



CROWN AGENTS

ACCELERATING SELF-SUFFICIENCY & PROSPERITY

Solar4Health

Saving lives through solar energy



Access to reliable electricity is crucial for the delivery of quality healthcare. Yet, over 60% of healthcare facilities in low- and middle-income countries suffer a lack of dependable electricity. The COVID-19 pandemic has highlighted how this problem weakens critical patient care and vaccine storage systems, severely undermining the capability of frontline health workers to save lives.

At the current pace of health facility electrification, many countries will fail to achieve the UN Sustainable Development Goal of ensuring good health and well-being by providing equitable and universal health access by 2030.

Climate change is exacerbating the problems that many communities around the world are already facing in accessing basic health care. As extreme heat, drought and flooding impact vulnerable populations, the need for stronger, more resilient health care systems which are responsive both to longstanding and newly emerging health care challenges has never been more urgent.

The Crown Agents **Solar4Health** programme tackles these challenges by enabling delivery of reliable, affordable and clean solar energy to healthcare facilities at scale.

Our focus is on countries in sub-Saharan Africa whose citizens are deeply challenged by poverty and are highly vulnerable to climate change risks. This innovative initiative combines our extensive experience of working with governments to successfully strengthen health systems in the world's most deprived countries, with our growing expertise in procurement and delivery of affordable, durable renewable energy solutions.

The **Solar4Health** programme aims to raise over \$160 million to improve health outcomes for 90 million vulnerable people. This will be done through enabling the climate-compatible, sustainable solar electrification of 10,000 healthcare facilities across 15 countries in sub-Saharan Africa.

By supporting the **Solar4Health** programme, together we can



Strengthen health care services for 90 million vulnerable people



Save millions of lives



Help deliver the UN Sustainable Development Goals



Improve health system readiness for future pandemics and the impacts of climate change



Demonstrate carbon emissions reductions through clean energy access in Africa

Inadequate electricity at Healthcare Facilities

Problems



Poor / no lighting



Inadequate refrigeration



Limited operability of medical equipment



Limited IT, internet & mobile phone charging



Restricted water supply (without pumps)



Implications



Reliance on noisy, polluting, expensive diesel generators as backup



Unable to run incubators or monitor patients' vital signs



Difficult to provide emergency care & safely deliver babies at night



Increase in security risk at night with no lighting



Compromised safety in storage of vaccines & perishable medical goods



Unable to undertake medical procedures & basic tests



Can't sterilize equipment or ensure adequate hygiene & cleanliness



Difficult to store or communicate data on patients & medical services



Reduced quality & safety of medical staff accommodation



Impacts



Sub-optimal health care service provided to citizens



Higher maternal and child mortality rates



Reduced vaccination levels in the local community



Poor retention of medical staff



Carbon emissions from diesel generators

Imagine giving birth in the dark, having surgery conducted with light from a kerosene lamp or being denied effective vaccines because of a lack of electricity for refrigeration. Unfortunately, for millions of people, this situation is their reality.

Today, over 60% of healthcare facilities in low- and middle-income countries lack access to reliable electricity. Without a viable alternative, many rural healthcare facilities resort to diesel generators for primary or regular backup electrification. These are expensive to run, require storage and handling of substantial volumes of hazardous fuels, and contribute

to carbon emissions and air pollution. Budgetary constraints and competing development priorities make the cost of installing clean solar power systems across healthcare facilities extremely challenging for low- and middle-income country governments.

Staff retention is a challenge where healthcare facilities lack a reliable electricity supply. Healthcare workers cannot do their jobs properly, quality of their on-site accommodation is poor, and security threats are higher at night with no lighting.

“Night-time deliveries were taking place in near-darkness, and the results were often tragic. The lights went out during one Caesarean section, and the team didn't even react because they were so used to it. We couldn't use the suction machine or do cautery to stop the bleeding. Luckily, I had a flashlight which we used to finish the surgery.”

Dr Laura Stachel, University of California, Berkeley, recalling her experience at a Nigerian hospital with only 12 hours of electricity a day.



Sierra Leone Health-Energy Snapshot

A recent Crown Agents survey of health facilities in Sierra Leone revealed that:

- Grid-connected health facilities in Sierra Leone experience **daily power outages of 11 hours or more.**
- **66% of maternal health care facilities** in Sierra Leone say night-time power outages force them to use cell phone torches and candles to deliver babies.
- **Mortality risk increases by 43%** for each day the power is out in health facilities for over 2 hours.

Our Solution: Solar4Health

Crown Agents' **Solar4Health** programme unlocks and facilitates delivery of holistic and sustainable renewable energy solutions for healthcare facilities at a national scale across multiple countries. By working with country governments and other partners, we use an evidence-based approach to identify health facility electrification priorities, define context-appropriate implementation pathways, and enable effective delivery.

Solar4Health provides the enabling platform for solar energy businesses to provide quality, long-lasting, financially efficient, context-appropriate solar health facility solutions. We do this by facilitating access to blended finance, supporting sustainable and impactful delivery models, and leveraging economies of scale. This will save many lives by widely improving access to quality health care.

Solar4Health catalyses green economic growth by supporting local products and services, building local skills and capacity, and strengthening health care institutions. This helps ensure that the investment we facilitate in solar electrification leverages critical local, long-term poverty alleviation and job creation benefits.

1. **Accelerates deployment of clean, efficient, and dependable electricity to health centres**, making it possible for communities to access quality healthcare wherever they live.
2. **Increases access to solar energy** and demonstrates the value of climate-compatible approaches in health service delivery.
3. **Strengthens and creates more resilient healthcare systems** in countries that are highly exposed to climate change risks and future pandemics.
4. **Grows local green business opportunities** and helps reduce poverty through the focus on local content and capacity building.



High-Impact Investment Model

Solar electrification of healthcare facilities is not a new concept. However, there are several reasons why previous investments have not yielded the level of impact needed in low- and middle-income countries.

Through our work on solar electrification supply chain management and delivery programmes in Nigeria, Kenya, and Zimbabwe, along with a recent survey of health facilities in Sierra Leone, Crown Agents has developed a deep understanding of the challenges which consistently undermine solar electrification investments in the health sector. Some of these include:

- **Limited data** on health care facility electrification needs, which undermines efforts to plan effective and sustainable solutions
- **Modest scale of interventions**, which limits opportunities to leverage economy of scale benefits
- **Poor coordination** between actors, resulting in confusion, delays, or inefficient use of funds
- **Inefficient government procurement processes**, constraining the speed of delivery
- **Unsuitable solar technologies or business models** that don't support the long-term sustainability of solar installations, or account for critical issues such as maintenance and ongoing operational oversight



In recognising the challenges faced by other solar health facility electrification investments, Crown Agents has positioned **Solar4Health** to unlock maximum investment impact through a direct focus on:

- **Delivery at scale** – Enabling solar electrification of 10,000 health facilities benefitting 90 million people is a big ambition and is the first of its kind. This facilitates cost efficiencies and enhances the technical and financial sustainability of solar systems maintenance. The collective impact of this programme across 15 of the poorest, most vulnerable sub-Saharan African countries will be globally significant.
- **Aggregating and enabling** – Our approach looks at the problem holistically. Unlike other service providers acting in isolation, **Solar4Health** serves as an aggregated delivery platform that accelerates and improves investment impact through a collaborative approach. We have experience working with all the relevant stakeholder groups to coordinate long term, sustainable solutions.
- **Catalyst for green economic growth** – We facilitate positive, sustained local benefits in poverty alleviation, capacity building, green business development, and institutional strengthening.
- **Sustainable operations model** – We focus on viable long-term business models that ensure health facilities can afford solar equipment maintenance and ongoing operational oversight, and that these systems are financially sustainable over the long-term.

Why Crown Agents

Crown Agents has an extensive track record in delivering large-scale off-grid energy and health systems strengthening programmes in complex environments. We have extensive experience leading on the transparent management and efficient deployment of large, multi-stakeholder development funds with \$797m currently under management across five key programmes in Africa and Asia.

We have a long track record of working as trusted delivery partners to the Ministries of Health over many years in Sierra Leone, South Sudan and Zimbabwe, among other countries. Through years of experience in deploying strong in-country expert-led teams, we have gained considerable understanding of the practical challenges that Health Ministries in low- and middle-income countries face in delivering quality healthcare, building and maintaining physical infrastructure, retaining and training staff and securing cold-chains for vaccine delivery programmes.

Why Now

- **The need is huge.** With over 100,000 health facilities across sub-Saharan Africa, current programmes have only electrified 2000-3000 at best. More players need to enter the field to have any chance of meeting 2030 UN Sustainable Development Goal targets.
- **Win-win solution.** **Solar4Health** provides climate-compatible solutions that support health systems' long-term sustainability and viability while tackling the acute challenges that undermine good basic healthcare for millions.
- **Additional benefits.** The programme has knock-on benefits that influence other important changes, such as improving health worker retention and better decision-making data.
- **The COVID-19 pandemic** has highlighted that electricity is essential right now and in health systems strengthening for the future.
- **Delivery of the SDGs by 2030.** **Solar4Health** will support in-country delivery of Sustainable Development Goals 3 (good health and well-being), 7 (affordable and clean energy), 8 (decent work and economic growth), and 13 (climate action).

Working in **64 countries**

Delivery offices in **21 countries**

Reaching **36 million people**

\$797m managed across **5 key funded global projects**

Provided **24-hour solar power** to over **200,000 people** in Nigeria through the solar electrification of **34** remote primary healthcare centres

Designed a solar information and technology hub for **185,000** displaced people living in Kakuma refugee camp, Kenya

Managing the Health Pooled Fund in South Sudan, delivering health services to **80% of the country**

Leading a Results-Based Financing for Health programme in **42 rural districts** in Zimbabwe, covering **849 health facilities** and **67 hospitals**, improving health services for over **6 million people**



How You can Help

Crown Agents is seeking transformative funding partnerships with philanthropies, donors, governments, banks and others interested in supporting the delivery objectives of **Solar4Health**.

We recognise the value of and are actively seeking technical partnerships with private businesses and academia that can help in facilitating innovation, collaborative problem solving, and shared learning processes.

A. As a philanthropist, we urgently invite you to make a personal donation to make our work possible. We would also value your introductions to others who can support this worthwhile cause and your perspectives on how best to ensure that the more vulnerable people have access to better healthcare through cleaner energy provision.

B. Corporate partners can make a financial contribution and offer technical support where possible. We also invite your clients and employees to help raise resources to bring us closer to universal electrification of healthcare facilities.

C. Trusts and Foundations will make a difference to our work by donating and introducing us to other like-minded organisations that can offer support and guidance on addressing the various health setbacks and challenges brought on by the limited access to clean energy in healthcare facilities.

D. Partnership with Financial institutions and private capital to design, and in time execute, innovative blended financing solutions needed to ensure the sustainable long-term operation and maintenance of the solar systems and scale financing to make a deep impact across our target countries.



The difference you will make

- Improving health outcomes for millions of people through your donation.
- Playing a significant part in addressing climate change and improving the resilience of the most vulnerable.
- Strengthening health systems across several countries.
- Contributing to achieving the United Nations Sustainable Development Goals (SDGs) by 2030.
- Leveraging your donation by encouraging others to give and match your gift.

Benefits of your support

- Opportunities to meet and get to know the beneficiaries of your support when travel is possible.
- Invitations to our exclusive events to meet other supporters and leadership.
- Regular updates to give you in-depth information on our progress.
- Global recognition across the 60 countries where Crown Agents works.
- Alignment with our brand.



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