Empowered lives.
Resilient nations.

Solar For Health - Strategy Overview and Case Studies

October 2018

At A Glance

- Solar for Health is currently installing solar panels in health facilities in **Zimbabwe**, **Zambia, Libya**, **Namibia**, **Sudan** and **South Sudan, soon will expand to Angola, Chad, Malawi and Viet Nam.**
- Installed capacity is **7.7 Mega Watts,**
- Access to health services more than 43 million beneficiaries
- S4H focuses on installing solar PV systems in health clinics located in the **poorest and most remote** regions of world, ensuring "leave no one behind".
- UNDP has developed standardized S4H equipment list and established first health sector specific solar energy pre-qualified suppliers (LTA) =19

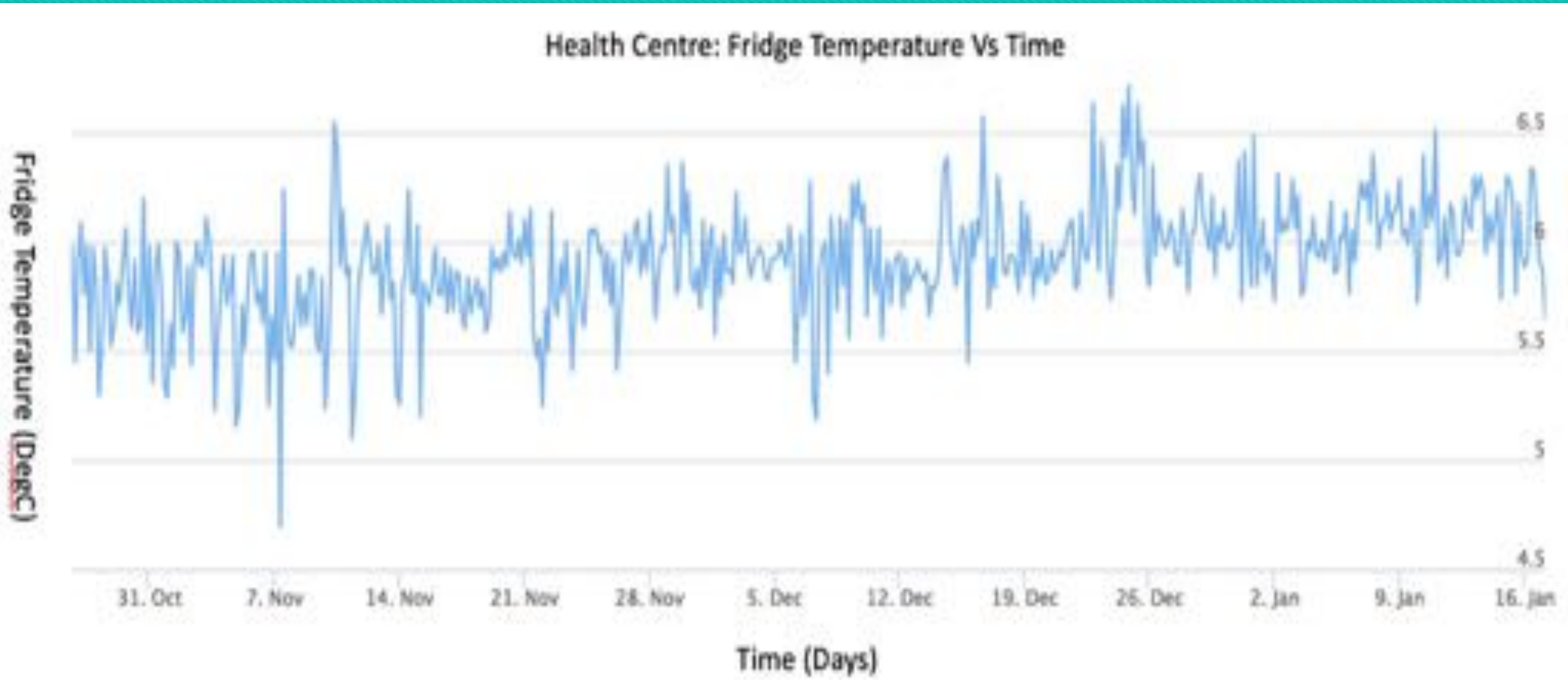
Key Features of the Solar for Health

- Provide 100% power from solar PV system Health Posts, health centers level I-III (plug and play) = 2-20kWp
- Meet 30% of the overall power needs of District, provincial and national hospitals and focus on most critical parts of the hospitals (maternity, surgery, A&E, Lab and Pharmacy) = 20-150kWp
- Supply chain and cold chain is top priority – National and regional Medical stores = 100-600kWp
- Hot and cold water for health posts and health centers,
- Security lights for health posts and health centers.
- Remote monitoring system

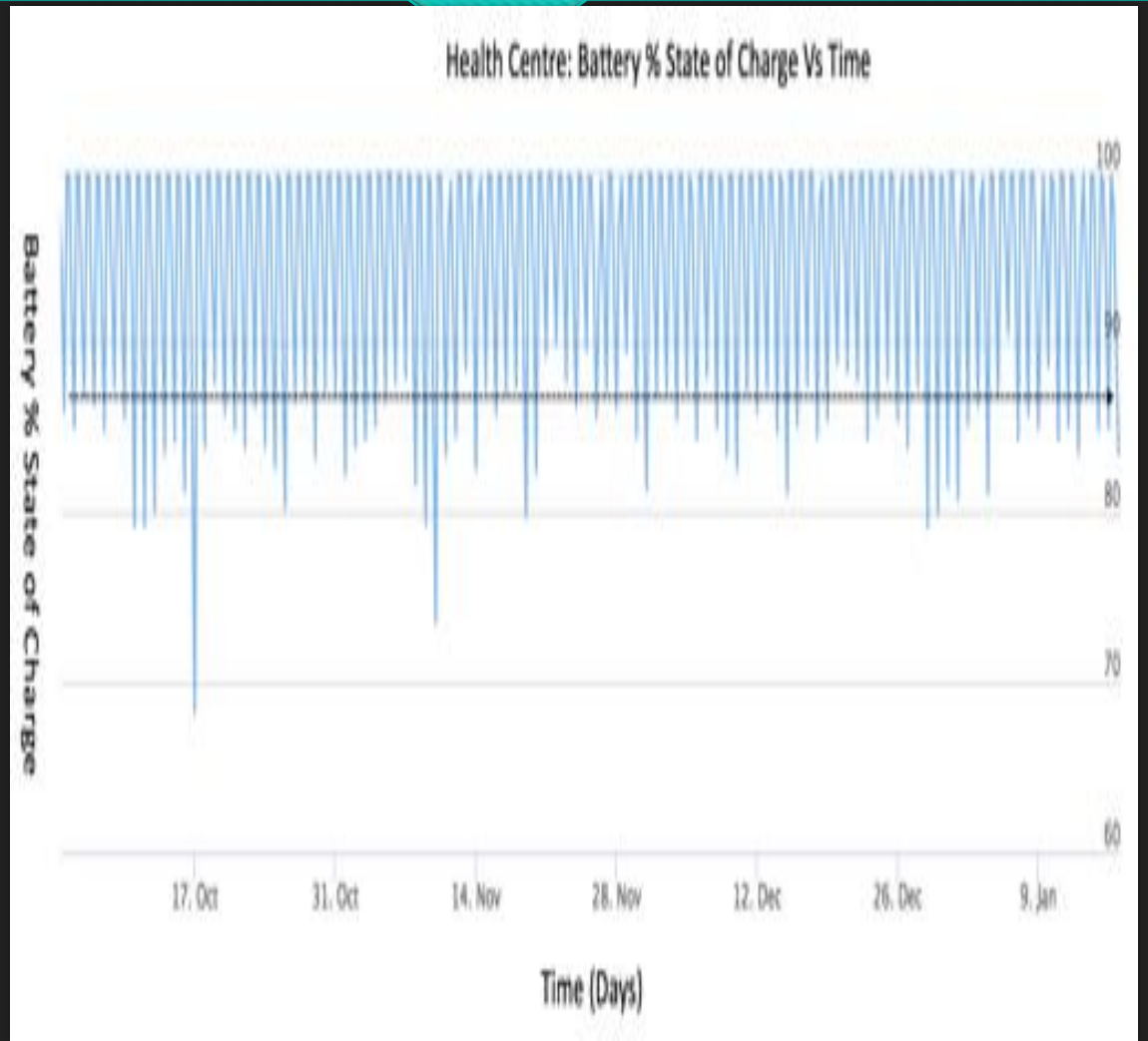
Coming soon !

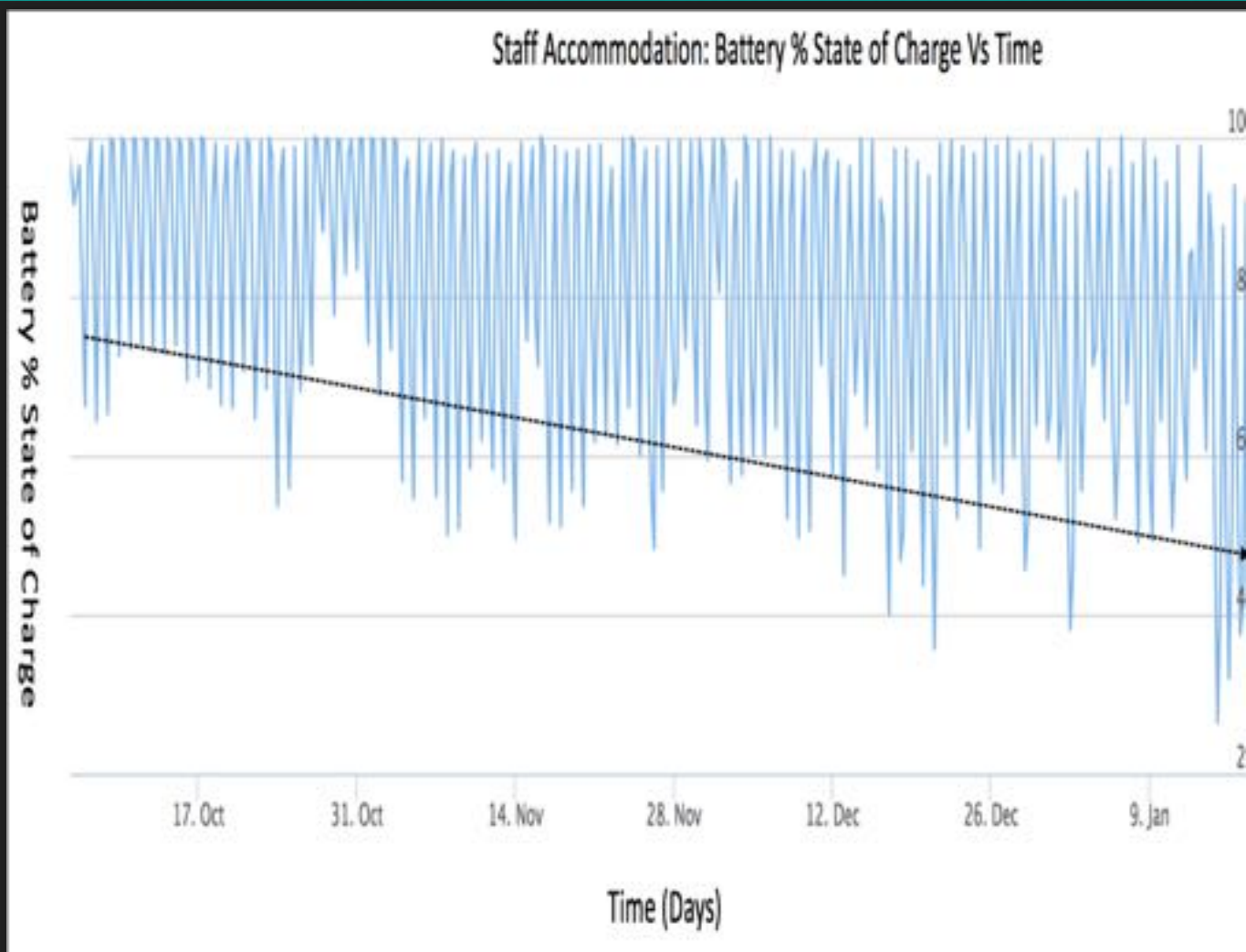
- Solar powered medical equipment – solar powered autoclaves,
- water purification system of health posts and centers

Remote monitoring system Data



Remote monitoring system Data





RESULTS

Countries	Health facilities	Installed Capacity kWp
Zimbabwe	405	4813
Nepal	145	550
Sudan	62	540
Zambia	19	1100
South Sudan	10	30
Namibia	5	30
Libya	5	350
Angola	1	300
Total	652	7713

Solar for Health and SDGs

"Leave No One Behind"

- SDG 3 – Good Health and Well-Being
- SDG 5 – Gender Equity
- SDG 7 – Affordable and clean Energy
- SDG 13 – Climate action
- SDG 17 - Partnerships

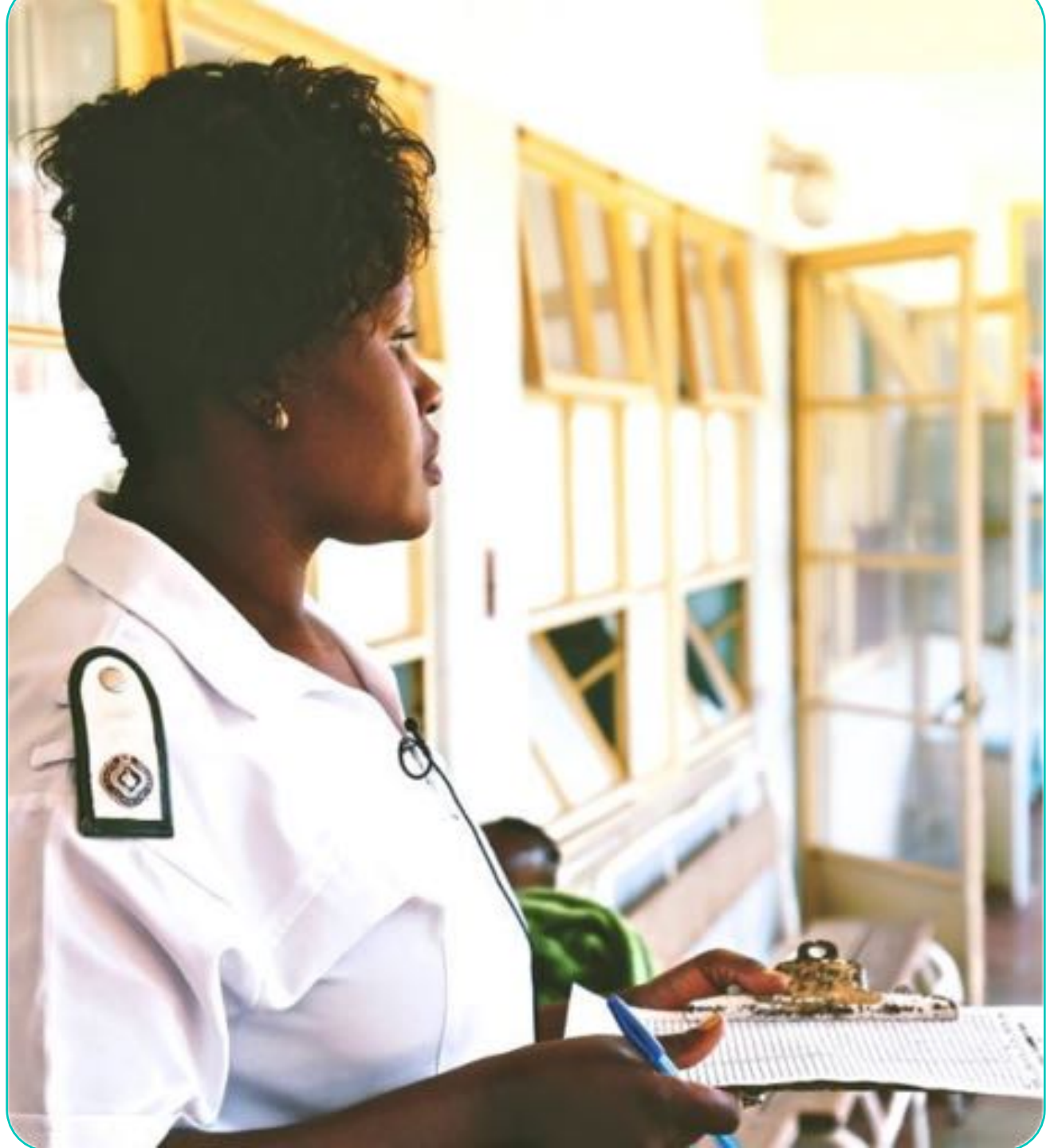
Challenges

- Health facilities often face significant power shortages
- More than 70% of health facilities in sub-Saharan Africa lack reliable access to electricity, ¼ facilities doesn't have access to electricity at all (WHO).
- Medicines and Vaccines are stored in poor condition (cold chain),
- Utility bills are high and hospitals are in debt,
- Health sector contributes to CO2 emission.

Cold chain of medicines (before and After)

New in old issues

- Fragmentation of the solar for health
- Inadequate coordination at all levels (multiple systems, increased elect. demand etc)
- Low capacity for maintenance
- Substandard Solar equipment



Opportunities

- Solar energy is clean and reliable. Health facilities powered on solar energy can deliver the quality care needed to **save lives**.
- Solar energy **saves money** compared to traditional sources of electricity.
- Transitioning from fossil-based energy to solar energy helps reduce carbon emissions, **save the environment**.

Case Study: Zimbabwe Solar For Health

- **Problem:** more than two-third of the health clinics in Zimbabwe have limited access to electricity, with only four hours of power supply a day.
- **Approach:** UNDP's Solar for Health initiative is providing solar energy to 405 HIV clinics in Zimbabwe.
- **Impact:**
- clinics can provide 24/7 health services to the population (pregnant women and children)
- Reduced electricity bills up to 60%
- safely store medicines and vaccines,
- Available clean water – solar powered water pump

Case Study: Zambia Medical Store Limited

- **Problem:** Medical Stores Limited (MSL) – an autonomous government agency that stores and distributes health products in Zambia – has faced regular power interruptions in the past, preventing them from refrigerating medicines and vaccines.
- **Approach:** UNDP has supported MSL to install 300 kwh solar energy systems and heat shield pain in the central medical warehouses of Zambia.
- **Impact:** The warehouses can guarantee the quality of vaccines and medicines and deliver these products to the populations of the country.

Investment Case

Health

- Increase access to health services, especially in remote areas
- Reduce energy costs for health facilities, freeing up resources for other priorities

Development

- Create Green jobs, for Women and Youth
- Increase local and national Technical capacities and market transformation
- Increase demand and uptake of solar technologies

Environment

- Reduce greenhouse gas emissions
- Help protect the local environment

Return on Investment

- Return on investment is estimated 2 to 4 years

Next Steps

- Feasibility Study of the S4H business case (Namibia, Malawi, Zambia and Zimbabwe)
- Increase S4H visibility at Global and local levels
- Increase resource mobilization efforts from domestic resources, private sector international donors and philanthropic foundations
- Continuously promote local ownership

PARTNERS

- Government agencies – MoH, Mo Energy, Rural Electrification Authorities ,
- Global Fund to Fight AIDS, TB and Malaria
- Innovation Norway
- Norwegian Solar For Health Consortium
- World Health Organization
- UNICEF
- UN Foundation

CONTACTS

Haŏkan Bjoŏrkman
Executive Coordinator, Global Fund Partnership, HIV, Health and Development Group,
UNDP Office in Geneva
T + 41 22 917 8539
hakan.bjorkman@undp.org

Saleban Omar
Senior Programme Advisor, HIV Health and Development Group,
UNDP Office in Geneva,
T + 41 79 554 62 48
saleban.omar@undp.org