

SAHA · SAVANNAH REGION LEARNING SESSION

Professionalizing water service delivery

In hard-to-serve communities across Ghana's Savannah Region.

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THE PROBLEM

The challenge



Volunteer-run systems break down

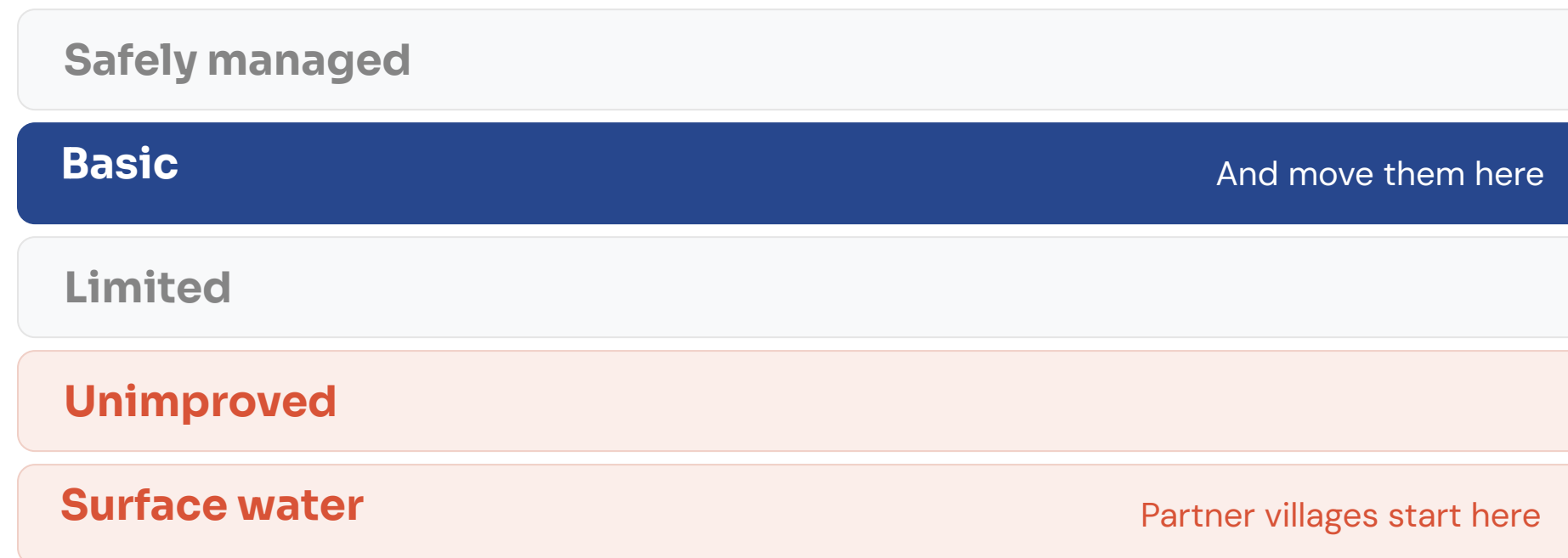
Systems managed by community-based volunteers deliver unreliable service, and that unreliability shows up as unsafe water at the household level.



No incentive means no priority

With no real incentive, volunteers turn to other income-generating activities. The water system is left to run itself, and it doesn't.

Where we work on the water ladder



Partner villages start at the bottom, on surface water and unimproved sources.

We invest to move *more people* up to Basic, not a few to safely managed.

OUR TECHNOLOGY

The Simple Surface Water Treatment System



SSWTS

A simple, robust, community-based treatment system using **alum and chlorine** to make surface water safe to drink.

Deployed where groundwater is unsafe or inaccessible, reaching communities that boreholes and piped utilities cannot.

THE LEGACY MODEL

Built on volunteers, and expected to pay for itself

2008

SINCE

The SSWTS was run entirely by community volunteers.

One expectation carried the whole model: **the system should cover all of its own costs.**

For rural, last-mile communities, that expectation quietly set the systems up to fail.

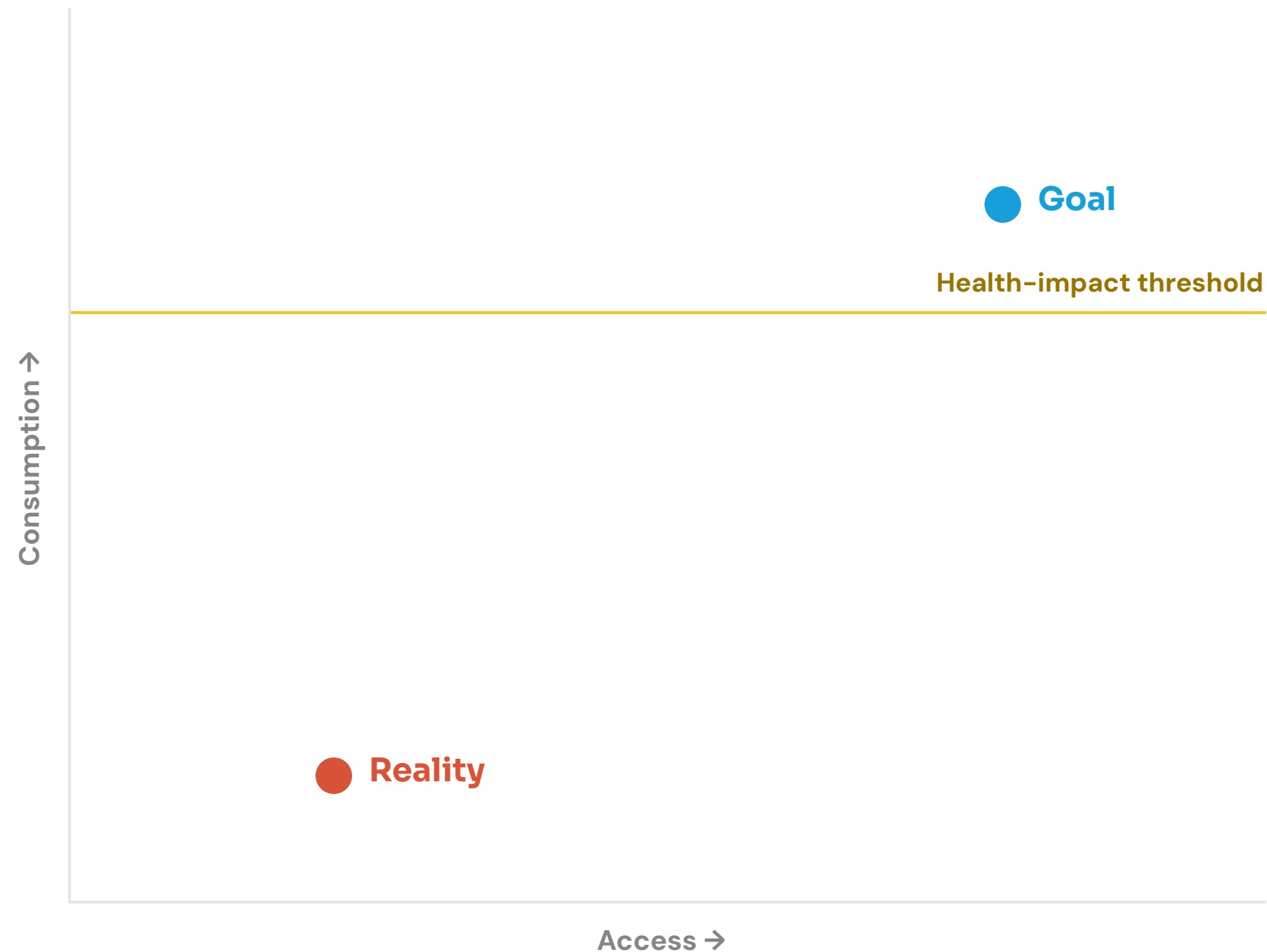
01

Evidence

What changed when we stopped relying on volunteers, measured across production, consumption and water quality.

OUR MISSION

Getting to the top-right: access and consumption together

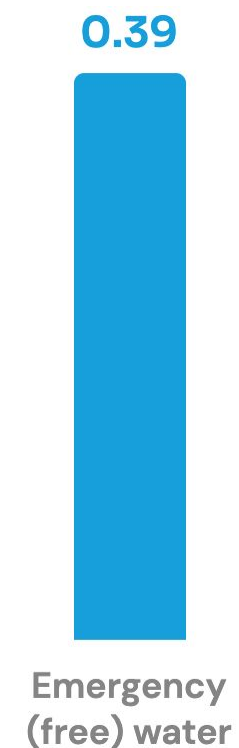
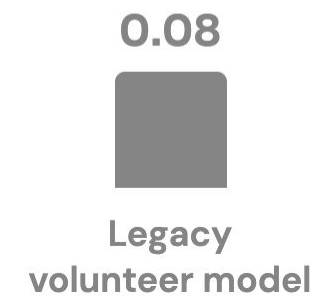


Access without use changes nothing.

Households only see a health benefit when safe water is both **available** and **actually consumed**. Our approach pushes on both axes at once.

Free water revealed what actually drives use

Average litres per person per day



300x

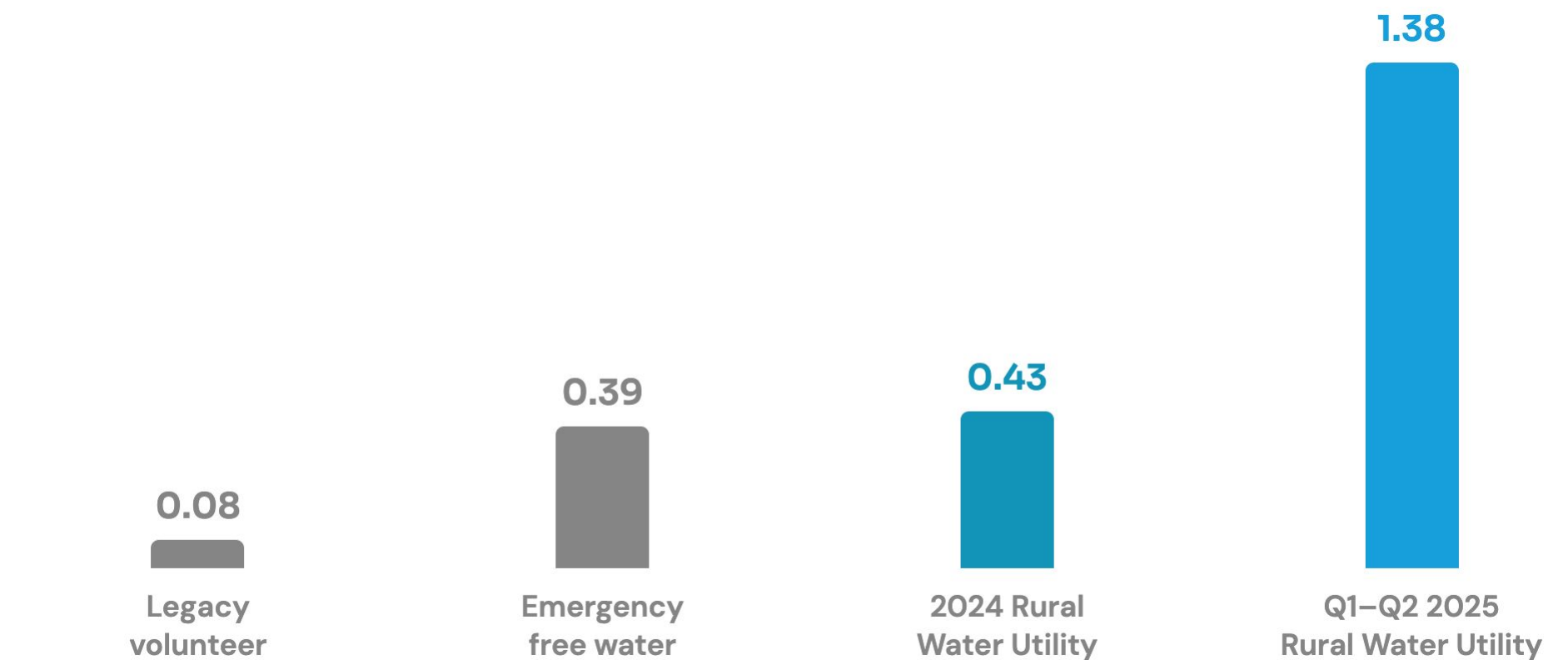
CONSUMPTION JUMP WITH FREE WATER

Deeper study surfaced three drivers of household use:

-  Price of water
-  Payment of operators
-  Reliable technical support

Professionalization beats even free water

Average litres per person per day



1.38 L

AVERAGE DAILY USE PER PERSON

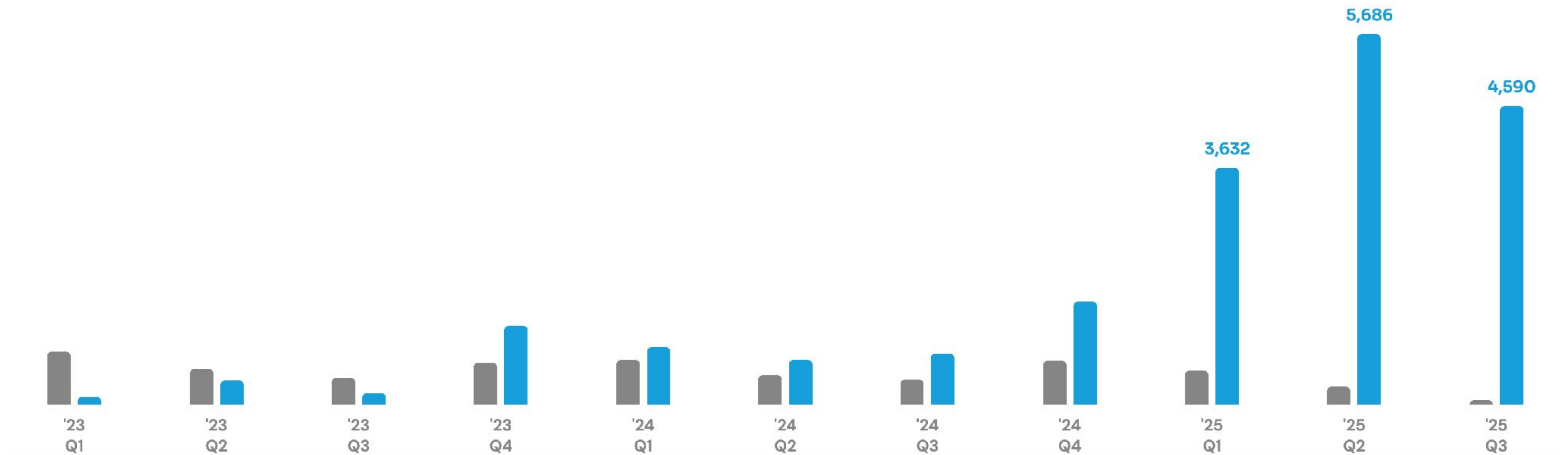
Roughly **17× the legacy model** and well above the emergency free-water period. Production now exceeds even the COVID-19 free-water peak.

EVIDENCE · PRODUCTION

Safe water production climbs under professionalization

■ Legacy ■ Utility (professionalized)

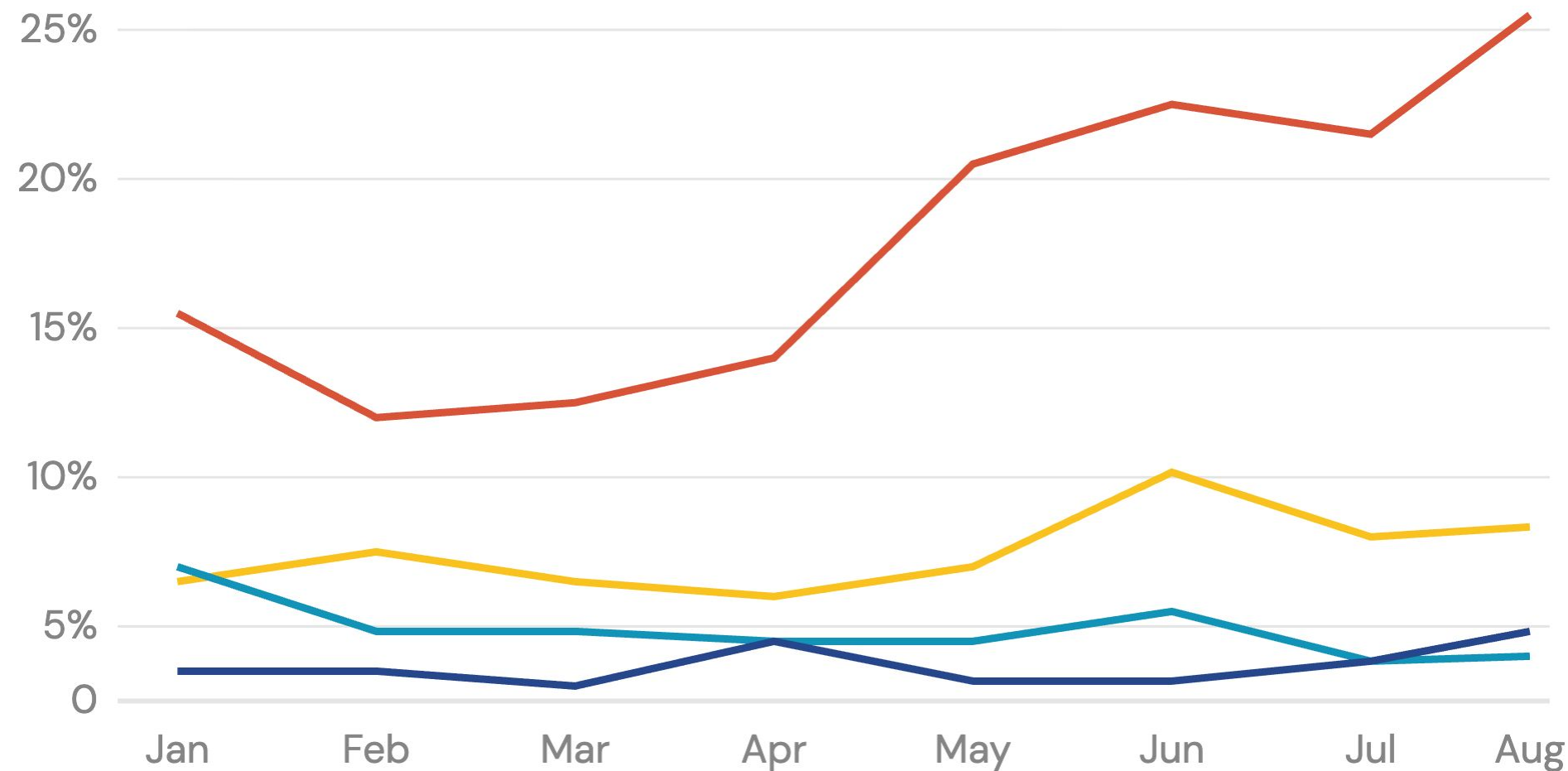
m³ produced per quarter



Contamination falls as payment ties to performance

2022 2023 2024 2025

% samples positive for total coliform · lower is better



Payment and performance assessment drive measurable gains in water quality.

The share of samples testing positive for total coliform has fallen year on year, from a 2022 peak above **20%** to consistently low single digits in **2025**.

The results are clear.

We cannot sustain rural water systems by relying on volunteers, and the wider evidence says the same. Community-based management can work, but broadly it has not. Recognizing that, and adapting our approach, is the whole game.

Snack break · 15 minutes

02

Operational Framework

You've seen the results. Here's what actually powers them.

OUR APPROACH

Four pillars, one outcome



Equitable pricing

Water priced so households can actually afford to use it.



Local women as operators

Trained, contracted, equipped and paid for the job.



Training, assessment & pay

Fixed pay plus performance bonuses against clear KPIs.



Professional external support

Supply chain, repairs, monitoring and lab verification.

Better health outcomes: higher consumption, safer water, and more reliable uptime, reinforcing each other.

PILLAR 01 • PEOPLE

Local women as operators

Saha engages operators as independent contractors. We:

- 1 Partner with the community to select operators.
- 2 Sign a contract with clear Key Performance Indicators (KPIs).
- 3 Train them, and equip them with mobile phones and treatment supplies.
- 4 Pay a monthly operator fee, plus a performance bonus.

GHc 173

MONTHLY OPERATOR FEE

GHc 46

PERFORMANCE BONUS / MONTH

PILLAR 01 • INCENTIVES

Criteria for the operator bonus

A monthly bonus of up to **GHc 46.58** is earned only when an operator meets every standard below, turning performance management into a clear, transparent incentive.

**Production & refill**

Refill rate above 1× each month.

**Water quality**

No more than one positive coliform / E. coli test per two-month period.

**Effective calling**

No reports of ineffective calling for the month.

**Water availability**

Water available more than 85% of the time.

**Customer surveys**

95% of customers report water is available.

See Saha's Commission & Bonus Evaluation SOP for full detail.

Training, assessment & payment



Training

Pre-implementation and post-implementation training for every operator.



Payment

Monthly fixed payments, KPI assessments, and bonus payments.

Operator KPIs

- ✓ Refill rate per month greater than 1
- ✓ Water availability & visit frequency > 85% of the time
- ✓ Positive microbial test < 1 in a month
- ✓ Customer surveys: 85% report water available
- ✓ Call promptly when supplies / repair needed

Managing performance, both ways

Saha actively oversees operator performance, rewarding what works and correcting what doesn't.



High-performing operators

- ✓ Receive performance bonuses on top of the fixed fee.
- ✓ Recognized as models for training and peer learning.



Low-performing operators

- 🔧 Placed on a performance improvement plan.
- 🔧 Transitioned out if standards are not met.

Professional external support

Saha provides comprehensive technical support to keep service consistent and safe:



Procurement & quality assurance

Supplying treatment materials and consumables while holding product consistency and quality standards.



Operational support

Routine and emergency assistance, from plumbing to repairs and equipment replacement, backed by a micro-insurance program.



Water quality monitoring

Monthly microbial water-quality testing across every operating site.



Independent verification

Funding third-party lab testing by CSIR–Water Research Institute (CSIR–WRI) to validate safety against national standards.

03

Professionalization Comes at a Cost

Reliable service is a recurring cost, not a one-time build. Here's what it takes to keep water flowing.

Costs under the surface-water model

	RWU	Legacy 2022
Direct \$ per litre	\$0.05	\$0.22
Direct \$ per cubic metre	\$48.47	\$219.90
Direct \$ per person / year	\$3.36	\$2.88
CapManEx annualized \$ / person / yr	\$0.23	\$0.23
\$ management / admin per person / yr	\$2.26	\$2.26
\$ per person / year	\$5.86	\$5.14

77.96%

LOWER COST PER LITRE PRODUCED VS 2022 BASELINE

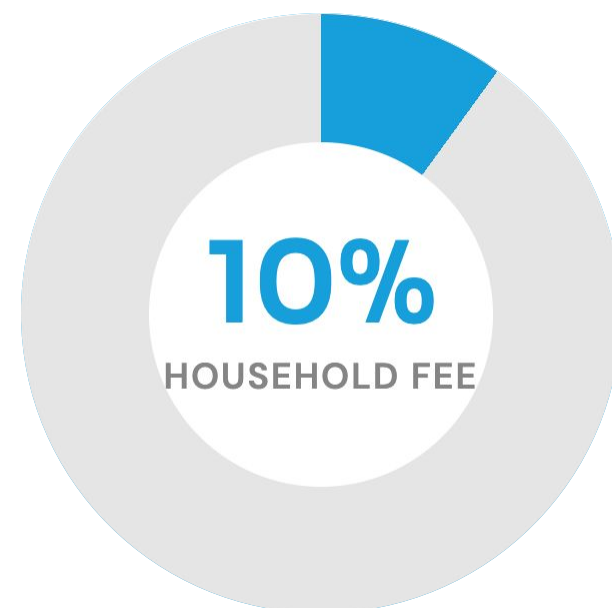
215.53%

MORE SAHA WATER PRODUCED THIS YEAR VS 2022 BASELINE

PART 2 • THE MODEL

Cost per person under the borehole model

Building a borehole is a one-time cost. Keeping it working, through operators, chemicals, repairs and monitoring, is a forever cost. The sector calls it **OMM: Operating, Maintenance and Management**.



WHO PAYS FOR RUNNING COSTS?

The GH¢2 weekly household fee covers only about **10%** of the true cost of service. The remaining **~90%** must come from external financing.

\$2.77

THE GAP, PER PERSON / YEAR

The cost of keeping safe water flowing to one person in a last-mile community for a full year. Small per person, but it must be reliable and recurring.

04

Next Steps / Way Forward

From surface water to boreholes, and the financing question underneath it all.

NEXT STEPS

Where do we go from here?



Professionalize borehole management

Take the lessons that transformed surface-water service and adapt them to the many communities that rely on boreholes.

THE MODEL

Professional management of boreholes



Preventive maintenance



Reactive repairs & troubleshooting



Spare-parts procurement & logistics



Water-quality monitoring & testing



Performance monitoring & reporting



Operator supervision & support

One operator, paid GHc 50, oversees the system, calling in reports and collecting fees each week.

THE CORE QUESTION

How do we maintain services to the last mile?

Addressing the cost gaps that revenue does not cover.

Community payments contribute toward service costs: maintenance, technical support, water-quality monitoring, operator management, transportation and system oversight.

But they cover only a **small portion** of the true cost of delivering reliable water.

THE FINANCING

How will we fund it?



District Last-Mile Maintenance Trust Fund

-  Piloting in East Gonja.
-  Professional service providers can qualify to tap into it, with no community-based management.
-  Payments based on results, anchored in a Results-Based Financing (RBF) framework covering uptime, quality and more, with a governing board deciding disbursement.



The 10% DACF lever

Districts should allocate their 10% District Assembly Common Fund (DACF) water share not only to **new systems**, but also to ongoing operations and maintenance, and could contribute directly to the fund.

IN SUMMARY

Conclusion

- 01** Professionalizing the operator role drives higher production and consumption, and cuts the frequency of community visits.
- 02** Results show a markedly stronger commitment from operators to reliable water provision.
- 03** The new structure gives us a far more objective way to manage water systems.



Universal access won't come from utilities alone.

We need localized, flexible, affordably priced, community-scale models. With the right partnerships and local innovation, we can solve the water crisis in our lifetime, and ensure that every sip is safe, every day, for everyone.

Thank you.

Questions & Discussion

05

Appendix

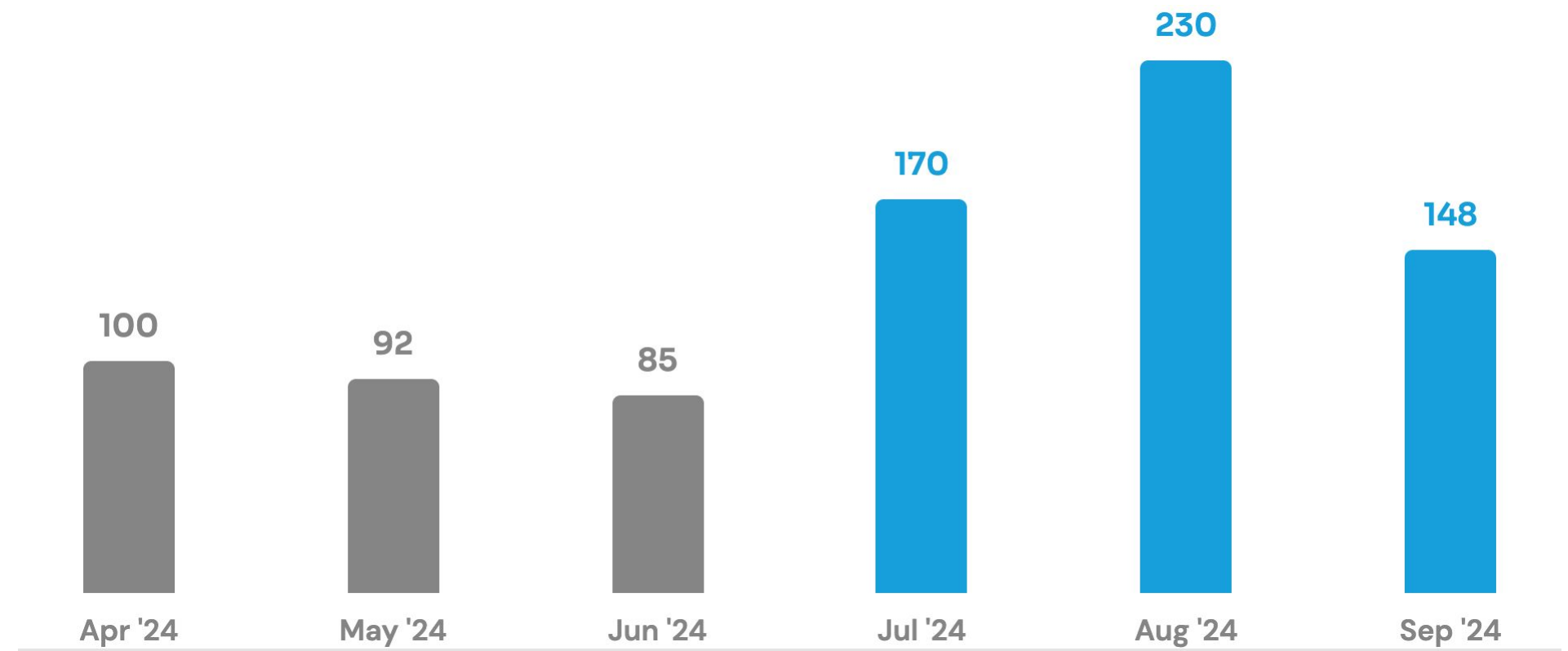
Supporting detail on pricing and the cost of last-mile service.

Price of water affects consumption

Under the legacy model, 20 litres of water sold for **50 pesewas**.

Under our current model, the same 20 litres sells for just **10 pesewas**.

m³ water sold



The price cut in July drives the jump in volume sold.

What does it cost to serve the last mile?

	GHS / person	USD / person	Subsidized?	Includes
CapEx	46.5 GHC	\$3.00	Yes	Hardware & set-up costs
OpEx	85.5 GHC / yr	\$5.86 / yr	Yes	Personnel (incl. operators), fuel, transportation, water testing, half of chlorine costs, before overheads / subsidy

These numbers are subject to change as Saha improves its service-delivery model. Figures are based on Saha's SSWTS.