

# Report:

## District Workshop on Energy Solutions for Healthcare

### **Theme: Building the Energy Ecosystem for Healthcare in Kambia District**

**Date:** Monday 12<sup>th</sup> July 2021

**Location:** Kambia District Hospital, Kambia Town, Sierra Leone

#### **Background:**

The Energy Nexus Network (TENN) is building an energy ecosystem platform in Sierra Leone in partnership with local and international partners will focus on designing multiple programmes around innovation and incubation in Sierra Leone starting with Kambia District, each of which will aim to further the network of grassroots level local energy champions/stakeholders. There is immense potential to use decentralized energy to improve rural healthcare and introduce productive use of energy technologies within the agriculture, fisheries, and livestock to improve rural livelihoods in Sierra Leone. The programme has begun with focusing on building SDG7 models on livelihood and healthcare within Kambia District through the BREAD for Life programme (Building Resilient Ecosystems Around Decentralized Renewable Energy in Sierra Leone). The programme is supported through the Global SDG7 Hubs initiative, a practitioner-driven, knowledge exchange and implementation platform to improve development outcomes globally using sustainable energy as a critical catalyst.

#### **Purpose:**

The Kambia District Health Management Team hosted a district level workshop on sustainable energy solutions for healthcare in Kambia District in partnership with The Energy Nexus Network (TENN), the global knowledge hub for sustainable energy solutions and SELCO Foundation through the Global SDG7 Hubs initiative. The objective of the workshop was to stimulate dialogue and cross learning on the key enabling conditions to scale sustainable energy solutions for healthcare in Kambia District. Participants will share stories of success and failures and lessons learnt on energy access challenges they have experienced when delivering healthcare services in the district. The goal was to identify potential areas for intervention and establish a coalition of local stakeholders who can help mobilize action to unlock sustainable energy solutions for healthcare in Kambia District.

#### **Key Outputs:**

1. Participants identified potential areas for intervention in the healthcare using decentralized renewable energy as a critical catalyst for sustainable energy solutions that are scalable and cost effective.
  - i. Key laboratory, Kambia Town Hospital – Participants discussed the proposal for a standalone building with its own solar system; site already identified within the premises of the referral hospital in Kambia Town.
  - ii. Innovative healthcare services for riverine communities – needs careful consideration to improve healthcare services in isolated communities, especially during the raining season when access to those communities via road is inhibited.
  - iii. Sustainable DRE solutions for healthcare facilities in Kambia District – the need to address human capacity challenges to repair existing facilities. Many healthcare

facilities in the district have been solarized (at least for basic lighting and refrigeration of vaccines). However, most of the installed systems are no longer in working order. An approach is needed to identify and fix the problem.

- iv. Built environment for: a) some healthcare facilities in Kambia District – several healthcare facilities do not meet the required national building standards – some have their superstructure made from corrugated zinc sheets; b) accommodation for healthcare workers in some locations was identified as a major challenge for many healthcare workers throughout the district and a major factor inhibiting the retention of trained and qualified healthcare workers in the district.

2. Participants took the initial steps to establish a coalition of key energy ecosystem stakeholders for the interventions in the healthcare value chain in Kambia District. The coalition will include representatives from the following key stakeholders:

- Ministry of Health
- District Health Management Team, Kambia District
- NGOs – TENN, CARE-SL, GOAL-SL,
- Kambia District Council
- Traditional Authorities in Kambia District



## Participants:

Participants at the workshop were healthcare professionals and representatives from the local council, chiefdom authority and NGOs supporting healthcare programmes in Kambia District.

Name of participant	Organization	Designation	Telephone
1. Tamba Komba	DHMT-MOHS	PPH/Supt	078425011
2. Ballah Marrah	DHMT-Kambia	CHO/Solar Technician	077920980
3. Musa Bangura	Kukuna-MOHS	CHO/Chief supervisor	099101890
4. Hassan Swarray	MOHS-DHMT	PHS	076355770
5. James Swarray	GOAL S/L	HDM	07665020
6. Kadiatu . J.Kanu	MOHS Gbalamuya	CHO/Chiefdom supervisor	076583263
7. Abu Bakarr Bangura	MOHS Mambolo	CHO/ Chiefdom Supervisor	076583263
8. Dr. Nabieu Yayah Yillah	Traditional Leader	Rep. for Hon. PC Magbema	076822808
9. Unisa Sesay	DHMT-MOHC	Chief Technician, Laboratory	076659226
10. Marrah Musa Harrison	MOHS-Mapotoloh	CHO	079577730
11. Bundu Sankoh	MOHS, Mafufuneh CHC	CHO	079592596
12. Terena Tholley	MOHS/ Mafaray CHC	CHO	079343813
13. Mohamed Boie Jolloh	MOHS/Bamoi munu	CHO	076379021
14. Mac Ansumana	CARE Sierra Leone	Representative	079622643
15. Alhassan Sumah			078600936
16. Hawah B. Palmer	MOHS/KGH	SCM	078070893
17. John S. Samura	MOHS/DHMT	DHSI	078425704
18. Kadie Bureh	MOHS/DHMT	DHSI	076657844
19. Mohamed Abass Kamara	ABC Development	Project Officer	078550254
20. Zainab Kamara	MOHS/DHMT	DHS II	078352332
21. Isata Sesay	KDC	Chairperson, Health Committee	077767739
22. Bai S. Sankoh	MOHS/Kamasasa	CHO	078747549
23. Ahmed. Alie Bangura	MOHS/DHMT	B/D Registrar	079057816
24. Raymond A.K. wright	MOHS/DHMT	DFO	076868765
25. Tennyson Momoh	GIZ	Technical Advisor	078887877
26. Saidu Tejan	MOHS		076718535
27. Dr. Sylvanus Bangura	MOHS/DHMT	District Medical Officer	080358506
28. Foday Lansana Suma	FLS Power Solutions	Managing Director/CEO	078004464
29. Senesie Mansaray	TENN	Programme Assistant	099373790
30. Dr. Paul T. Yillia	TENN	Technical Advisor	033 820964

## Key Highlights:

### Opening statement –\_Dr. Sylvanus Bangura, District Medical Officer (DMO)

- This workshop could have happened earlier but unfortunately, we had to postpone it because of the COVID-19 pandemic. We even had plans with TENN for an international event in India through their partner SELCO Foundation to deliberate on the energy ecosystem with other actors around the world. But due to COVID, we now have a justification to have a very good workshop here in Kambia Town through this coalition on how we can improve on the energy ecosystem in Kambia District for healthcare. This program is sponsored by The Energy Nexus Network otherwise known as TENN which is a liaison between national and international partners to improve upon sustainable energy solutions in Sierra Leone.
- TENN has key interest in using Kambia District as a pilot district in Sierra Leone. You know Kambia has always been an opportune district based upon the fact that it is unique as the main gate way via land and as a transitional point, we expect that it should be the place for innovation that is the reason why Kambia has been on the highlight in terms of innovation and novel intervention in the country. Talking about the energy ecosystem, we all know the challenges that

we are confronting in ensuring that there is sustainable energy at district level. We all know some of the implications of man's activities on the environment such as global warming, climate change and lot of natural disaster because of the effect of man's activities on the environment.

- This is a forum we can discuss how to come up with solutions that are cost-effective interventions to achieve sustainable energy around healthcare service delivery in Kambia District. All our interventions are centered on energy. We need energy for data management, laboratory services. We need energy to ensure functioning of medical equipment. We need energy to provide an enabling environment for our health care workers. This platform is important for us to examine the successes, challenges, and opportunities in using energy for sustainable solutions.
- I want to welcome you to this very important deliberation, and I want to express my sincere appreciation to the funders of this workshop to make this a reality as we address the objectives. One is to ensure that we form a coalition of partners both local and international to deliberate the way forward towards achieving sustainable energy solutions in health care services. The next objective is for us to map out what are some of these bottle necks that have been responsible for the unsustainable nature of the energy ecosystem. We also want to look at cost-effective, solutions to ensure sustainability. I am hopeful we will have a very fruitful deliberations as we engage on these family discussions.

### **Opening statement – Dr. Paul T. Yillia, Technical Advisor, TENN**

- Thanks to the DMO and the Kambia District Health Management Team (DHMT) for hosting this workshop. We bring you greetings from our senior management team at TENN, a knowledge hub on sustainable energy solutions. We work on several sectors: agriculture, health, human capacity/skills development, productive uses, etc. using sustainable energy as an entry point. Energy is an enabler for development. Without energy, many sectors will collapse because energy is needed to strengthen those sectors and to facilitate the services that those sectors offer. When we use energy as the entry point, we use of course the technology that comes with energy, but in addition, we look at the entire elements in the energy ecosystem that ensures sustainability and replication. When we work in the health sector, we look at the entire enabling environment around the health sector and this is what we call the ecosystem.
- For those of you who studied Biology at high school, I am sure you still remember what an ecosystem is as a concept in Biology. The first time I had ecology and energy, I was a bit confused and wondered what ecosystem as a concept has to do with energy because an ecosystem deals with the interaction between living and non-living things, so living things can thrive through the interactions with the non-living environment. There is some understanding in the ecosystem concept that applies to the energy ecosystem. In an environmental ecosystem, it is the functioning of the various elements of the ecosystem that makes the ecosystem work and function properly. Similarly, when we talk about the energy ecosystem in the health sector, there are several important elements that must be present so all of you working in the healthcare systems can function properly. In addition to technology and innovation, these elements must include good national policy, finance, forward and backward linkages, human capacity/skills to use and manage the other elements. They are known as the enabling environment, and they are very important for sustainability.
- This is the second time we are visiting Kambia District in 2021. We came here in April this year and we probably met some of you at your various locations. With the permission of the DMO, we were able to visit some health centers. Probably we visited some of you in your duty stations to undertake a rapid energy needs assessment in your healthcare facility. I remember having some discussions with the DMO who pointed out clearly most of the challenging issues in the district. But we also want to hear from you now, what some of these challenges are in your locations where you work from and let us see whether we can build coalitions around enabling factors that

can ensure that through energy as an entry point, we can build a stronger ecosystem for the health sector in Kambia District.

### **Opening statement – Ing. Foday Suma, Managing Director, FLS Group (TENN Consultant)**

- I am an installer from FLS academy. We train people in electrical engineering and solar installations. I have been fascinated with the work TENN is doing because personally I love to see that all health facilities in the country with adequate access to energy because we understand the horrible stories we have been hearing from hospitals because of lack of electricity and we have also done a lot of surveys and we know how a lot of people are struggling with simple things that can be done if you have the opportunity.
- When we came to Kambia last April, we identified a few spots to see how the energy ecosystem is working here. This include assessing the infrastructure that is already there, who are providing the services, and we looked at the facilities in terms of accommodation for staff, we looked at the health laboratories in some of these places. We looked at where the work is been delivered and how they are all connected. We have used the rapid needs assessment as the baseline to be able to deepen our understanding on the energy nexus story.
- Even though we already know some of the problems and issues at the healthcare centers, it is very important that you who are managing these healthcare centers can highlight these issues further and after this discussion and narrow down the discussion on the possible areas where are we going to intervene. This is a pilot project and is not an endless spot of money is a limited sum of money that we are looking to spend but you want to spend it were it can create the maximum impact.
- But just to provide you with some examples of the issues we saw during the rapid needs assessment we undertook. We visited a nicely built facility in a certain town, but I think the ecosystem was not complete because the healthcare workers who are running the facility do not have proper accommodation and their lives are in constant danger because they work in dark environment and there was even a reported incident of a snake in that facility which created panic among the health care workers in the center. Even though they are giving their time and their resources to do this we can tell that they are barely doing it because they must do it. If they had options if they had an opportunity, they would not be there.
- There are other places we went to were in we found that the energy bit is install and you have two or three interventions from different NGOs, but the energy system is not working. You will have a GOAL intervention, a GIZ intervention but because they were not very linked together you will find out that may be from one installation to another just the inverter is broken. From another installation, a charge controller is broken. There is no coordinated effort to be able to fix this problem for that healthcare facility to function properly. We visited other healthcare facilities where we found out that there is water, there is electricity but there are plumbing issues although elements of the healthcare facility were well managed, well-coordinated but there was no plumbing line between the borehole and the tank was a problem and these guys have been struggling for six to eight months struggling to fix this problem by their account any way. But these problems go endless.
- The way we understand the energy story is to say the energy is the backbone of all these services including this hospital here. I was part of a PRESSD project that installs a 20Kw mini-grid system in this hospital and up to this moment the project has folded and there is no more money to push on the broken facilities that are here but most importantly the hospital will need an anchor who should be a grass root person who will work with all these efforts to be able to bring solutions to these problems. Therefore, I see the coordinated approach of TENN as very important because what it is doing in as much as we have all the solutions to all these problems



and if we have the money, we can solve all of them tomorrow. The bad news is we cannot be coming from far to solve this problem so one of the solutions is to focus on the partnership between the grassroots and the international community that we are trying to merge. We want to have local champions driving these efforts we are always here we can always coordinate with them and have a chat with them.

- I want to give you the opportunity to highlight some of the challenges and proffer solutions. We want to understand what your personal challenges are from the healthcare facilities you are managing. Apart from the challenges we also look at the opportunities that are there. What do you see as an opportunity for us to intervene? Where do you see for us to intervene and spend some money that can create maximum impact? May be for every clinic that you represent you gives us your name, the location where you come from and the challenges and perhaps the key opportunities that you are faced with. Let us start with the main referral hospital here in Kambia Town.



### Selected testimonies/stories of success and failures, including opportunities for delivering healthcare services in Kambia District



- Reticulation is a challenge in some facilities e.g., plumbing for the WASH sector. In most our facilities there are challenges. If I am to represent the entire district, I will just present the Kambia District mid-year and annual review and update. There are over 23 facilities out of the 68 government public health units in Kambia District that do have running water. This means that for the rest, we cannot talk about reticulation/repairs because there is no running water. Plumbing it is a challenge and we want to see how together with our partners we can form a coalition to ensure that there is sustainable energy ecosystem for the healthcare system in Kambia district.
- If we are talking about this energy ecosystem, we are a bit down at the Kambia Town Hospital. There is no light in the maternity wing. We need light in the labour room area and the isolation unit as well. Sometimes when the generator has problem and there is no light, how can we transfer patients who are supposed to be under oxygen/ventilation support/intensive care. We want to grab this opportunity to solve some of our electricity challenges. The generator only works from 7:00pm to 12:00 midnight. We need light for 24hrs for the patients and for our own safety.
- I want us to discuss elements that are responsible for health workers safety. These are the element that forms the healthcare ecosystem. If you look at patient safety and all the electricity needed. The same electricity is what we need to ensure that there is resuscitation both cardio-pulmonary resuscitation as well as to ensure that



patient have physical comfort. I don't believe that we are safe with accommodation and our welfare because we need electricity for our security. The healthcare facility needs energy supply, because when there is electricity, I am not worried about darkness.





- I want to thank TENN for coming here at the right time and I want to thank the speakers. Of course, I can recall you visited me at the lab when you came in April, and I informed you about the challenges we are facing at the lab. Generally, in terms of electricity supply in the government hospital here in Kambia Town, it is a big challenge. For the laboratory, we are having electricity supplied by the solar system at the lab from 9:00 AM to 4:00 PM. The generator comes on at 7:00 PM until 12:00 midnight. But we need electricity for 24hrs in the laboratory. Suppose we have a patient at 4:00 PM and during this period there is no electricity, and we have a lot of equipment that uses electricity to perform important medical tests that are needed for treating the patient. The intervention by TENN is very timely. The lab space is also too small. It needs to be relocated, preferably to a new and standalone structure.



The lab is a very critical pillar in terms of case management. We cannot provide a definitive or confirmatory diagnostic health case without the existence of a proper functioning laboratory at the only referral hospital in Kambia District. It is so paramount to make sure that the laboratory is functioning properly. There is something I am particular about which has to do with the space. Currently, the laboratory space is not ideal. An assessment was done about a year ago by the laboratory manager of EBOVAC and his recommendation was that the laboratory at the government hospital in Kambia Town does not meet international standards as a laboratory. The recommendation was that the current laboratory is either upgraded or it should be relocated to a new infrastructure which will meet the required standards for a laboratory. We have identified a space right at the back of the DMO's for the new building for a modern laboratory for the Kambia Town Hospital, one that will serve the entire Kambia District especially when we consider the fact this Hospital is the only tertiary or referral healthcare facility in the district. So that is our appeal to help us construct a new laboratory for the Kambia District. We have already upgraded the caliber of the staff at the government hospital. We have trained technicians, a consultant specialist pediatrician, we also have a surgeon on the ground. However, we cannot have best practice from the laboratory because investigative diagnosis remains a major challenge. So please TENN take note of this need.



It is important to have many partners in the workshop because we said the TENN is here to help us form a coalition around the energy ecosystem. This is good because we have a partner here that is responsible for infrastructural rehabilitation and there is also another partner that is responsible for the solarization of the health care facilities. If we form a sustainable coalition of partners, then we can address the challenges holistically, hence the need for this workshop. In terms of scaling up infrastructure, we have CARE Sierra Leone, they are doing WASH and other components of rehabilitation as well as GOAL that is also supporting in terms of WASH up-grade. The other partner is the Kambia District Council, Government of Sierra Leone, who need to ensure that there is infrastructural development and funding is available from the government for repairs and so on. These are issues we need to sit together and discuss as partners.

- We have solar facility installed at Gbalamuya CHC, but the problem now is the light is not constant especially during deliveries at night. es. The light is not constant.    
The light can go off at any time. For us living at the quarters they told us that we should buy meters for our quarters even though we are living in that forest quarters not good enough for staff to leave. We are required to do prepay for the electricity supply into our homes, but electricity supply is very irregular. We are wasting our income and they told us before they do the connection that there one connection for the community and the one for the health facility. I don't know why we don't have light for now for the health facility. WASH is not because they don't have the same connection. The water supply has its own solar connection. The major problem is that the electricity is not constant especially during the night.

  - Gbalamuya is supplied through the rural electrification project by Government of Sierra Leone supported by UNOPS. The system at Gbalamuya is a small system, sixteen Kilowatt mini-grid so obviously it will not be able to serve everyone all the time. But that will not stop any intervention because what it means is the power supply is not adequate. It is surprising that there is no stable electricity supply because the way it was set up, 6kw was supposed to be dedicated to the healthcare facility alone, and that should be more than adequate for the needs of the CHC and the staff.


- We are happy for the ecosystem approach because of the situation at the Mafaray CHC needs attention given that it has now being upgraded into a Basic Emergency Obstetric Care center (BEmOC). The facility is not running smoothly because of lack of electricity and water supply. There is no running water, no light facility, limited accommodation for staff, broken doors and windows in staff accommodation and medical facilities, spoilt incinerator, and leakages in the roofing material. It is only the labour room that has electricity. Even the toilet in the labour room has no electricity. We CARE Solar visited the CHC and provided only four bulbs. The labour room is so small and sometimes when we have two or more pregnant women, it is difficult because we have to send some into the post-natal unit. The leakages and the broken windows have been our problem. If we have no electricity and the toilet is far from the main building it is dangerous especially for snake bites at night. Also, we do not have a laboratory. We will be happy if Mafaray is considered.    
 


  - There is virtually no facility in the district that can say there is no wink of solar in the facility. Notwithstanding, we are still having challenges in terms of sustainability and the area of coverage. The solar installations that are provided are not enough to power the facilities. In addition, many installations need of repairs. It only the labour wards and the post-natal wards that are prioritized. We should have the entire facility electrified so that even if you are in the bush from far away, you should be able to see the healthcare facility and know that I should seek healthcare services at that point. We want to have a comprehensive solar package, especially now that our partners are here. Let see whether we can have a comprehensive solar package to have a sustainable energy solution for healthcare services in Kambia District.

  - As for Tonko Limba, We CARE solar has installed their system in almost all the facilities and they are virtually doing well, except for some PHUs, like the one in Maseleh and Timbo. The healthcare facilities in those communities are still having problems with their solar installations. The system installed in Maseleh is not switching on at all. As my colleague was saying for some of us that are getting electricity from



the mini-grid installed by UNOPS, we are getting a lot of headaches with the electricity system. Most the time we get blackout even when we have emergencies. We sometimes use a torch. In the area of accommodation for staff in some PHUs, they are using the health facility as a quarter for the staff. Think of Timbo the likes of Kamagbewu, Kamawala, and many more. We are really getting serious problem in terms of staff accommodation in that chiefdom. Some PHUs in the chiefdom have a whole lot of leakages. We have one newly built PHU in Boli Laya but when you are inside it is just like you are outside due to the leakages. The condition is worst during the rains although it gets better during the dry season. The staff are even having problems preventing their documents from the rain. There are a lot of plumbing problems for water supply. In Madina, they made rehabilitations for water supply but there is no running water in the facility. There are PHUs where water is collected from the neighbouring houses to host their staff. Lastly, the PHU at Kamasasa is nothing to write home about because it is an old building that was constructed with mud block over forty years ago.

 - In the area of accommodation, we have our local authorities. Dr. Yillia from TENN is not only an authority but also our ambassador to the world. I hope he will draw attention to this problem. There are two prong approaches I should say around accommodation. One of the approaches we already said is the pillar which is community ownership. The community should provide accommodation for healthcare workers. The other approach is anybody that wants to support the communities with a healthcare facility, you as supervisors or healthcare workers should refer them to the DHMT (District Health Management Team). This is important, so that we can guide them with the required standards. We have noticed in the past years that people build sub-standard healthcare facilities in the interest of scoring political points. If the facility is lacking in the five components of a standard healthcare facility, it is not fit for purpose as a healthcare facility. We want to avoid this as much as possible. This is the reason why most of the time, we keep dragging our feet to commission some of those facilities because we know they are not fit for purpose. A facility without toilet, no laundry, no incinerator, no laboratory, a facility without accommodation for the resident staff - that is not an ideal healthcare facility. Since it does not contain all the basic elements and requirements, it become difficult to retain healthcare workers in those communities. We must ensure that all the elements that befit a standard healthcare facility must be present.

 - This also applies to electrification for the healthcare facility because the energy cannot be functional or effective if the required standards for the building are lacking. As for the leakages, if you visit some of these facilities, most of the staff are discontent of the infrastructure. Regular minor maintenance has been done year in year out and they look very beautifully built from the outside. However, when go inside the building, then you will face the ugly situation head on. This is not sustainable. We need to find solutions. The money available for repairs, 1 million Leones (approximately 100 USD) cannot do anything in terms of addressing the problem. We need to look for additional funds elsewhere. We have a roll over budget which can be used to address some of the minor challenges but certainly not enough to address major challenges. There was this deplorable healthcare facility that was made of corrugated zinc sheets such that when it was raining, we usually loose our drugs. That health care facility was vulnerable to outbreak. So, we used the roll over budget to build a facility that is better and that is what we did to prevent possible outbreak in the future. Please as partners in this meeting, let us consider how we are coming in to solve this problem. If the patient's welfare is not maximized, then definitely we cannot get where we want to go. My appeal is that although some people will say this is not in our operational



plan, let us try to be flexible and be more compassionate to address some of these challenges.



- I will start with my own center in Mafufuneh village. There were solar panels in all the healthcare facilities, but they are no longer functional. In the maternity wing, solar installation only works at night. For the staff quarters there are panels that are not working. Accommodation for the staff is inadequate and the roofing systems has leakages. In Kassirie, there is no light at night, but CARE is doing some renovation. Kychom is supplied by the UNOPS mini-grid intervention but the healthcare facilities in Roshino and Mangaybesa Villages have no electricity supply.

- Before now, there were no solar installation but now there is solar installation, but the batteries are not functioning. Leaking roof in the facilities is a major problem during the rainy season. Accommodation for the staff is a major challenge as well. Also, some healthcare facilities lack toilets For Moribaya village, there is no accommodation for the staff, there are leaks in the building, and the labour room is very small, For Kortuma village, accommodation is also a major problem for the staff and in Yeliba village only the labour room has electricity.



- The postnatal is so small with two beds and there is no space for administrative work. The solar panels installed by UNOPS are not working. There is no water supply as the water system no longer works (reticulation problem). Out of 8 PHUs in Mambolo, only four have water facility. In Rotain Bana village, the resident staff are using the health facility as accommodation and in Romano village water supply is a major problem and the solar installation is no longer working. CARE is about to rehabilitate the healthcare center in Romano village. The Tombo Wala healthcare center is a good model.

### Recorded statement by Huda Jaffer, Director, SELCO Foundation:

- It is great to be part of this workshop. We are very excited for the partnership between The Energy Nexus Network (TENN) and SELCO Foundation and we are very happy to have all of you here with us to move the needle and push the agenda of how we can achieve better healthcare services using energy access and energy efficiency.
- SELCO Foundation has been working now for decades to promote how decentralized energy can improve access to health and better services in healthcare.
- There are many issues involved in this, right from staff retention to patient's wellbeing and access to basic services. We do feel like using technologies like clean energy and energy efficiency, they basically provide low hanging fruits.
- The excitement of having all of you in the room is to basically look at how can we have Sierra Leone as a model region for West Africa, for sub-Saharan Africa to push the agenda of meeting the SDGs, whether it is SDG 7 on energy, SDG 3 on healthcare, as well as SDG13 looking at climate action and climate mitigation.
- Kambia is one such region where we really believe if we can blanket all the healthcare center and the district hospital as a development agenda in the district, it can really shift the metrics that we have on healthcare, the types of services that are provided, the number of services that are provided could drastically change if we really look at decentralized energy to ensure that Kambia can have not only a climate friendly and a climate sound approach but also ensuring that there is savings overall, savings not only for the health department but also for the end users of healthcare facilities.

- We do feel that the impact we can create in Kambia and really be a model for other areas in Sierra Leone as well as other countries in West Africa.
- We look forward to the partnership. We would have loved to be there, but it is not possible now. Hopefully we will be there soon working with each of you on the ground.

**About The Energy Nexus Network (TENN):** TENN is a global knowledge hub for sustainable energy solutions, a founding partner of the [Global SDG7 Hubs](#) initiative. TENN works with local and international partners to understand and strengthen the energy ecosystem for productive uses and improved wellbeing. Simultaneously, TENN facilitates high-level multi-stakeholder dialogues on sustainable energy solutions and provides advisory support on crucial energy-enabling Sustainable Development Goals (SDGs) to accelerate scaling and replication of cost-effective solutions.

**About SELCO Foundation:** SELCO Foundation seeks to inspire and implement socially, financially, and environmentally inclusive solutions by improving access to sustainable energy. SELCO Foundation works with local partners to: systematically identify diverse needs of the poor, understand, and define the role of sustainable development, poverty alleviation and decentralized energy; create and deploy innovative solutions that positively impact well-being, health, education, and livelihoods towards the alleviation of poverty; foster the development of enabling conditions or an ecosystem through holistic thought processes in technology, innovation, finance, entrepreneurship, and policy.

**TENN - SELCO Foundation Partnership: Fellow Travelers for Holistic Development Models**

TENN is building an energy ecosystem platform in Sierra Leone in partnership with [SELCO Foundation](#) to strengthen partnerships and linkages between energy and key sustainable development themes such as poverty, health, food, education, water supply, climate change and environment. Pursuing sustainable energy interventions at the intersection with these development priorities is crucial for the effective delivery of development programmes. Unfortunately, some of the key enabling conditions required for scaling and replication of sustainable energy solutions remain weak or even non-existent in Sierra Leone. These so-called energy ecosystem elements include strong institutions and regulatory framework, finance (for entrepreneurs and end users), civil society engagement, human capacity, market linkages, and technology/innovation. Through the Global SDG7 Hubs initiative, which is a flagship programme of SELCO Foundation, TENN is working with local and international partners to facilitate south-south transfer and adaptation of technology, innovation, knowledge, and skills for the implementation of pro-poor sustainable energy solutions that are cost-effective and replicable.



**Additional information:**

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