



# Electrification of Healthcare Facilities in Africa Conference Report

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**Organisers:** The African School of Regulation and Sustainable Energy for All

**Dates:** 10th, 11th and 12th of December 2024 (3-5pm EAT each day)

**Geographic Focus:** Sub-Saharan Africa

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## Introduction

The International Online Conference on the Electrification of Healthcare Facilities in Africa brought together key stakeholders to identify the essential steps needed to electrify HF<sub>s</sub>. The conference featured panel discussions and presentations on regulatory interventions, business models, and financial approaches necessary to improve electricity access in healthcare facilities (HF<sub>s</sub>) across Sub-Saharan Africa. Panellists included representatives from the following organisations: World Health Organization (WHO), United Nations Children's Fund (UNICEF), Power Africa / Health Electrification and Telecommunications Alliance (HETA), The Carbon Trust, We Care Solar, Foreign, Commonwealth & Development Office (FCDO), Oxford Policy Management (OPM), Odyssey Energy Solutions, United Nations Development Programme (UNDP), and the Energy Regulatory Authority (ERA) of Uganda. The event attracted an engaged global audience, with an average of 100 participants joining each day, facilitating a dynamic exchange of perspectives, recommendations and expertise.

The conference highlighted the critical need for reliable and sustainable energy access in this sector. According to WHO<sup>1</sup>(2023), nearly one billion people worldwide rely on HF<sub>s</sub> with either no electricity access or unreliable electricity, highlighting the urgency of this challenge. Whilst in sub-Saharan Africa 25,000 HF<sub>s</sub> have no access to electricity, and a further 70,000 have unreliable power supply.

Efforts to electrify HF<sub>s</sub> have gained momentum in recent years, particularly after the COVID-19 pandemic, which exposed the vulnerabilities of existing systems. Organisations such as SEforALL have worked on this challenge for over a decade, together with organisations such as UNICEF, the World Bank, GAVI, WHO, and Power Africa, making strides in solarizing HF<sub>s</sub> and optimizing cold chain equipment for vaccines through initiatives like the Cold Chain Equipment Optimization Platform (CCEOP)<sup>2</sup>.

Three of the main topics discussed included:

- 1.The current state of the HFE sector.
- 2.Effective coordination mechanisms.
- 3.The need for adequate regulatory and business models modifications.

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<sup>1</sup> WHO, [Energizing health: accelerating electricity access in health-care facilities, 2023](#).

<sup>2</sup> GAVI, [Cold Chain Equipment Optimization Platform, 2023](#).

## 1. The current state of the HFE sector in sub-Saharan Africa

The HFE sector saves lives, allowing people and communities to improve their livelihoods. Reliable access to electricity ensures that essential medical equipment, such as life-saving devices, diagnostic tools, and refrigeration for vaccines and medications, can function consistently without interruptions. In remote or underserved areas where energy access is limited or non-existent, electrification allows HFIs to operate efficiently, improving health outcomes and reducing preventable deaths. HFE should be viewed through a human lens—beyond infrastructure and technology, it is ultimately about saving lives, improving patient care, and ensuring that no community is left behind in accessing essential medical services.

Despite growing recognition of HFE's importance, the current market is heavily reliant on CAPEX grants and donor funding, primarily using Engineering, Procurement, and Construction (EPC) contracts and delivery models. While these models enable rapid deployment, they often neglect long-term operation and maintenance (O&M), leading to system degradation or failure over time. The lack of structured funding for ongoing technical support and replacement parts results in unreliable electricity access in the long-term, leaving HFIs vulnerable to power outages and equipment failures, which can ultimately cost lives. Delivery models focused on initial CAPEX subsidies lack OPEX funding and therefore often lack long-term O&M provision, leading to sustainability challenges due to unreliable electricity access.

## 2. Effective coordination mechanisms

A recurring theme in the discussion was the often fragmented and siloed nature of HFE efforts, often disconnected from broader energy access initiatives. This approach hinders scalability and efficiency. Panellists emphasized the importance of institutional coordination, particularly between government health and energy departments, to ensure cohesive planning and implementation.

The Multilateral Energy Compact for Health Facility Electrification, convened by SEforALL, was highlighted as a key coordination platform. Its three objectives are:

- Enhancing data availability for HFE.
- Facilitating the implementation of electrification projects.
- Serving as a coordination mechanism for knowledge exchange.

Since 2021, 6,000 facilities have been electrified by 23 signatories of the compact which has a goal of electrifying 35,000 facilities by 2026. In addition, other targets to be adopted as part of the compact are gender inclusion, capacity building initiatives, long term sustainability, funding targets and geographical targets.

Furthermore, SEforALL has also developed HFE Market Assessments and Roadmaps for Nigeria, Sierra Leone, Rwanda, and Madagascar to guide market intelligence and implementation. As well as a Global State of the Market report published in 2024, alongside a Global Heatmap of nearly 400 different HFE initiatives.

Panellists called for stronger collaboration among stakeholders at all levels and highlighted the value of existing initiatives—such as joint efforts between GAVI, UNICEF, WHO, and others to electrify 1,000 facilities in Zambia, Ethiopia, and Pakistan, aiming for 10,000 by 2028.

### 3. The need for adequate regulatory and business models

The current regulatory environment was identified as a major barrier to scaling HFE, particularly in attracting private sector investment. Existing frameworks often fail to mitigate investment risk or provide financially viable returns, making the sector less attractive to private capital. Undersized systems, inadequate planning, and HFs limited ability to be regular payers further compound the problem.

To address these issues, participants proposed tailored regulations to support diverse business models like energy-as-a-service, alongside integrating HFE into national electrification strategies and broader energy planning. Suggestions included:

- Developing robust financial plans involving DFIs, donors, private investors, and cross-subsidisation.
- Providing fair and reliable remuneration through solid concession contracts.
- Addressing import regulations that hinder access to necessary equipment.
- Leveraging data analytics to build strong investment cases.

To address sustainability challenges, service-based models, particularly the Energy Service Company (ESCO) model, were proposed as alternatives in this conference. These models allow private providers to supply electricity through long-term service contracts, ensuring consistent power, sustainable O&M, and reducing the burden on governments. Emerging trends in the HFE sector include the growing adoption of ESCOs, integration of productive uses of energy (PUE), and innovative financing solutions such as subsidized tariffs, cross-subsidization, and carbon financing.

The ASR emphasised that HFE should be integrated into national electrification strategies to ensure both sustainability and scalability. They advocated for service-based models supported by concessional financing and clear, low-risk remuneration frameworks—such as subsidised tariffs and solid concession contracts. It also recommended establishing dedicated entities—a public agency or a concessionaire via a public private partnership.

(PPP)—to coordinate efforts, reduce costs through economies of scale and supply adaption to demand characteristics and use of advanced technologies<sup>3</sup>.

Sustainability was redefined beyond technical durability to include affordability, reliability, and adaptability to climate shocks. Local capacity building for O&M was highlighted as key to long-term success. Additionally, stakeholders highlighted the potential of PUE to generate local revenue and strengthen the financial viability of electrification initiatives, particularly when healthcare facilities serve as anchor loads.

SEforALL presented the Sustainable Energy Policy Hub<sup>4</sup>, an interactive platform designed to assist policymakers in developing and refining policies and regulations related to electricity access, by supporting the decision-making process for creating robust energy policy and regulatory frameworks. The hub includes a digital library of relevant resources developed and validated by leading organizations and experts in the energy field, and currently offers essential resources on electricity access, including HFE.

#### 4. Conclusions

The conference concluded with a call for more holistic and integrated approaches to HFE, emphasizing the need for robust financing strategies, scalable business models, and alignment with broader development objectives. To achieve this, panellists highlighted the importance of working within current donor timelines, rather than attempting to change them, and enhancing capacity building and knowledge sharing through stronger collaboration among stakeholders at all levels.

Private sector involvement remains crucial, requiring targeted incentives —such as tax breaks, subsidies, and risk guarantees— to drive innovation, scalability, and sustainability through long-term O&M frameworks. These measures need to be integrated into national electrification strategies to ensure both sustainability and scalability via comprehensive regulated approaches based on service-based business models.

Additionally, enhanced coordination between sector stakeholders and particularly energy and health counterparts is crucial to drive the sector forward, including more capacity building and other types of funding and financing models. By addressing these challenges, HFE can enhance healthcare service delivery and contribute to socio-economic growth.

Another key priority is comprehensive data collection (particularly looking at energy assessment audits), leveraging existing systems while integrating new technologies like AI and smart meters to drive better decision-making.

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<sup>3</sup> ASR, "An Integrated Framework for Electrification, IFE", <https://africanschoolregulation.org/the-asr-and-key-stakeholders-discuss-on-a-sustainable-and-scalable-mini-grid-business-model-in-africa/>, 2024.

<sup>4</sup> SEforALL, <https://policyhub.seforall.org/en>.

Lastly, the conference stressed the need for champions and advocates to promote this agenda, citing as an example Mission 300<sup>5</sup>. The integration of PUE, such as community services and HFs as anchor loads, can generate revenue, making electrification efforts more sustainable and workable.

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<sup>5</sup> World Bank, <https://www.worldbank.org/en/programs/energizing-africa>.

## Annex

### CONFERENCE PROGRAMME

Time	Session Name	Session Description
<b>Day 1: The Present Situation - Experiences and Challenges</b> <i>Overview of the reality and immediate prospects for electrification of health facilities in Africa including data and current barriers</i>		
3 to 5 pm EAT on all days The programming below is in Eastern Africa Time (EAT)		
<b>3:00 - 3:15 PM</b>	Conference opening	<ul style="list-style-type: none"> <li>Welcome by Frederick Nyang (Director, African School of Regulation, ASR).</li> <li>Opening words by Rahul Srinivasan (Senior Energy Specialist, Powering Healthcare, SEforAll).</li> </ul>
<b>3:15 – 3:50 PM</b>	Present approaches and challenges and best worldwide practices	<ul style="list-style-type: none"> <li>Current situation of electrification of health facilities in Africa – with a focus on data.</li> <li>Best international practices and current barriers to regional electricity access for healthcare facilities</li> <li>Sustainable Energy Policy Hub as a tool that can inform the development of policy and regulatory frameworks for PHC</li> </ul>
<b>3:50 - 4:00 PM</b>	BREAK	
<b>4:00 - 4:55 PM</b>	Panel 1 – The current state of electrification of healthcare facilities	<p>What does the current state of health facility electrification (HFE) look like in Sub-Saharan Africa? Refer to <a href="#">our report launched in Feb 2024</a>. What are the challenges, what opportunities exist, and how can we accelerate electrification of health facilities in the Sub-Saharan Africa.</p> <p><b>Lead:</b> Rahul Srinivasan, SEforALL  <b>Panellists:</b></p> <ul style="list-style-type: none"> <li>Salvatore Vinci – Technical Lead, WHO</li> <li>Gina Cady – Health Electrification Partnerships Lead, Power Africa/HETA</li> <li>Ranjit Dhiman – Supply and Logistic Manager, UNICEF</li> </ul>
<b>4:55 – 5:00 PM</b>	Closing for the day	Luc Severi, SEforALL

## CONFERENCE PROGRAMME

Time	Session Name	Session Description
<b>Day 2: Surmounting the Challenges</b>		
<i>Evaluating different approaches, key market players and delivery models dedicated to improving access to reliable electricity for healthcare facilities</i> 3 to 5 pm EAT on all days The programming below is in Eastern Africa Time (EAT)		
<b>3:00 - 3:05 PM</b>	Introduction and schedule of the day	Nashwa Naushad – Campaigns Analyst, SEforAll
<b>3:05 – 3:55 PM</b>	Panel 2 – The Multilateral Energy Compact for Health Facility Electrification and Other Approaches	<p>What is happening with the Energy Compact currently and what progress is being made with this agreement. What are the next steps and immediate objectives to consider. Are there any ways to change or improve this to increase impact for the sector, and what are there and barriers or opportunities to consider.</p> <p><b>Lead:</b> Nashwa Naushad, SEforALL</p> <p><b>Panellists:</b></p> <ul style="list-style-type: none"> <li>• Matt Clark – Director of HETA Partnerships, Abt Global</li> <li>• Nour Alnajjar – Regional Energy and Environment Specialist, UNICEF</li> <li>• Ambrose Katungi Muhwezi – Africa Regional Director, We Care Solar</li> <li>• Harriet Bradshaw-Smith – TEA Project Manager, The Carbon Trust</li> </ul>
<b>3:55 - 4:05 PM</b>	<b>BREAK</b>	
<b>4:05 - 4:55 PM</b>	Panel 3 – Regulatory modifications to remove barriers and facilitate delivery	<p>What is currently happening in this area and what progress is taking place or which areas are working well. What are the main barriers and how are they impacting the sector, in particular in relation to slowing down the rate of progress. What are the key factors that need to change to aid progress and how do we implement these changes.</p> <p><b>Lead:</b> Daniella Ngarambe (Research Associate, ASR)</p> <p><b>Panellists:</b></p> <ul style="list-style-type: none"> <li>• Irene Calvé (Principal Specialist, Energy Access - Partnerships and Innovations, SEforAll)</li> <li>• Gracia Munganga (Senior Technical Advisor Power Africa  HETA)</li> <li>• Harold Obiga (Director of Legal Services, ERA)</li> </ul>
<b>4:55 – 5:00 PM</b>	Closing for the day	Daniella Ngarambe, ASR

## CONFERENCE PROGRAMME

Time	Session Name	Session Description
<b>Day 3: Looking Ahead and Innovating Together</b> Recap of Days 1 and 2, followed by roundtable to define an action plan and a long-term vision 3 to 5 pm EAT on all days The programming below is in Eastern Africa Time (EAT)		
<b>3:00 - 3:05 PM</b>	Introduction and schedule of the day	Charly Gatete (Senior Researcher, ASR)
<b>3:05 – 3:35 PM</b>	Wrap-up of Days 1 and 2	Charlie Knight - SEforALL
<b>3:35 – 4:50 PM</b>	Panel 4 – A call to action. What works, what can be improved and the need for a comprehensive and long-term vision.	<p>This final session will underscore and consolidate the key messages on the potential of the approaches to increase healthcare facilities electrification in Africa, the necessary regulatory interventions, the business model design, the financial instruments, and the important roles of all actors across the power sector. What are the key challenges and what do we need to do to overcome these. What are the next steps and actions needed to scale up HFE.</p> <p><b>Lead:</b> Charlie Knight – Senior Specialist, SEforALL</p> <ul style="list-style-type: none"> <li>• <b>Panellists:</b></li> <li>• Frederick Nyang – Director, ASR</li> <li>• Stephen Hunt – Senior Energy Innovation Advisor, FCDO</li> <li>• Elizabeth Gogoi – Principal Consultant, OPM</li> <li>• Kobe Opare – Director of Business Development, Odyssey</li> <li>• Abdullah Alkulaib – Regional Specialist - Regional Bureau for Africa, UNDP</li> </ul>
<b>4:50 - 5:00 PM</b>	Conference closure	<p>Closing words by the co-organisers of the conference.</p> <ul style="list-style-type: none"> <li>• Frederick Nyang, ASR</li> <li>• Charlie Knight, SEforALL</li> </ul>