



Dear friends and supporters of the Solar Energy Foundation,

Supporting personal initiative and promoting entrepreneurship - these are the focal points of our work.

The reason is simple: isolated aid projects usually only help temporarily. But if they are embedded in a strategy to promote local solar companies, the sustainability of the projects is increased and, on the other hand, the creation of jobs in small and medium-sized enterprises is supported.

Therefore, we promote the engagement of young East Africans with a dual approach:

We promote the distribution of solar energy:

- For village development
- In schools for better education
- For better health care
- To improve the harvest

Wir fördern das lokale Solarhandwerk:

- We train technicians
- We support young entrepreneurs
- We create jobs
- We provide microcredits

A dual approach that has proven its worth for 20 years now.

Read more about our activities in recent months in our newsletter. I would be pleased if you continue to accompany and support our work.

Enjoy reading!

Au/Freiburg, June 2023

Harald Schützeichel, Director



Ademun Peninah Ketty (above) recently participated in Sendea Academy's six-week basic solar course in Uganda and was subsequently accepted into our new solar small business support program because of her good results.

After six months, the altogether 10 participants (see picture below) will be able to manage their solar company professionally.

The program consists of block courses lasting several weeks on all topics of business management as well as continuous coaching by experienced local

entrepreneurs. This is because we are primarily concerned with providing practical support in day-to-day business, not just theoretical knowledge transfer.

Ademun Ketty would like to further expand a solar store in her home town of Kumi (250 km northeast of Kampala). The option of receiving a small loan of 500 euros is therefore particularly valuable to her. The loan is granted in the form of solar products. If repayment is successful, the loan amount can be successively increased.



Background

African governments will only succeed in the large-scale deployment of clean energy solutions if they gain the trust of consumers and local communities. To drive Africa's desired transition to clean energy, youth are therefore key change agents.

Sub-Saharan Africa is not only the youngest continent (average age 20), the region also has the lowest rates of access to clean energy. For these young people, advocacy for clean energy is now often a very personal issue. The majority grew up without access to electricity. As a result, they personally appreciate the critical role clean energy plays in addressing the twin challenges of economic development and environmental sustainability.

Our support program in Uganda is therefore meeting with great demand. For many Ugandans, setting up a small solar business in rural areas is an attractive way to earn a living and create jobs. Many see a market with great potential in this modern technology.

July 2023: Expansion to Kenya

Our Kenyan partner company SunTransfer Kenya also has many years of entrepreneurial experience in the solar sector. Together with the executives of this solar company, the Kenyan Solar Energy Foundation will offer the model proven in Uganda in an adapted form for Kenyan small entrepreneurs in the second half of 2023.

Like most other African countries, Kenya faces a double challenge: high youth unemployment and limited access to clean energy, especially in rural and remote areas where the majority of the off-grid population lives.

This challenge presents tremendous opportunities if local youth can be equipped with entrepreneurial skills and empowered to provide clean energy products and services.

Our Kenyan "Solar Entrepreneurship and Empowerment Program" (SEEP) therefore aims to train and continuously mentor small and micro enterprises specializing in solar clean energy products and services.

The program is sponsored by, among others:



Practical training: solar installation in a Ugandan village



Photo credit: Göran Schattauer - FOCUS online

Kenyan startup DropAccess, founded in 2018 by electrical engineers Norah Magero and her husband James Mulatya (pictured above, right), has developed a special solution for cooling and transporting vaccines and medicines: a portable solar refrigerator called the "VacciBox."



With this product, Drop Access has been participating in our accelerator program Startup|Energy as a Fellow since 2021: the two founders receive, among other things, intensive coaching and a wide range of support with questions about setting up the company.

Part of the support is also a pilot project: The Solar Energy Foundation Kenya has purchased five mobile solar refrigerators and had them installed by DropAccess in these health stations:

1. Isinya Sub-County Hospital - Kajiado County

2. Ngatu Dispensary - Kajiado County
3. Osarai Dispensary - Kajiado County
4. Kiloh Dispensary - Kajiado County
5. Ivoleni Dispensary - Makueni County

The project is financially supported by the Enzkreis District Office, among others:



The startup Drop Access and the health station in Kiloh were visited by a reporter from FOCUS Online in March 2023. He produced an informative report and a film that is well worth seeing, which is available on Focus Online on the Internet (in German).

For our own quality control, Gathu Kirubi, head of the Kenyan Solar Energy Foundation also visited the health stations and checked the use of the VacciBox. Here is his report, which also contains interesting background information on health care in Kenya:

1. Kiloh Dispensary

"I can vividly recall the date and time when this VacciBox fridge was delivered and installed in this clinic in September, 2022," an excited Victor Kiprotich remarks as he warmly welcomes us into Kiloh Dispensary, a typical off-grid health clinic in rural Kenya. Located about 150km South West of Nairobi, the journey to this remote clinic is not for the faint-hearted; it takes over three hours from Nairobi, navigating through the lush green savannah grasslands on extremely rough off-road terrain



Victor Kiprotich puts medicines in the VacciBox

Kiloh Dispensary, which began operations in February 2016, serves a Maasai community of nearly 3,000 people who live scattered within a 15 km radius of the dispensary. "The diseases we commonly treat here include malaria, diarrhea and upper respiratory infections such as pneumonia," explains Victor, who has managed the dispensary since 2019. Malaria is a common tropical disease in Africa.

"But what are the causes of pneumonia and diarrhea?" we inquire.

"The reasons are obvious. Pneumonia is mostly due to indoor air pollution caused by the use of

firewood in poorly ventilated Maasai houses, the *Manyattas*", Victor explains and he continues: "Lacking toilets, Maasai community resort to open defecation in the bushes to answer the call of nature. The poor hygienic conditions are exacerbated by extremely limited supply of water, of which the primary source is rain-water harvesting in a region that can go for 2-3 years without adequate rains", concludes Victor.



Manyatta: A typical Maasai house

With this in mind, we ask Victor: "What difference has the VacciBox refrigerator made to this Maasai community?" For Victor, it's clear: "The first positive impact is vaccine storage. Since we are not connected to the power grid, our only storage for medicines has been a gas-powered refrigerator."

Such a gas refrigerator is still a common solution in remote health clinics. But apart from the high cost, gas supply is very unreliable, especially in remote clinics like Kiloh. It is not uncommon to go several weeks without gas.

The result: a huge loss in medicines that are no longer refrigerated and a serious disruption in medical care. "The solar-powered VacciBox has completely solved the problem of medicament storage!" notes Victor.



Photo credit: Göran Schattauer - FOCUS Online



Photo credit: Göran Schattauer - FOCUS Online

Undoubtedly, solar energy as an energy supply is a crucial innovation for the operation of the refrigerator. But in these remote villages, portability is an even more important design feature. That's because it makes vaccination campaigns possible even in remote villages.

"Once or twice a week, we transport a Vaccibox full of vaccine to remote villages like Nguseron, which is 15 km away. We then camp there from dawn to dusk, administering vaccines and treatments to children, expectant mothers and the elderly who, for one reason or another, can't make it to the health clinic."

The results of these aggressive vaccination campaigns are impressive: more than 60 children are vaccinated per month and, in addition, nearly 800 people receive Covid vaccinations.

Thanks to the Vaccibox, Victor is now also able to expand his work to five elementary school in his catchment area, with a total of more than 1,500 students.

The Vaccibox has also enabled a rapid and reliable

response to emergencies, such as treatment against rabies, which is often transmitted by bites from wild dogs and hyenas. Boys and men in particular are frequently attacked as they herd their livestock in the forests and open grasslands of the savannah.

Improving support options for deliveries is another important impact of the Vaccibox in Kiloh, as Victor explains, "Before we got the Vaccibox, it was very difficult to convince mothers to come to the health clinic to deliver because we didn't have a reliable supply of essential medicines and vaccines."

Victor continues, "The good news is that this negative attitude about the unreliability of health care has changed thanks to Vaccibox. Our regular immunization campaigns in villages using the Vaccibox have created much-needed confidence in the reliability of our services. As a matter of fact, not only do we support at least 5 deliveries per month at this dispensary we get calls to attend to emergencies cases relating to deliveries at homes," Victor proudly concludes the discussion.

2. Health Center Isinya



In white coat: nurse Amos Karanja, on his left Gathu Kirubi (Solar Energy Foundation Kenya), on his right James Mulatya (co-founder of DropAccess).

It's easy to limit the relevance and impact of the solar-powered VacciBox fridges to the health clinics located in remote, off-grid rural and poor locations. Yet, that's until you get to the Isinya subcounty health center.

The center, located just 60 km south of the capital Nairobi, is situated in a relatively well-established business and residential area on the outskirts of the city and is connected to the public power grid.

Established in 1969, the health center is one of the oldest health facilities in the region and currently has 20 nurses, three clinical officers (COs) and three public health workers. Together, they are responsible for an area that is now home to over forty thousand people.

Although the health center in Isinya is connected to the power grid, the electricity supply is very unreliable. "It is not uncommon for us to be without

electricity 2-3 days a week," explains Amos Karanja, the nurse in charge since 2019.

"Since the power grid is unreliable, the solar-powered VacciBox is a key advantage," Amos continues.



The delivery room of the health center



Nurse Amos Karanja demonstrates the VacciBox

In addition to the efficiency and reliability due to the solar power supply, Amos also praises the technical accuracy of the VacciBox, especially the fact that the refrigerator is able to maintain the desired temperature range of 2 to 8 degrees Celsius. "This is a fantastic achievement," he enthuses.

As in the Kiloh center, the 50-liter VacciBox refrigerator in Isinya is making a difference in two main areas: first, the 60-70 deliveries per month, and second, the number of vaccinations. According to Amos, the VacciBox allows over 500 children per month access to important vaccinations.



One advantage of the VacciBox is its mobility: it can easily be used for outdoor operations.



Solar technicians after receiving their final certificates

Sendea Academy, the training facility of the Ugandan cooperative Sendea, has held numerous courses in the last six months:

- 33 people participated in a multi-day training course on remote monitoring of PV systems, which Sendea conducted in cooperation with the Ugandan startup Innovex.
- On behalf of an international aid project, Sendea Academy arranged trainings for 80 young solar technicians in solar energy and in some cases also in mini-grid technology. Part of the training is also an internship with local solar companies.
- 9 participants attended the last training course for freelancers - a six-week course that Sendea has been offering since 2021 with great success for rural freelance technicians. Some of the graduates will be accepted into the subsequent business-building support program (page 2-3).

More training courses will be held until the end of July 2023:

- Operation and Maintenance of Solar Mini-Grids
- Basic solar technology for freelancers
- Advanced solar energy



PV Solar Systems for Freelance Technicians

COURSE DURATION
From 05th June and 14th July, 2023

QUALIFICATIONS:
S.3, UCE, UACE and above.

70% Funded & Students Pay 30%, 405,000/=

St. Josephs Vocational Training Institute, Kamuli

What you will get:-
DIT Assessment, Tool boxes, Overalls, Helmets, Certificate of competence.

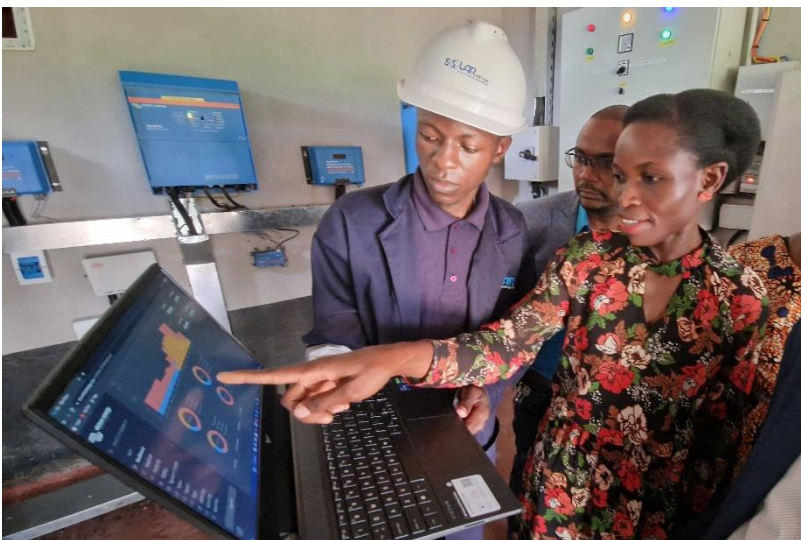
All interested Applicants are advised to Pick Application Forms from the above Institute
or Email us at academy@sendea.org

Funded by: **STIFTUNG SOLARENERGIE** SOLAR ENERGY FOUNDATION
Implementing by: **sendea**

Female applicants are encouraged to apply.

This means that since November 2022 alone, around **200 participants** have attended courses offered by Sendea Academy and have been given the

opportunity to obtain a state-recognized certificate of completion. A large proportion of the participants in the courses are women.



Sendea Academy's work would not be possible without the support of numerous donors. These include:



The Solar Energy Foundation Team

Germany



Dr. Harald Schützeichel
Founder and Director

Team members

- Daniela Ruthart
Accounting, project management
- Isabel Nande
News page Sun-Connect News

Board

- Beate Baumm, Munich
- Albert Krikken, Cham
- Ursula Schachenmann, Schaffhausen
- Jörg Stüdeli, Küsnacht

Ethiopia



Samson Tsegaye
Solar Energy Foundation Ethiopia
Director

Kenya



Gathu Kirubi PhD
Solar Energy Foundation Kenya
Director

Uganda



Loy Kyozaire
Sendea UG
CEO

This is how you can support our work

- Distribute this newsletter to interested family and friends.
- Donate to our work:
 - 200 Euro: Light for a household (solar village)
 - 1.500 Euro: Training of a solar technician
 - 2.000 Euro: Participation of a startup in the Startup|Energy program (one year)
 - 2.500 Euro: Solar light for a health station
 - 4.500 Euro: Solar refrigerator for a health station

Contact:

Stiftung Solarenergie
Am Schönberg 8b, D-79280 Au
mail@stiftung-solarenergie.org

Our bank details:

Volksbank Freiburg
IBAN: DE78 6809 0000 0037 3830 07
BIC: GENODE61FR1

Our work is recognized as non-profit by the tax office Freiburg-Land.