



Powering Healthcare

Decentralized Renewable Energy Solutions for Health Facilities

October 15-16, 2015

Protea Hotel Courtyard
Dar es Salaam, Tanzania

Background

Energy poverty continues to be a challenge in many developing countries, affecting the lives of millions of women, men and children. While much of the attention in the ongoing response to energy poverty has focused on household energy, less attention has been paid to energy in social services, including healthcare.

Energy plays a vital role as an enabler of healthcare. It powers health facilities and the medical services they provide. Yet, thousands of health facilities across Africa lack even the most basic energy services, including lighting for child delivery and emergency night-time care, refrigeration of vaccines and electricity for simple medical and diagnostic equipment. A recent analysis of access to energy in health care facilities in 11 Sub-Saharan countries, for example, revealed that on average more than a quarter of health facilities reviewed lack access to electricity. While the majority of large hospitals have access to electricity, access rates drops to below 25% for rural clinics in some countries.

Global concern about meeting development targets on maternal and child health, coupled with growing global interest in scaling up access to energy, presents a major opportunity for the health sector to improve access to and the quality of health services; particularly maternal, newborn and child health services. Renewable energy technologies, in particular, are providing economically competitive options for powering health facilities. Despite their promise, decentralized solutions using solar, wind and other renewable sources have yet to come into widespread use and attract sufficient attention among decision makers in the energy and health communities. Furthermore, past efforts to electrify health facilities with renewable energy based decentralized solutions have had varying degrees of success, providing important lessons on how to enhance support for such solutions.

In recognition of these challenges and opportunities, the International Renewable Energy Agency (IRENA), the United Nations Foundation (UNF), and the World Health Organization (WHO) are conducting a regional workshop in Dar es Salaam, Tanzania on October 15-16, 2015, to draw attention to innovations and lessons learned in electrifying health facilities in Africa, including findings from the UN Foundation's health clinic energy assessment work in Ghana, Malawi, and Uganda over the last year. The workshop is being organized under the auspices of the UN Secretary General's *Sustainable Energy for All* (SE4ALL) initiative, which aims to improve access to, as well as the efficiency and sustainability of, energy by 2030.

Objectives

The workshop has the dual objectives of:

1. **Exchanging Knowledge and Building Capacity:** The workshop will exchange knowledge, practical experiences and case studies – all aimed at improving how renewable energy based decentralized solutions can be better deployed and maintained to meet the needs of health facilities. Emphasis will be on improving upon the “business-as-usual” approach to clinic electrification, through innovations and best practices in fields such as renewable energy, energy efficiency, energy storage and remote monitoring.
2. **Raising Awareness:** The workshop will also raise awareness among key decision makers in the energy and health sectors to the relevance of energy access in strengthening health systems and to *why* additional attention to and resources for this issue are necessary.

Participants

The workshop will convene participants from Africa and globally from:

- Ministries of Energy and/or Rural Energy Agencies
- Ministries of Health
- Bilateral and Multilateral agencies
- UN agencies (e.g. UNDP, UNICEF, WHO, UNFPA, UNEP)
- Energy entrepreneurs and service providers
- National and International NGOs, including women’s groups and gender experts

The United Nations Foundation (UNF) was established in 1998 with a \$1 billion gift from entrepreneur Ted Turner, founder of CNN. In addition to Mr. Turner, the UN Foundation Board of Directors is comprised of a number of prominent international leaders including Kofi Annan, Fábio Barbosa, Dr. Gro Harlem Brundtland, Muhammad Yunus, N.R. Narayana Murthy, and Queen Rania Al-Abdullah. The Foundation supports the UN and its causes through advocacy, grant making, and partnerships across three focal areas: children’s health (polio, measles, and malaria); women’s health (population/family planning and adolescent girls); and environment (climate change, clean energy, and energy access). UNF sees energy as being essential to economic development and our Energy & Climate team works with the UN and other partners to help move the world toward a safer, cleaner, more equitable and climate-friendly energy future. The UN Foundation supports the UN’s leadership on energy and climate change – through the UN Framework Convention on Climate Change, the Intergovernmental Panel on Climate Change, and Sustainable Energy for All. www.unfoundation.org

The International Renewable Energy Agency (IRENA) is mandated as the global hub for renewable energy cooperation and information exchange by 143 Members (142 States and the European Union). IRENA promotes the widespread adoption and sustainable use of all forms of renewable energy, including bioenergy, geothermal, hydropower, ocean, solar and wind energy in the pursuit of sustainable development, energy access, energy security and low-carbon economic growth and prosperity. Our support includes the provision of renewable energy data and statistics; advice on best practices; technical expertise and insights on financial mechanisms; capacity building programmes; and a large library of publications and other resources. www.irena.org

The World Health Organization (WHO), established in 1948, is the directing and coordinating authority on international health within the United Nations System. It is responsible for providing leadership on global health matters, shaping the health research agenda, setting norms and standards, articulating ethical and evidence-based policy options, providing technical support to countries, monitoring and assessing health trends, and improving global health security. WHO is governed by its 194 Member States and is staffed by more than 7000 people working in 150 countries, six regional offices and in its headquarters in Geneva, Switzerland. www.who.int

Agenda

October 15: Day 1

8:30-9:00AM

Registration

9:00-9:45AM

Opening Remarks: Welcome and introduction by the organizers and featured government representatives.

- Welcome: Richenda Van Leeuwen, Executive Director, Energy Access, United Nations Foundation
- Speakers:
 - Permanent Secretary, Ministry of Health and Social Welfare, Tanzania
 - Eng. Boniface Nyamo-hanga, Director Market Development and Technologies, Rural Energy Agency, Tanzania
 - Mr. Salvatore Vinci, Programme Officer, IRENA
 - Dr. Richard Banda, Officer in Charge, WHO Country Office Tanzania

9:45-11:15AM

Scene-Setting

Energy-Healthcare-Gender Linkages: Why is energy important to the functionality of healthcare facilities and the quality and availability of health services delivered within them? Why is health clinic electrification particularly important to women and children's lives?

- Moderator: Ms. Michaela Pfeiffer, Technical Officer, WHO Headquarters
- Speakers:
 - Dr. Chirangi Bwire, Medical Director, Shirati Hospital, Tanzania
 - Dr. Laura Stachel, Co-Founder, We Care Solar
 - Mr. Whymah Youyoubon, Director, Ministry of Health, Liberia

Q&A – 10 min

State of Play of Health Clinic Electrification: What is the current status of health clinic electrification in Africa? Study findings and experiences from the field.

- Moderator: Ms. Richenda Van Leeuwen, Executive Director, Energy Access, United Nations Foundation
- Speakers:
 - Mr. Mark Hankins, CEO, African Solar Designs
 - Mr. Abdeel Kyezira, Managing Director and Lead Renewable Energy Expert, Konserve Consult Ltd
 - Mr. Stuart Miller, Director, Calcon
 - Mr. Samuel Adu-Asare, Independent Consultant

Q&A – 15min

11:15-11:30AM *Coffee Break*

11:30AM-1:00PM **Solutions/Innovations:** What role can today's decentralized renewable energy solutions play in powering rural health facilities? What are the latest innovations in this sector? Where and how have they worked? What lessons have we learned?

- Moderator: Mr. Babu Ram, Chief Power Engineer, African Development Bank
- Speakers:
 - Mr. Mutisya John, Project Manager, Innovation: Africa
 - Mr. Luc Severi, Project Manager, WorldLoop
 - Mr. Sam Dargan, CEO, Great Lakes Energy
 - Mr. Jeff Lahl, Project Director, Solar Electric Light Fund

Facilitated Discussion - 25min

Q&A – 20min

1:00-2:00PM *Lunch*

2:00-3:30PM **Enabling Policy Frameworks:** Is electrification of health facilities given enough priority within energy and health sector planning? Who has responsibility for this within governments? What can governments do to encourage greater use of decentralized renewable energy solutions in the health sector?

- Moderator: Mr. Salvatore Vinci, Programme Officer, IRENA
- Speakers:
 - Representative from WHO
 - Mr. Wisdom Ahiataku-Togobo, Director for Renewable and Alternative Energy, Ministry of Energy, Ghana
 - Mr. Mwakasungula, Director of Policy and Planning, Ministry of Health and Social Welfare, Tanzania

Facilitated Discussion – 60 min

Q&A – 20 min

3:30-4:00PM *Coffee Break (Group photo)*

4:00-5:30PM **Sustainability:** What are the current challenges around sustainability of energy systems in health clinics? What arrangements for owning, operating, monitoring/maintaining and funding power systems are best suited to ensuring their long-term sustainability?

- Moderator: Eng. Matthew Matimbwi, Executive Secretary, TAREA
- Speakers:
 - Mr. Abu Musuuza, Co-founder and CEO, Village Energy Limited
 - Mr. Jonathan Njerere, Programme Manager, Rural Sustainable Energy Development Project, OXFAM
 - Ms. Michaela Pfeiffer, Technical Officer, WHO Headquarters

- Mr. Edgar Kapiza Bayani, Country Director, Community Energy Malawi

Facilitated Discussion – 25 min

Q&A – 20min

5:30-6:00PM

Day 1 Wrap up

- Ms. Richenda Van Leeuwen, Executive Director, Energy Access, United Nations Foundation

6:00-7:00PM

Reception

7:00-9:00PM

Dinner

- Keynote speaker: Mr. Deogratias Niyizonkiza, Village Health Works, Burundi

October 16: Day 2

9:00-9:15AM

Kick-off

- Representative from IRENA

9:15-9:30AM

Powering Health Movie

- Dr. Carolina Barreto, Renewable Energy Manager, Tetra Tech

9:30-11:00AM

Education and Training: What occupations and stakeholders found along the different segments of the supply chain are critical to the successful deployment of decentralized renewable energy solutions in health facilities? Do they have the requisite knowledge and skills to carry out their role? If not, where should efforts be focused to develop skills (e.g. vocational schools)? What training resources exist to develop individual/institutional capacities (both within the energy and health sectors)?

- Moderator: Ms. Chitra Narayanswamy, Programme Officer, Technology Support & Partnerships, IRENA
- Speakers:
 - Ms. Neha Misra, Co-founder and Chief Collaboration Officer, Solar Sister
 - Mr. Nicholas Adjabu, Deputy Director, Clinical Engineering Department, Ghana Health Services
 - Dr. Carolina Barreto, Renewable Energy Manager, Tetra Tech

Facilitated Discussion - 35 min

Q&A - 20 min

- 11:00-11:15AM *Coffee Break*
- 11:15-12:45PM **Financing:** How is health clinic electrification currently being financed? What are the biggest challenges to financing? What role does the private sector have, if any?
- Moderator: Mr. Stephen Mooney, Climate and Environment Adviser, UK Department for International Development (DFID)
 - Speakers:
 - Mr. Ties Kroezen, Venture Manager, Philips Africa Incubator
 - Mr. Willem Tom, Financial Expert, Healthcare, Catholic Organization for Relief and Development Aid (Cordaid)
 - Representative from the Ministry of Health and Social Services, Tanzania
 - Dr. Asami Miketa, Programme Officer, Energy Planning, IRENA
- Facilitated Discussion - 25 min*
- Q&A - 20 min*
- 12:45-1:00PM **Closing Remarks**
- Representatives from UNF, WHO, and IRENA
- 1:00-6:00 PM **Site Visit**
- Delegation going on the field visit will receive a boxed lunch on the bus