



Pay-as-you-go clean cooking: Key insights to drive sustainable scale

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Executive summary

The Solar Home Systems (SHS) PAYGo industry has faced significant hurdles over the past decade. As companies pursued rapid scale, credit quality often took a backseat: misaligned incentives between sales and credit teams led to invisible portfolio deterioration, and when defaults eventually surfaced, investor confidence wavered and capital became scarce.

Clean Cooking PAYGo is now at a critical inflection point. The sector shares fundamental characteristics with SHS, combining physical products with consumer credit, targeting similar customer segments, and operating with limited credit regulation. It also faces unique challenges, including dual performance tracking (payments and usage for carbon credits), and the inability to remotely disable most cookstoves.

This paper explores the similarities and differences between the SHS and clean cooking worlds, then leverages lessons from the SHS experience to provide three actionable recommendations:

- 1. Encourage separation of credit from sales operations:** either through partnerships with licensed financial institutions or by establishing independent internal credit departments with distinct KPIs and accountability structures
- 2. Prepare companies for incoming regulation:** new asset financing credit rules (e.g., Kenya) will require product registration, transparent APR disclosure, and customer suitability assessments; companies should build compliance-ready models now
- 3. Establish standardized KPIs and industry benchmarking:** create transparency around portfolio performance (similar to PAYGo Perform for SHS) so investors can identify strong operators and companies can learn from best practices

The clean cooking sector has a critical window of opportunity: the foresight to learn from the PAYGo SHS' lessons, and implement protective measures before challenges emerge. By adopting these recommendations now, the industry can build sustainable, investor-ready operations that deliver long-term value to their customers.

PAYGo: same model, different outcomes?

The SHS PAYGo Cycle: A 10-Year Warning

The SHS PAYGo industry launched with promise but most companies fell into a (now predictable) trap:

- Companies and their investors pushed for scale, often achieving it by lowering credit standards; this was easy since consumer lending was unregulated. Bad debt grew invisibly while sales-driven KPIs masked the damage. Neither companies nor investors saw it coming.
- When defaults finally surfaced, companies scrambled for quick cash fixes: pushing more sales to collect deposits. This deepened the problem. High-profile failures followed. Without standardized KPIs or transparency, investors couldn't distinguish strong operators from weak ones.

How can clean cooking avoid this vicious circle?



Clean cooking shares DNA with SHS, but there are important distinctions

Similarities

- Both industries operate on the same fundamental model: selling products through PAYGo, **combining physical hardware with consumer credit**.
- Both target similar customer segments with **limited accessibility**, whether due to remote locations or poor digital connectivity (limited phone access, unreliable SMS), and face comparable operational challenges, notably **assessing creditworthiness** for customers outside the formal financial system.
- Critically, both sectors remain largely **unregulated on their lending practices**, leaving credit standards to individual company discretion.

Differences

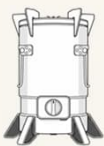
- Unlike SHS, clean cooking companies must track **both payment and usage**: carbon credits depend on active product use, not just loan repayment. This creates a dual performance pressure SHS never faced.
- Most clean cooking products also **lack remote token-locking capabilities**, removing the primary repayment enforcement mechanism that SHS relies on.
- Finally, while the SHS industry is establishing **standardized KPIs** and benchmarking (via initiatives like PAYGo Perform), clean cooking has no equivalent framework, making it harder to assess company performance or compare operators.

This paper explores the implications of each of these for the clean cookstove industry

Similarity #1: selling a product in PAYGo, two products in one?

Two value chains

A PAYGo sale is two products masquerading as one:



PRODUCT

A clean cooking product

sold by a sales and distribution company

COMBINED WITH

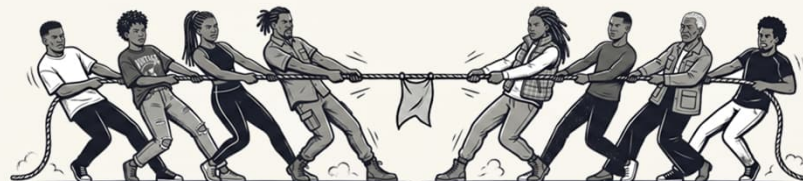


LOAN

A loan

originated by a lending company

With conflicting incentives



COMMERCIAL

Wants to push sales of the product

CREDIT

Wants to pull back on making a loan until customer willingness and ability to pay is proven

Why does this matter?

The PAYGo model has an inherent flaw: you can't optimize for both sales growth and portfolio quality. When sales volume is prioritized, credit checks weaken, and defaults rise. If the quality of sale (credit quality) is prioritized, the volume of sales slows. As such each "product" (stove and loan) needs separate teams with product-linked incentives.

Similarity #2: limited reach makes customer success a challenge

Customers are physically distant

Most customers live in remote areas, often far from main roads; reaching them often necessitates lengthy and complex travel.



And digitally hard to reach

Reaching customers digitally (phone or SMS) is often a difficult after onboarding, as many have a poor network, or become frustrated by frequent contacts and block the number.



Why does this matter?

Field operations are expensive: companies can't afford separate sales and credit teams visiting the same customers. Credit teams must assess applications remotely, relying on information from sales agents who are incentivized to get deals approved. This creates an inherent conflict: the gatekeeper depends on the salesperson. Multiple trips spike costs, so credit teams are pressured to approve quickly, leading to rushed underwriting and increased default risk.

Similarity #3: an (as yet) unregulated sector

Credit in PAYGo is unregulated

PAYGo companies operate outside financial regulation unlike microfinance institutions. PAYGo lenders set their own terms:

- No caps on interest rates
- No required customer protections
- No mandated credit checks

Most PAYGo companies don't disclose their effective Annual Percentage Rate (APR) or interest charges; they view themselves as product sellers, not lenders. They are both.

But it's coming

Kenya is plans to regulate non-deposit-taking credit providers, which includes pay-as-you-go.

LEGAL NOTICE NO.
THE CENTRAL BANK OF KENYA ACT
(Cap. 491)

IN EXERCISE of the powers conferred by section 57(1), (3) and (4) of the Central Bank of Kenya Act, the Central Bank of Kenya makes the following Regulations—

THE CENTRAL BANK OF KENYA (NON-DEPOSIT TAKING CREDIT PROVIDERS) REGULATIONS, 2025

Why does this matter?

PAYGo companies grew fast because they didn't have to follow the strict interest limits and rules that govern traditional microfinance. As markets like Kenya introduce new laws, these old business models will be challenged. New companies must build "regulation-ready" models from day one: honest about costs of credit, and using fair, clear ways to check if a customer can pay.

Difference #1: product usage and the need for a deep assessment of customer needs

SHS customers need to pay, not use

Technically, as long as customers pay for their solar home systems, they don't need to use them.

While usage is of course a big driver of repayment, the unit economics of an SHS is not directly impacted by usage, only by repayment.

But Clean Cooking customers need to do both

Clean cooking flips this logic. Most companies depend on carbon credits, which require documented, ongoing usage. A customer who pays but doesn't cook is a double loss: no carbon revenue, and likely a future default when they realize they're paying for something they don't use.

Usage isn't a nice-to-have, it's the business model. Without it, unit economics collapse.

Why does this matter?

For SHS, not caring about usage can make collections more aggressive. Companies focus less on whether customers actually need or value the product. For clean cooking, usage is critical to unit economics: companies must understand customer needs upfront, not just creditworthiness, but actual product fit. This requires stronger pre-sale assessment and ongoing engagement, which most PAYGo companies aren't built to do.

Difference #2: token locking mechanism, pros and cons

SHS units are lockable

- Most SHS systems use locking to disable a system if a customer misses a payment
- This provides an immediate repayment incentive without the cost of sending staff to the field
- Companies became over-reliant on this feature, using it to justify poor credit checks for high-risk customers
- Remote locking cannot replace proper underwriting; many locked-out customers eventually stop engaging and abandon their units

It's impossible on most clean cookstoves

- Most clean cooking products lack the hardware for remote locking
- Disabling a stove to enforce payment prevents usage, which immediately cuts off carbon credit revenue
- Companies face a "lose-lose" choice: allow customers to use the product for free or lose their primary income source
- This conflict makes the traditional SHS "lock-to-pay" model challenging for the carbon-reliant clean cooking sector

Why does this matter?

Without locking, enforcement depends entirely on manual follow-up: field visits, phone calls, community pressure. This is expensive, slow, and often ineffective. Clean cooking companies lose this tool. They must rely on stronger upfront customer assessment and relationship-based repayment cultures. During crises (like COVID), SHS companies with no locking mechanisms saw defaults spike as customers felt no immediate consequence for non-payment.

Difference #3: the importance of standardized KPIs and benchmarking

The SHS industry is establishing standard KPIs

- Historically, SHS companies used varied metrics, like "collection rate" with multiple definitions
- KPIs such as PAR30 were skewed by short-term sales volume, masking credit quality issues
- Through the GOGLA PAYGo PERFORM initiative, the industry is now standardizing KPIs: Portfolio-at-Risk (PaR) at 90 days and repayment rate at 1.5x the contract term
- These unit-economics-aligned KPIs separate credit performance from sales volume, measuring credit health independently of growth

Which is helping build investors' trust

- Standardized performance metrics foster investor trust by allowing fair comparison of companies and directing capital to those with genuine credit discipline
- Better customer protection through making predatory practices (high defaults, aggressive collections) visible and measurable
- Sales-driven KPIs previously masked impaired loan portfolios; standardized credit KPIs surface problems earlier, protecting investors and customers

Why does this matter?

Clean cooking has no equivalent. Investors entering the sector can't reliably assess company credit health or compare operators. Without standardized KPIs, the sector risks repeating SHS mistakes: capital flowing to fast-growth, weak-credit companies until defaults surface and trust collapses. Establishing transparent performance standards now is critical to sustainable capital deployment.



Key recommendations



Recommendation #1: Encourage split between sales/operations & credit

Encourage split between credit and sales

Clean cooking companies must separate credit operations from sales (either externally via partnerships or internally through strict organizational separation).

- **External Split (Preferred):** The company focuses only on distribution (sales, installation, service). An external partner (MFI, bank, asset finance company) or a separate entity owned by the company handles all credit operations (underwriting, collections). The company receives upfront payment from the external partner, removing receivables from its balance sheet.
- **Internal Split (Minimum):** If external separation is impossible, create independent internal credit departments with separate reporting lines, compensation, and decision authority. Credit teams cannot report to sales.

Explore alternative financing models beyond PAYGo

PAYGo is just one financing option. Clean cookstoves can be financed through various pathways, including MFI loans, salary advances, or energy-as-a-service models. Companies defaulting to PAYGo may miss better market segments.

A Potential role for Development Partners

Mandate separation as a funding requirement

- Require proof of credit/sales separation before capital deployment (org charts, reporting lines, compensation structures)
- For external splits: verify partnership and service-level agreements (SLAs) with financial institutions (MFIs, banks, or AFCs); for internal splits: verify independent credit committee
- Enhanced monitoring for integrated sales-credit structures

Facilitate credit partnerships

- Connect companies with specialized credit providers
- Co-fund pilot cookstove distributor-financier partnerships
- Support SLA development and revenue-sharing structures tied to portfolio performance

Monitor compliance

- Tie follow-on funding to portfolio quality, not growth metrics

Explore alternative models

- e.g., can energy-as-a-service be replicated in the cooking space?

Recommendation #2: Prepare for a regulated industry

Adopt "regulation-ready" standards immediately

Proactively implement transparent APR calculations, documented customer consent, and rigorous underwriting before regulated oversight. Operating as if enforcement is already live prevents the high cost, legal exposure, and technical debt of "retrofitting" legacy portfolios and systems at scale.

Leverage licensed financial partnerships

Utilize "external splits" by routing the lending portion of the transaction through licensed banks, MFIs, or asset financing companies. This allows the credit function to reside within an existing, recognized legal framework, effectively reducing the direct regulatory and licensing burden on the cookstove provider.

Standardize consumer protection & transparency

Formalize all mandatory disclosures, including total loan costs, payment schedules, and penalty structures, while establishing robust, documented redress mechanisms. This not only avoids regulatory sanctions but also ensures long-term portfolio health by verifying customer suitability and repayment capacity at the point of sale.

A Potential role for Development Partners

Require regulatory readiness as funding criteria

- Mandate transparent APR calculations and customer disclosures for all PAYGo products
- Require documented customer suitability assessments and ability-to-repay evaluations
- Verify formal complaints mechanisms are operational
- Prioritize funding for companies partnering with licensed, regulated financial institutions

Support regulatory compliance

- Provide compliance resources and template development for customer consent and disclosures

Monitor proactively

- Track regulatory developments on asset financing and share updates with portfolio

Recommendation #3: Standardize KPIs and benchmarking

Establish standardized KPIs and performance benchmarking

The Clean Cooking sector must develop industry-wide performance standards before capital scales. Without standardized metrics, investors can't distinguish strong operators from weak ones, leading to capital misallocation and eventual sector-wide distrust (as happened with PAYGo SHS).

Minimal critical standardized metrics:

- Paid vs. Plan over first 90 days
- Repayment rate measured at 1.5x contract term
- Usage rates, especially over first 3 months (essential for carbon credit models)
- Share of High/Low using customers over first 3 months

Create transparency and comparability

Create sector benchmarking (similar to GOGLA's PAYGo PERFORM) allowing anonymous company comparisons. This protects investors, improves capital allocation, and creates competitive pressure for better credit practices.

A Potential Role for Development Partners

Fund standardized KPI development

- Support industry working groups to define clean cooking-specific performance metrics
- Adapt SHS learnings from PAYGo Perform while accounting for clean cooking differences (usage dependency, carbon credits)

Mandate standardized reporting

- Require portfolio reporting using agreed KPI definitions as condition of funding
- Regular submission of credit performance data

Support benchmarking platforms

- Co-fund clean cooking equivalent of PAYGo PERFORM
- Enable anonymous company comparisons to identify outliers and best practices
- Use benchmarking data to inform future investment decisions