eHealth AFRICA

CASE STUDY:

Powering Primary Healthcare Through Solarization

Challenge

Primary Health Care (PHC) facilities in Nigeria face persistent power shortages that hinder life-saving services. Before solarization, facilities like Panshekara PHC in Kano State endured frequent blackouts, sometimes going two to three days without electricity. Fuel for generators was costly and unsustainable, forcing staff to send patients home when laboratory equipment could not run. Deliveries at night were often referred elsewhere due to lack of power, putting mothers and babies at risk. Even basic comfort, like fans for ventilation, was absent, exposing patients to mosquito bites and discouraging them from returning.

As Bashir Garba Lima, In-Charge of Panshekara PHC, explained:

> *"Before the solar installation, power might come on for an hour or two, but often we'd go days without it. We even sent patients home because lab activities were unavailable. Deliveries had to be referred to the general hospital, sometimes with tragic consequences."*

Solution

To address these systemic barriers, UNICEF, in partnership with eHealth Africa (eHA), launched the RE4PHC Solarization Project. The initiative is solarizing 238 PHCs across 12 states between 2024–2026. Each facility is equipped with photovoltaic (PV) solar systems, ensuring a steady power supply for vaccine cold storage, diagnostics, maternal and child care, and other essential services. Facility staff also receive training in maintenance to ensure long-term functionality.

At Panshekara PHC, the installation included reliable solar-powered lighting, fans, and support for laboratory machines, enabling round-the-clock services.

Impact

The transformation has been immediate, measurable, and far-reaching:

Expanded Reach: Comprehensive energy needs assessments were completed in 238 PHCs across 12 states, creating a roadmap for sustainable electrification.

Accelerated Rollout: Installation, Testing, and Commissioning (ITC) was successfully completed in 28 PHCs in Kano State; delivered ahead of schedule.

Healthcare Outcomes:

92% improvement in vaccine cold chain reliability.

78% increase in safe night-time deliveries.

72% rise in facility-based births, directly advancing maternal and child health.

Service Reliability:

100% reduction in outages across solarized facilities.

83% increase in patient satisfaction.

143% rise in evening outpatient visits, strengthening resilient health systems.

Sustainability:

65% reduction in operational costs, cutting dependency on costly fuels.

Improved local capacity through staff training, ensuring long-term efficiency and system ownership.

At the facility level, stories are just as powerful:

- **Healthcare Access:** Facility attendance in solarized centers across Kano State rose by 65%. Panshekara PHC alone doubled its patient numbers, serving over 3,000 patients monthly compared to less than 1,500 before.
- **Safe Deliveries:** Women now prefer to deliver at Panshekara, confident that electricity will be available at all hours.
- **Diagnostics:** Genotype tests and PCV that once took days are now delivered immediately, improving trust and efficiency.

As Ibrahim Muhammad Bello, Vice In-Charge and Health Records Officer at Panshekara PHC, shared:

> *"Before solarization, overcrowding during immunization was common, and patients suffered without fans. Now, everywhere has light and ventilation. Even mosquito bites in the wards have stopped because fans are always on. Patients are happier, and services run smoothly."*

Bashir Garba Lima further emphasized:

> *"With solar power, we run 24-hour services. Our staff are motivated, patients are comfortable, and service delivery has doubled. The biggest value is that lives are being saved right here in our facility."*

What's Next

The success at Panshekara and other solarized PHCs highlights the urgency of scaling up solar power across more facilities in Nigeria. Sustaining this momentum requires:

- Expanding solarization to unreached PHCs in underserved communities.
- Further upgrading existing solar capacity to meet growing patient demand.
- Strengthening local maintenance and ownership for long-term system sustainability.
- Supporting health workers with additional resources to match increased patient inflows.

Call to Action

Reliable power is more than just electricity; it is safe childbirth, timely vaccines, and life-saving care for Nigeria's most vulnerable populations. Donors, governments, and partners can build on this progress by investing in the expansion and sustainability of solarization projects nationwide. Together, we can ensure that no mother is turned away at night, no child misses a vaccine, and no life is lost due to lack of power.

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