

Off the grid, On the map

Unlocking universal solar access in
South Africa: a private sector
operator's view

SAPVIA Universal Access Working Group
launch webinar

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Sun King delivers last mile solar and energy efficient appliances for off-grid and underserved households and businesses

Suite of essential products underpinned by in-house design and R&D, and addressing a wide range of customer wallets & needs



DC Solar kits (3-80W)

Solar Lanterns

Launch: 2009



Replaces kerosene lanterns in homes and businesses.
Power Delivery: <5 W

Solar Home Systems

Launch: 2016



Multi-room lighting, phone charging and appliance power. Sold optionally with energy-efficient radios, TVs, fans.
Power Delivery: 7 - 80 W



AC Solar Systems (600W – 30kW)

Launch: 2025



Replace unreliable electric grid and diesel generators to power vast majority of appliances. Scalable to home or business's needs.
Power Delivery: 600 – 30 kW AC



Smart phones

Launch: 2024



Sun King combines its engineering, supply chain optimization and financing capabilities to make smart phones affordable to the next generation of internet-connected households



'Pay as you go' cooking gas

Launch: 2026



Sun King's delivers and sells 'pay as you go' metered modern cooking fuels—saving people money, improving quality of life and drastically reducing carbon emissions

We provide a powerful and highly scalable platform for essential services to Africa's underserved communities

What Sun King does: Product development, Distribution, and Financing of standalone solar and energy efficient appliances

1 PRODUCT

In-house design and R&D to meet the needs of offgrid communities



End to end in-house design. Built to last in rural African conditions. Centralised production to drive down costs

2 DISTRIBUTION

The largest pan-African solar delivery network comprising staff, warehouses and last mile store



41,000+ field agents and 470+ branches in 11 countries and growing. Selling, installing and after-sales support at the doorstep.

3 FINANCING

Via PAYG to make solar accessible to unbanked and low income consumers, while improving financial inclusion



Over 90% of products sold on PAYG. \$1.2bn (R20 bn) in consumer finance disbursed. Low default rates

One private company, 27 million homes powered across Africa



Every one of these connections was delivered by private capital and private distribution, in markets with poorer households and tighter public budgets than South Africa's.

27.2m

Homes powered

31.5m

Solar products sold

>300k

New connections per month

41,000+

Field agents, 43% women

30+

Countries

470+

Retail branches

\$1.6bn

Consumer financing

239 MW

Solar capacity installed

How does the private sector deliver such numbers consistently?

By ensuring the private sector takes on the technology, operational and payment risks. In contrast, a traditional tender-and-supply contract pays on delivery of the product/infrastructure, and cannot deliver such impact consistently.

Where the money goes in a quality PAYG solar home system



57–69%

Everything else: consumer finance, sales and marketing, after-sales service, shipping, overheads, labour and margin.

12–29%

Taxes and duties: import duty and VAT.

14–20%

Materials and components.
The technology itself.

1

We build products that survive the field

According to GOGRA, only about 27% of the global off-grid market is quality-verified at all. Standards like VeraSol are key. Sun King sees standard as our floor, not our ceiling.

We minimize production cost through scale

Centralised design and manufacturing across 11 markets. Volume is what makes a durable product affordable, and a 93% fall in lithium pack prices since 2010 has also been critical

2

We made Pay as you go (PAYG) work

Tech enabled risk assessment at the point of sale, and lockout built into the device, in the same way a prepaid meter works. Low defaults are what keeps capital flowing and low-cost

3

Smart government incentives and subsidies were critical

We did not get here on our own. Smart subsidies, such as results-based finance (RBF), as well as duty and VAT exemptions make the product more affordable.

4

Affordable product + cheap credit + subsidies drive volumes

And a lower monthly payment does not only help the customer already in the market. It enlarges the market, which is the whole point.

5

Proven returns bring in cheaper capital

Profitability and a performing book let us sell receivables to commercial banks. Cheaper capital feeds straight back into the price, and the cycle repeats.

6

c.90%

Collection rate, against a 68% industry average

\$700m+

Capital raised to date, including two Kenyan securitisations sold to banks

Benefits of the offgrid solar under PAYG models

1 Deployment is rapid

About 350,000 connections per month, or 11,000 per day. We now represent about 20% of connections in Kenya. In Nigeria we are connecting over 80,000 households per month. Sector wide, a quarter of all households are now served by solar rather than by wire. Africa is leading the world in the speed of delivery of offgrid solar

2 A fraction of the public money per connection

A verified standalone connection cost US\$64 of public subsidy, against US\$635 for a mini-grid connection. Grid extension in East Africa runs US\$2,400 to US\$8,000 per household.

3 Government pays only for what was delivered

Results-based financing releases money against third-party verification. The company pre-finances, installs, and carries delivery risk. No stranded assets, and nothing paid for equipment that was never switched on.

4 Service lasts because the revenue depends on it

A customer whose system is dead stops paying, so the supplier has a permanent commercial reason to keep it working. Of roughly 375 million off-grid kits distributed worldwide, an estimated 250 million have fallen into disrepair, almost all from models with no service revenue behind them.

5 A network that finds the households planning misses

41,000 agents living in the communities they serve identify, qualify, install and maintain systems where no utility holds a customer record. In Kenya the decentralised sector employed about 48,280 people in 2021 compared to 8,500 employed by distribution utility. Agents earn on the sale and on every collection, so the value stays local.

6 Customers become payers, and many become borrowers

65% of Sun King customers access formal credit for the first time through a solar purchase, and build a repayment record that follows them. 69% live on less than US\$5.50 a day, so this is not a top-of-pyramid product.

Public money de-risks and buys down the price. Private balance sheets carry delivery, service and credit risk for the life of the asset. That is what efficient blending looks like.

South Africa's openness to private sector delivery models in offgrid solar is very welcome and long overdue

The INEP Action Plan commits to a hybrid model and to innovative funding with the private sector. PAYG solar is the most successful hybrid approach and it addresses most of the current challenges the Department outlines

Challenges outlined by the DEE

"Significant budget reduction by NT on both ESKOM and MUNIC programmes"

"Theft, vandalism, illegal connections, meter bypass and ghost vending"

*"Incomplete and illegal occupation of houses",
"informal / unproclaimed settlements"*

"Steep tariff hikes are making electricity unaffordable"

How PAYG solar can help

The average South African grid connection costs R57,000, and the Department's own delivered non-grid cost in 2024/25 was about R12,600. Using smart subsidies, this can be stretched out by 3-5x

There is no network to tap. The asset belongs to the household, and payment is enforced inside the device, the way a prepaid meter works but without a line anyone can bridge.

A standalone system needs no proclaimed stand, no title deed, no wayleave and no reticulation. It can serve a household the formal planning process cannot yet reach.

A fixed monthly instalment with no tariff escalation, and the household owns the asset outright at the end of the term. It also takes load off an ageing network instead of adding to it.

And it is the most inclusive electrification South Africa can offer

*"We shouldn't be getting load shedding because we've got a whole power plant here that is producing electricity."
Luthando Nogwebu, beside the Wesley-Ciskei wind farm, April 2025*

The asset sits on the household's own roof and is owned outright once it is paid off. And the agent who sells and services it lives in the same community.

None of it happens if we default to what is familiar. Three lessons from the rest of Africa

1. Pay on verified results, not on delivered equipment

2. Ensure “customer pays” approach, even if heavily subsidized

3. Allow flexibility in system sizing, and let the household choose

**Traditional models will take too long. We have the knowledge and we have the experienced implementers.
What is still missing is the political will to be ambitious and to stay focused on the goal.**