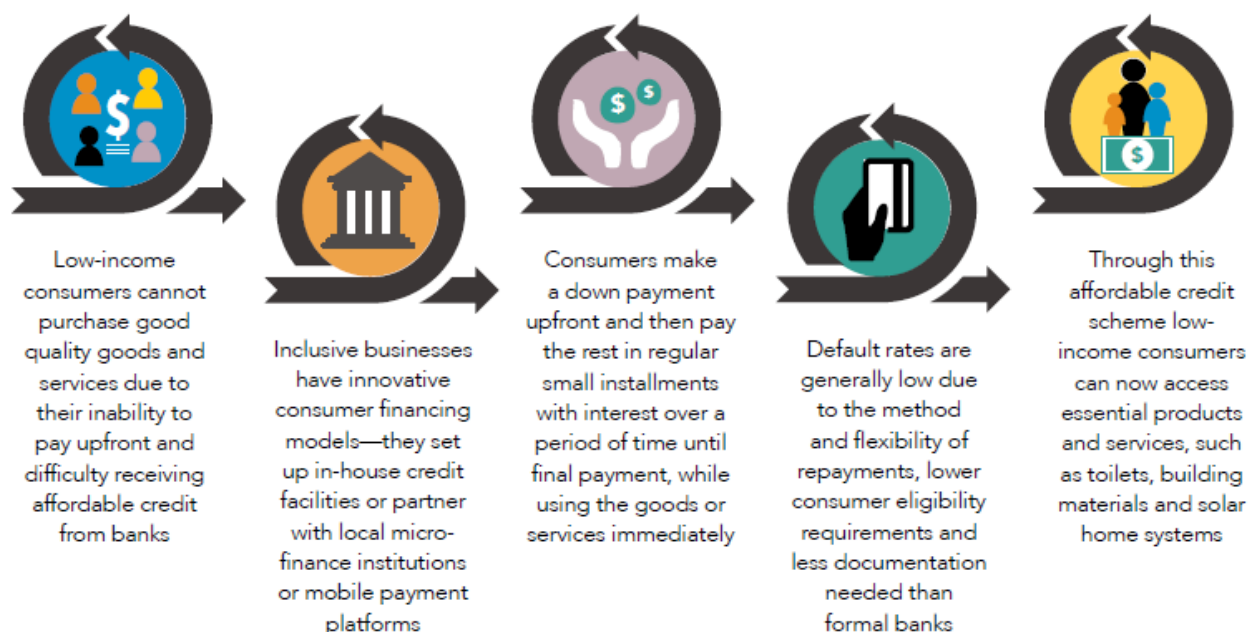
Default rates are generally low due to a range of incentives and measures within the models. SolarNow has had to write off less than 0.4 percent of its loans, while ¡Échale! a Tu Casa has had no defaulters so far. On the other hand, solar home system producers in Bangladesh have had huge difficulties getting payments from their customers (payback rates were around 30–50 percent in early 2015) because of the huge amount of competition in the market. The competition has led to selling systems to consumers who cannot really afford it.

In most cases, companies have put in place systems to measure the ability and willingness of potential customers to pay before they are given a payment plan. These systems are not as stringent as those at MFIs and banks, however; they mostly involve checking sources of income of the household and validating basic information with references. Most companies have eligibility requirements to mitigate risk. While ¡Échale! a Tu Casa makes sure customers save 10 percent of the total cost of the product in a savings fund set up by the company (Bessarabova, 2014b), SolarNow ensures that the household earns at least US\$1.7 a day before a customer qualifies for credit.

The additional value that customers receive from these companies in the form of after-sale service and support encourages them to take up the finance and continue regular payments. Grameen Shakti, a company selling solar home systems in Bangladesh, offers in-house credit to its customers over three years. Customers pay a monthly service charge—which includes maintenance as well as financing—to the technician who checks their system each month. Customers know that the technician will not miss a visit, and the company knows that customers won't miss a payment for fear of losing out on maintenance.

Once customers have completed the full payment cycle, they often become eligible for upgrades to their product, be it more material to make improvements to their houses or electronic products to use on their solar home system. This provides incentives to ensure a clean credit record and complete the first payment cycle.

## Improve access to quality goods and services through consumer financing



### Cost Factors

In this model, the consumer costs consist of a down payment at the start of the finance scheme and then small, regular installments paid over the duration of the scheme. The consumer pays an interest rate to the business or financing partner over the scheme duration.

### Revenue Streams

Table 1 provides an overview of these consumer finance schemes and the associated end-user costs. These schemes make many essential products and services affordable to a bottom-of-the-pyramid (BoP) population that otherwise has had to make do with low-quality alternatives that are often more expensive. For example, M-KOPA makes solar products affordable to low-income households on a pay-per-use installment plan. Customers acquire solar systems for a deposit and then purchase daily usage “credits” for US\$0.45, which is less than the price of traditional kerosene lighting. In Mexico, ¡Échale! a Tu Casa’s self-build kits—eco-friendly, good-quality, secure homes—are up to half as expensive as already built homes.

**Table 1. Overview of the consumer finance schemes and the associated costs to the end user**

Business	Product	Total cost	Consumer payment plan	Credit facility
SolarNow, East Africa	Solar home systems	US\$400–\$10,000	US\$130 down payment. Monthly repayment plan over 24 months. 30% interest rate over two years.	In-house
M-KOPA, East Africa	Solar home systems	Approx. US\$200	US\$30–\$35 down payment. Daily repayment plan over 12 months with repayments of US\$0.50–\$0.60 a day.	In-house
WaterSHED, Cambodia	Rural latrines	US\$45–\$50	US\$4.5 down payment. Monthly payment plan over 18 months. 2.8% interest rate. MFI loan officers collect repayments.	Facilitate access to MFI loans
Gramalaya, Guardian, India	Rural latrines	US\$150	Monthly payment plan over 18 months. 21% interest rate.	In-house and loans through SHGs

¡Échale! a Tu Casa, Mexico	House building materials	Starts from approx. US\$10,000 for a new house	Up-front cost is 10% of total costs saved by consumer in Échale savings account. Bi-weekly repayments. 14% interest rate.	In-house
CEMEX, Mexico	House building materials	Starts from approx. US\$10,000 for a new house	Up-front cost is five weeks of savings of the weekly repayment amount. Customizable payment plan over 70 weeks.	In-house

### Financial Viability

This model is proving financially viable because of the sheer demand for affordable consumer finance and the innovative schemes developed. Companies providing low-cost housing finance are particularly profitable, with CEMEX Patrimonio Hoy, ¡Échale! a Tu Casa, and Mahindra all reporting a profit. ¡Échale! has an annual turnover of US\$5 million, with an internal rate of return of 10 percent. The solar businesses offering finance are growing quickly and attracting large investments from impact investment funds. SolarNow, which closed a funding round of US\$2.6 million in October 2014, expected to reach breakeven in July 2015. M-KOPA, which was on track to reach its annual revenue target of US\$15 million at the end of 2014, has raised more than US\$25 million in capital through a mix of debt, equity, and grants. The company has reinvested all cash flows to grow the business further and is on track to hit its target of US\$100 million in annual revenue by 2018 (Zayed Future Energy Prize, 2014).

### Partnerships

Financial institutions are an important stakeholder in this model. Banks and investors provide the necessary debt and equity capital to companies that have set up in-house financing. For companies without in-house credit, MFIs play the role of financiers.

Mobile money platforms are important partners for a number of companies, particularly those that use the PAYG model. Companies develop partnerships with these platforms to allow their customers to make repayments over their mobile phones.

## Implementation: Delivering Value to the Poor

### Awareness

Companies need to create awareness of the goods or services, not the payment plans. Consumer financing solutions alone do not secure demand for these products. The companies invest considerably in techniques such as engaging entrepreneurs and building word of mouth networks, to build awareness and demand for the products.

### Acceptance

The method and flexibility of repayments make this an attractive model for BoP consumers. The PAYG model of paying a small amount each week or month through a local agent in the same way that people top up their mobile phones is an easy model for consumers to understand. Unlike more traditional lines of credit, this model also allows payment plan flexibility. The customers of Fenix International's ReadyPay PAYG energy solution in Uganda can choose to pay for their solar home system on a daily, weekly, or monthly plan. Collateral and much of the documentation required by other financial institutions is not required on these payment plans, which reduces the perceived risk of the consumer.

### Accessibility

The energy businesses that have adopted this model mostly use a network of agents to increase their reach. Azuri, for example, engages small enterprises such as corner shops and mobile top-up kiosks to accept micro-payments from its customers. Many have integrated mobile phone payments into their models to increase reach. ReadyPay has partnered with MTN Mobile Money in Uganda to allow its subscribers to make their payments over its electronic payment platform. Customers of M-KOPA can buy a solar home system and avail themselves of an affordable payment plan using the M-Pesa mobile money service in Kenya.

## Affordability

This model ensures affordability to the BoP by breaking the cost of a product into small, regular payments that are relatively easy to pay for low-income consumers. If the product is offered without credit, then a large share of the target population cannot afford it. In Cambodia, for example, where the average income is a little over US\$1 a day, paying around US\$50 up front, even for an essential product like a latrine, is not possible. The 2015 World Bank paper *Making Products and Services Affordable for Low-Income Consumers* details how this model and others are innovating to address the issues of affordability at the BoP.

## Results and Cost-Effectiveness

### Scale and Reach

The numbers of people reached varies because the businesses operate in very different sectors. The two housing companies in Mexico, CEMEX and ¡Échale! a Tu Casa, have reached approximately 2 million and 1 million people, respectively. In the energy sector, SolarNow has installed more than 7,000 solar home systems in Sub-Saharan Africa, reaching 50,000 people, while M-KOPA has reached more than 150,000 households (M-KOPA, 2015). Companies that provide latrines through financing reach similar numbers: in Cambodia, WaterSHED and iDE have sold 60,000 and 80,000 latrines, respectively, in the past three to four years.

### Improving Outcomes

Consumers are able to afford good-quality products that would have been out of reach to them or would have left them in higher debt without consumer financing. For the same building materials offered by ¡Échale! a Tu Casa at an interest rate of 12 percent, customers would have had to take a loan at up to 50 percent from local financial institutions. These models create additional income opportunities for local entrepreneurs as well, as many companies engage them as agents for sales and marketing.

The model's long-term significance is that companies can develop goods and services targeted at lower-income markets because consumer financing provides a way to alter the relationship between product cost and household disposable income. While other constraints to scaling up effective demand also need to be solved, tackling the "ability to pay bottleneck" undoubtedly expands the reach into the BoP market.

Increased access to better quality essential products has led to a positive social impact across sectors:

- *Housing:* For the low-income customers of CEMEX and ¡Échale! a Tu Casa who have purchased self-build housing schemes, living conditions have improved. These customers, who previously lived in crowded, temporary, low-quality housing, have been provided access to secure, good-quality housing. This in turn enables other social benefits, including better health conditions, improved learning conditions for children, and greater harmony and responsibility within the household.<sup>1</sup>
- *Energy:* The provision of solar home systems using consumer finance has increased access to clean energy for low-income consumers. The environmental and health impacts of shifting from kerosene or biomass can be significant.
- *Sanitation:* The use of good-quality latrines in rural areas that customers can buy from companies offering consumer financing can improve health outcomes.

## Scaling Up

### Challenges

BoP consumers aren't looking for cheap products, but rather good, risk-free products. There is a willingness to pay for products that are more expensive if the risk of being disappointed is decreased. The willingness of CEMEX's customers to pay extra for the additional benefits they receive demonstrates this. The focus of companies using this model on quality product and service has helped build trust among target consumers and has contributed to building demand.

There is a clear need for flexible forms of consumer finance at the BoP. The availability of consumer finance significantly increases the likelihood of BoP consumers buying a product. In Cambodia, the rural latrine enterprise iDE has found that only 12 percent of households are willing to purchase a US\$50 latrine when they have to pay cash on delivery, whereas 50 percent of them are willing to buy when a loan is offered (Shah, 2013).

However, for in-house credit facilities, the biggest challenge is raising sufficient working capital. Asset financing businesses are cash intensive and need to raise debt and equity on a large scale to refinance their portfolios, manage working capital, and maintain stock levels.

Apart from the cost of refinancing the portfolio, other day-to-day operational costs remain high for the in-house model as well. The cost of maintaining client discipline and making payment collections is significant: staff need to be employed to maintain records and make regular client visits. This is mitigated for companies that use the agent distribution model; although, in those cases, investments have to be made to ensure that the agents are providing a quality service.

When companies have to partner with or facilitate access to MFIs to provide the finance, either because they are unable to set up an in-house facility or because regulation prohibits it, problems can arise. Working with MFIs has its advantages, such as providing access to large groups and endorsement of the product by trusted MFI officials, but it also restricts reach and flexibility. The Hystra report *Marketing Innovative Devices for the Base of the Pyramid* states that MFIs and other providers of microfinance only reached about 10 percent of the world's poorest at the end of 2010 (Hystra, 2013). It also reports that only a fraction of MFIs are able and willing to build effective partnerships (one practitioner revealed that at best 1 in 10 of these partnerships actually worked in the long term).<sup>2</sup>

The shift from partnering with third parties for finance to in-house financing can significantly increase reach and revenue for companies. Apart from avoiding the constraints of working with MFIs, listed above, in-house financing has also been seen to increase returns on sales by 3 to 15 percent for some companies.

### Role of Government and Public Policy

Government and policy can play a crucial role in enabling the growth of this model. As companies are combining the sale of products with the provision of finance, this is a difficult policy arena to navigate. In some cases, governments and policy makers have been receptive to the emergence of this model; in other case, they have been less supportive. There are some lessons to be learned from these cases:

- *Flexible regulators are enablers.* A big factor in the success of CEMEX and ¡Échale! a Tu Casa in Mexico is the willingness of the local government to buy into the benefits of the self-build housing program to solve Mexico's housing problems. The National Housing Committee put subsidies in place for people opting to self-build and gave the companies a license to operate in the housing segment. The case of M-KOPA in Kenya is similar. M-KOPA was able to put its model in place relatively easily because of the local government's support of the mobile money model.
- *Regulation can inhibit growth.* In some countries, such as India, regulation is such that only financial institutions can offer interest-bearing credit, which means companies have to partner with MFIs to offer finance. This hinders growth: The companies' reach is restricted to areas where MFIs operate, and they have less flexibility in what they can offer. In Uganda, the government set up a well-intentioned solar subsidy program with funding from the World Bank, but it was not implemented well at the local level and SolarNow ended up losing money because of the scheme.<sup>3</sup>
- *Potential for government in helping companies attract working capital.* For companies with in-house credit facilities, this model is cash intensive. There is a plea from businesses for governments to actively help them attract more working capital from local banks and also make foreign

exchange in-flows simpler. SolarNow has been lobbying the government in Uganda for some time about this but reports little support.<sup>4</sup>

**Table 2. List of case studies in this profile**

Company	Country	Description
<a href="#">Arogya Finance</a>	India	Arogya Finance has partnered with hospitals and other health care providers to ensure that people can access medical loans for themselves and their families. Patients borrow from and repay Arogya Finance directly, leaving them free to get treatment wherever they choose. Arogya Finance has been designed for Indian customers—for a reality where not everyone has a bank account, salary slips, or collateral.
<a href="#">Azuri</a>	Kenya, Malawi, Zambia, South Sudan, Uganda, South Africa	Azuri's small solar home systems bring good-quality light and phone-charging to off-grid households and save them money. Once they have paid for their starter system, Azuri's customers may upgrade to larger systems.
<a href="#">CEMEX Patrimonio Hoy</a>	Mexico	Patrimonio Hoy provides low-income families living in urban and semi-urban areas with access to materials and technical assistance to build good-quality houses. It offers finance through a savings and credit facility.
<a href="#">¡Échale! a Tu Casa</a>	Mexico	¡Échale! a Tu Casa has committed to making US\$25 million in low-cost financing available over the next five years to 25,000 low-income families to build their own "eco-friendly" homes, which include wood-saving stoves or biodigesters for energy needs and rain-harvesting water purification systems.
<a href="#">Global WASH Initiative (iDE)</a>	Cambodia, Bangladesh, Nepal, Zambia, Vietnam, Ethiopia	iDE is a nongovernmental organization (NGO) acting as a market facilitator to commercialize low-cost latrines through active support to local manufacturers and the identification of village-based promoters.
<a href="#">Gramalaya Guardian</a> (Gramalaya Urban and Rural Development Initiatives and Network)	India	The NGO Gramalaya engages local communities in awareness-raising programs and works with committees responsible for sanitation provision in their area. It promotes a range of toilet models to households, supports local producers in manufacturing better-quality latrines at lower cost, trains masons in installing them, and offers end-user financing through its spin-off arm Guardian or partnerships with local microfinance institutions.
<a href="#">Grameen Shakti</a>	Bangladesh	Grameen Shakti has developed market-based programs with a social objective for popularizing solar home systems, including other renewable energy technologies, to millions of rural villagers.
<a href="#">WaterSHED</a>	Cambodia	Acting as a market facilitator, the NGO WaterSHED creates supply chain networks, working with local businesses, government, and communities to commercialize low-cost latrines. It currently works with 165 latrine manufacturers.
<a href="#">Mahindra</a>	India	Mahindra Rural Housing Finance Ltd. provides loans in rural and semi-urban areas for the purchase, repair, and construction of new homes.
<a href="#">M-KOPA</a>	Kenya, Uganda, Tanzania	M-KOPA makes solar products affordable to low-income households on a pay-per-use installment plan. Customers acquire solar systems for a deposit and then purchase daily usage "credits"; after one year of payments they own their systems and may upgrade to more power.
<a href="#">Mobisol</a>	Rwanda, Kenya, Tanzania	Mobisol solar home systems increase living standards in off-grid areas by replacing the use of kerosene and/or diesel. Combining solar energy with microfinancing schemes reduces the barriers usually faced by the poor to access the finance needed to shift to renewable energy technologies.
<a href="#">SELCO</a>	India	SELCO links sustainable energy to poverty alleviation by providing quality, customized solar home lighting systems to poor customers, partnering with banks to provide financing for increased affordability.
<a href="#">Simpa</a>	India	Simpa has introduced its pay-as-you-go pricing to household energy systems. Users prepay based on actual usage and each payment counts toward the total purchase price of the solar home system.

## Notes

<sup>1</sup> Bessarabova (2014a).

<sup>2</sup> Ibid.

<sup>3</sup> Willem Nolens (CEO, SolarNow), Skype interview with author, May 2015.

<sup>4</sup> Ibid.

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Enterprise data were also provided via interviews with Sebastian Groh (CEO at SOLshare), Willem Nolens (CEO, SolarNow); and Francesco Piazzesi (CEO, ¡Echale! a Tu Casa).

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## PROFILE: ¡Échale! a Tu Casa

*Using innovative financing to make good-quality housing available in Mexico*



### Challenge

Rapid urbanization in Mexico has resulted in a severe shortage of affordable housing in cities. Home loans are not easy to obtain because they require collateral and formal proof of income, and interest rates are high, leaving many Mexicans at the bottom of the pyramid (BoP) unable to find safe places to live.

### Innovation

¡Échale! a Tu Casa ([www.echale.com.mx](http://www.echale.com.mx)), founded in 2006, has developed an innovative self-build housing program that provides low-income families with the opportunity to own good-quality, secure homes. It provides a one-stop solution through three key components: construction, finance, and community.



The company produces compressed earth blocks (known as Adoblocks), and then it makes architects, engineers, and construction workers available to help customers build their houses with this material.

To make builds affordable, ¡Échale! offers finance through a savings and credit facility. Its government-sanctioned community finance society (known as a SOFINCO) gives customers access to simple savings and credit products to build or improve a house. Once a customer has saved 10 percent of the total cost of the building material, the savings are used as a guarantee against a loan. ¡Échale! charges an annual interest rate of about 30 percent, whereas other lenders charge 50 percent and impose additional charges.

¡Échale!'s model revolves around community engagement. The company helps organize local housing committees to oversee house construction. It pays and trains five members of the community to help construct each house. It also runs financial education workshops for its customers. This community-centered approach also helps the company design and improve its products and services to better meet the needs of its customers, who in turn promote ¡Échale! and the program's benefits to others.

Environmental impact is a key focus. Adoblocks are environmentally sustainable, and all houses built are equipped to harvest rainwater, reducing the use of municipal water by 20 percent. Many of the houses are also equipped with biodigesters, which reduce leakage of latrines and septic tanks, and solar energy-efficient lamps, which reduce dependence on energy by 10 percent.

### Impact

¡Échale! has facilitated the construction of 30,000 new homes and 150,000 home improvements, reaching about 1 million people. Moving out of cramped, informal settlements into houses with privacy and space improves conditions for health and sanitation and creates improved learning conditions for children.

The program also increases employment, creating five temporary jobs per house. The company estimates that 200,000 people have gained temporary employment through the program. The training they receive helps equip them to take on similar work after their temporary job with ¡Échale! ends.

### Scaling Up

The company has reached scale. It is developing a social franchise model to allow other countries to replicate its success. A key success factor has been the local government's recognition of the benefits of the self-build model and its willingness to put measures in place to enable its growth. ¡Échale!'s stakeholder engagement has been another key driver.

## PROFILE: SolarNow

*Providing energy to off-grid communities through innovative asset financing*



### Challenge

More than 60 percent of people in Sub-Saharan Africa lack access to electricity, according to the World Development Indicators. Most of them live in rural areas off the grid, relying on primitive sources of energy such as biomass and kerosene, which are expensive, harmful to health, and polluting. With the slow pace of grid expansion, solar energy is the most viable option for them. However, the cost of a good-quality solar energy system is beyond the means of most villagers.



### Innovation

SolarNow ([www.solarnow.eu](http://www.solarnow.eu)) has developed 50- to 2,500-watt solar home systems, priced from US\$400 to US\$10,000. Its products provide more power than simple solar lamps and last 10–20 years, depending on usage. To make its products affordable to base-of-the-pyramid consumers, SolarNow offers a 24-month credit facility, called PayPlan. Customers deposit 15–20 percent of the purchase price, paying the rest in monthly installments at an annual interest rate of 30 percent. To qualify for the plan, a buyer must pay US\$130 up front and have a monthly household income of US\$75. Once the deposit is paid, the system is installed within 14 days. Afterward, a service team makes regular calls and visits to monitor quality and ensure that customers are aware of repayment terms; a two-year service guarantee is also provided.

Ownership of the system incentivizes proper usage and maintenance by the customer, as does the ability to upgrade their system and purchase other electrical products after completing the 24-month plan. Product upgrades—TVs, refrigerators, and other electrical appliances—are a key source of revenue for the company.

SolarNow writes off less than 0.4 percent of its loans, and less than 2 percent of PayPlan customers have repayments pending more than 30 days. Payment discipline is a constant focus: SolarNow has invested in monitoring repayments, sending timely reminders to customers.

### Impact

Founded in 2010, SolarNow has sold 7,000 solar home systems, reaching about 50,000 people. A company investor's impact study found that about half of all consumers live below the US\$2.50 per person per day poverty line. A third of the customers are institutions, including clinics and schools, which also reach the bottom of the pyramid. Customers experience multiple benefits: cost savings; cleaner indoor air; increased productivity, as a result of lighting at night; and access to information, through radios, TVs, and phones. The 7,000 systems are estimated to reduce carbon emissions by about 70,000 tons over a 10-year period.

### Scaling Up

SolarNow has been selling solar home systems to off-grid consumers in Uganda since 2011. A major driver has been the company's in-house consumer credit facility. It also sells a high-quality product, which has built trust among consumers previously wary of investing in solar systems.

SolarNow has found it difficult to find equity investment: investors find the proposition too risky and are confused by the fact that the company combines solar home system sales with asset financing. Working capital has also been a constant issue. Cash constraints have reduced margins and caused stock-outs, making it difficult for franchises and sales staff. Despite these difficulties, SolarNow raised €2 million in equity investment in 2014.