



Dear friends and supporters of the Solar Energy Foundation,
in the past months we were able to implement some interesting projects thanks to your support:

- **Solar training** for solar technicians in Uganda
- Light and cooling for **health stations** in Kenya
- Another **solar village**: Kinabi in Uganda
- Support for African **energy startups** (Startup|Energy)

Read more information in the current newsletter.

Enjoy reading!

Freiburg, May 2022

Dr. Harald Schützeichel, Director

A further note for all donors: The tax office Freiburg-City has audited the work of the Stiftung Solarenergie in detail. The result was not surprising for us, but we were very pleased: All implemented projects fully comply with the regulations for non-profit status.

Training of solar technicians



The Ugandan cooperative of local solar companies (Sendea), which we initiated, has developed a training program in recent years that is in great demand in the industry.

Since 2021, the Sendea Academy has been offering a unique course: basic training for freelancers, i.e. people who sell solar systems on a freelance basis in rural regions.

The background: Almost all solar dealers are located in large cities and have only a few sales outlets in rural communities. Therefore, customers either have to travel to the cities to buy solar systems (which is difficult for most rural families) or they use the services of freelancers.

However, these freelancers usually have little knowledge of solar technology. They can therefore neither advise customers professionally nor carry out a clean solar installation or maintenance.

In turn, customers trust freelancers because they themselves are poorly informed about solar energy and freelancers are cheaper than formal solar companies.

Moreover, they have no indication of the quality of a freelancer, such as a public certificate.

The consequences are:

- wrong dimensioning of the solar system
- faulty installation
- insufficient after-sales service

The result is negative for all parties involved: households spend a lot of money on an inadequate solar installation, the freelancer loses credibility and reputation - and finally the reputation of solar technology in general is damaged.

The **Sendea Academy freelancer training** program is in great demand. Since the program was introduced, we have now trained 105 freelancers.



The course, initially designed to last two weeks, has now been extended to four weeks. In addition, participants receive a state-recognized certificate.



A special appreciation took place on April 2, 2022 for the participants of the last solar courses: Together with representatives of Ugandan ministries and international organizations, they were invited to a large graduation ceremony in Kampala. There, they were ceremoniously presented with their graduation certificates. For many of these young freelancers, it was their first visit to the capital at all.

The training course is supported by Jugend Eine Welt, Stiftung Entwicklungszusammenarbeit Baden-Württemberg (SEZ) and Ashden Foundation (London), among others.



Graduates of the last freelance course in April 2022

The **solar training course for trained technicians**, which has been offered since 2019, was also continued after the end of the lockdown and the reopening of the training centers in January 2022: The last course ended in early May 2022, with refugees from Congo participating for the first time. A new course already started on May 18.

The technician courses are supported, among others, by the Rivera Foundation, the "Schöpfung nachhaltig bewahren" association and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).



CEO of Sendea and head of the Sendea Academy: Loy Kyozaire

The growing solar sector in Uganda needs more and more well-trained specialists. For a long time, solar companies operating in Uganda trained their new employees on their own.

On the one hand, this is costly for the companies, and on the other hand, it only offers employees a knowledge base that is closely aligned with the company's needs.

The Sendea Academy, launched in 2020, has changed this situation.

The independent solar energy training school is run by the Ugandan cooperative Sendea, an association of local solar companies.

In the past two years, more than 200 solar technicians have been trained and received a nationally recognized certificate.

For us, the success of the company-independent training concept is demonstrated above all by the successful integration of the graduates into the Ugandan labor market.



Light and cooling for health stations



Top: On the way to the Enkoireroi health station (bottom), April 7, 2022.



Kasale Salepo runs Enkoireroi Health Station, a remote rural clinic located about 100 km southwest of Nairobi in Kajiado County, Kenya.

With roads nearly impassable, the drive through the arid and rocky Savannen landscape takes more than three hours to reach the health clinic, which serves more than 5,000 people in this poor and marginalized Maasai community.

With no access to electricity, Kasale could only operate the clinic during the day. Many important health services, such as deliveries, vaccinations and, not least, vital emergencies like snakebites, went unserved.

"The situation was catastrophic. Frankly, it was quite frustrating to see patients' conditions worsen and others even die in their homes," Kasale recalls.

The good news is that the Enkoireroi problem has been turned into a huge opportunity, thanks to the Stiftung Solarenergie Germany, who in partnership with the Stiftung Solarenergie Kenya, installed a solar system in the clinic in March 2022.

The 300W solar system has provided the much-needed lighting enabling Mr. Kasale to not only operate the clinic at night but also reside within the premises making it more convenient and efficient to respond to any emergencies.

Within the first month of operating at night, he registered 5 maternal deliveries in addition to saving more lives. As important, he's also able to keep his mobile phone charged 24/7, enabling him to make referrals and seek urgent assistance as needed from other better equipped hospitals located far away from this remote village.

In his own words, the solar system was a "dream come true."

Sadly, there are still hundreds of clinics in rural Kenya that lack access to electricity. Many more are connected to the national grid yet experience daily blackouts due to unreliable grid supply.

The encouraging message, however, is that with a budget of 2,500 euros, it is possible to supply and install a complete solar lighting solution for a typical rural clinic like the Enkoireroi Health Station. A solar refrigerator for medicines costs 4,500 euros.



Kasale proudly shows the medicines in the solar refrigerator

Basic medical care

In rural areas, health stations form the basis of medical care for the population:

- Treatment and diagnosis of diseases
- Preventive care and vaccinations
- Care after accidents
- Care for pregnant women and support during childbirth.

Since 2004, the Stiftung Solarenergie has already equipped more than 200 health stations in Africa and Asia with solar systems for lighting and cooling. The solar equipment we install varies according to need and local capabilities.

We will continue this work in Kenya, Uganda and Ethiopia in 2022.



Solar Village Kinabi in Uganda



Jacqueline Nassimbwe and Stephan Okolng from the new solar village, both working as village school teachers

"Solar villages" is what we call our successful concept for village development: basic solar power supply for an entire village. The Stiftung Solarenergie provides all households with a basic power supply with solar energy as a start-up aid at a subsidized price: it consists of 2 LED lamps as well as the possibility to charge a cell phone.

The price to be paid by the households is based on what the poorest families in the village can pay. This is to ensure that each family receives a basic power supply.

Payment for the solar system is made in monthly installments. The money is used to finance maintenance and service. People use the system and now pay for the solar power instead of kerosene. Once the installments are completed, the solar systems become the property of the families.

The sustainable success of the program is ensured by the fact that local technicians are available for maintenance and service. In this way, the program also promotes local solar craftsmanship.

Since 2005, we have implemented 19 solar villages in Africa and Asia. Another one has now been added thanks to the support of Phoenix Contact

GmbH: Kinabi in Eastern Uganda. 100 households in this small village were able to dispose of their harmful kerosene lamps and now use clean solar energy.

Installation and maintenance were carried out by the local solar company Access to Solar. Project management was done by Sendea, a Ugandan solar cooperative initiated by us.



Left: Joseph Wanume, the CEO of Access to Solar, a founding member of the Sendea cooperative.

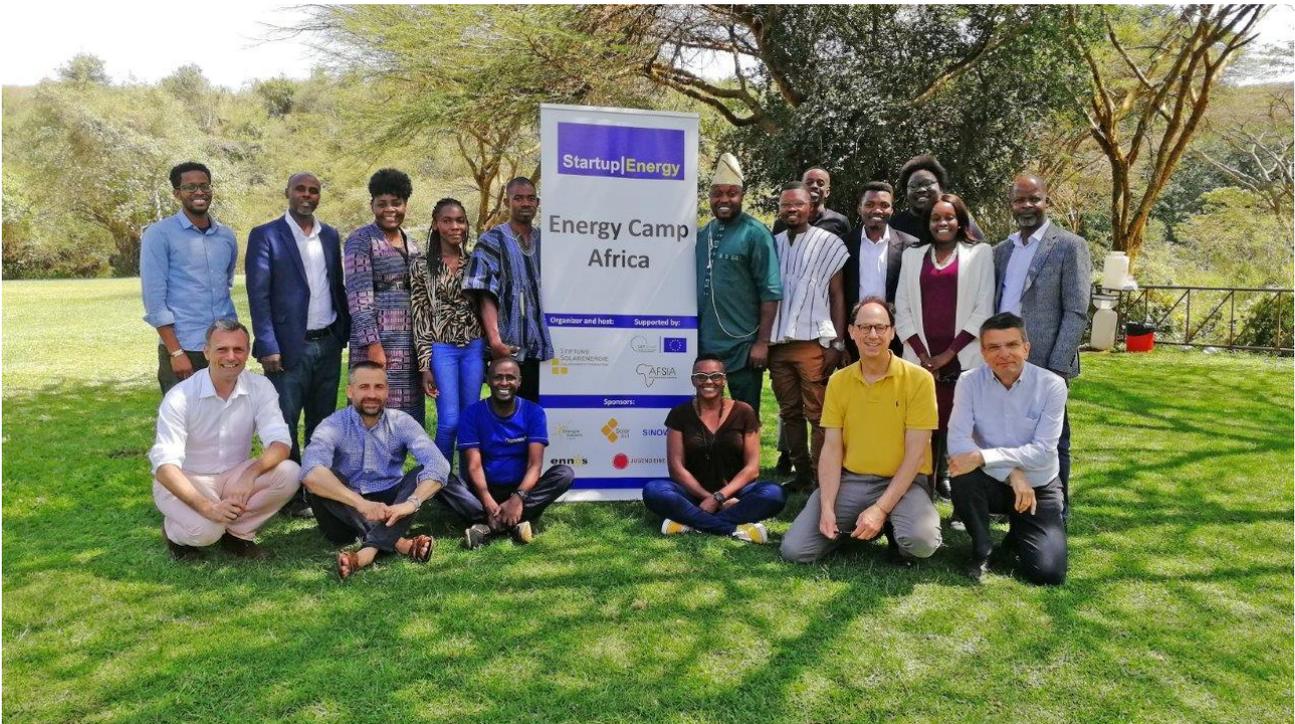
Right: Anne Kirabo grew up in the village and became so interested in solar technology during the installation that she has since attended the four-week course for freelancers (see above).



Top: The village lives mainly from the production of clay blocks.
Bottom: One of the oldest residents of the new solar village.



Energy Camp Africa for African Energy Startups



The number of African energy startups is rising steadily. Their advantage over international companies is often their proximity to the specific social and cultural requirements of the new energy products.

However, local startups in Africa also face specific challenges. One of the biggest is their lack of visibility for cooperation partners and investors.

Supported by numerous organizations and companies, we held the **2nd Energy Camp** in spring 2022. A total of 78 startups from 16 African countries applied to participate. From these, five startups from four countries were selected. They initially received several weeks of coaching from experienced African entrepreneurs.

The final step was a workshop lasting several days in Nairobi in April 2022. There, the business models were again critically scrutinized and further developed by the coaches as well as investors and other experts. At the final competition, the startup Worldtech Consult won the Startup|Energy Award.

Here's what Energy Camp participants are saying:

"The Energy Camp was an opportunity for us to meet, share, learn and grow. The insights we gained there were invaluable and will help us greatly as we build our business."

"With the help of our coaches, we were able to develop additional revenue streams and, more importantly, find a solution for our clients who are struggling with repayments."

"We liked the work session the day before pitch day. We received candid feedback from each participant. The openness and sometimes brutal honesty helped us reflect on some aspects of our business and sharpen our company profile."



The five startups of Energy Camp Africa 2022 are:



Second Life Storage (Rwanda) manufactures energy storage systems using batteries from e-waste or decommissioned electric vehicles. The start-up company manufactures customized battery packs for various market segments that cushion power peaks and enable savings on electricity bills by shifting the load.



Solakilimo (Kenya) provides solar-powered cold rooms for fish, fruit and vegetable farmers based on a fee-for-service model. 80% of the farmers are located in regions that are not connected to the national electricity grid. The freshness of fish, fruit and vegetables is extended from two to 30 days. Farmers can sell their harvest at better prices on the market.



Thinkbikes (Nigeria) manufactures electric bicycles and cargo bikes locally and provides them to individuals and businesses in urban and rural communities with a leasing option.

Over 90% of the components are sourced locally, only the electric motors are imported.



Solar-e-Cycles / TryKe (Kenya) is also active in the field of electromobility: the solar-powered tricycles generate their own electricity from sunlight and offer the rider a comparatively fast and comfortable means of transport.

The bicycles are to be used primarily in remote regions where the public power supply is only available sporadically.



Worldtech Consult (Ghana) designs, manufactures and markets turn-key, modular, off-grid and hybrid cold chain solutions and rural electrification. The technology reduces food losses by up to 50% and operating costs by up to 90% - and enables better value creation that improves profitability and long-term sustainability for customers.



Projects currently being implemented



Installation of a solar system for the MST Junior School in Uganda

For a secure energy supply, the school will receive a solar plant with 3.2 kWp. The solar plant will be partly financed by the Stiftung Solarenergie in the form of an interest-free loan.



Mobile solar refrigerators for health stations in Kenya.

Kenyan startup Drop Access has developed a solar refrigerator for medicines that also enables remote monitoring.

We will deploy five refrigerators in health stations in one project.

Drop Access is the winner of our Energy Camp East Africa 2021.

Also in planning:

- Implementing another solar village in Uganda, Kenya and/or Ethiopia.
- Startup|Energy: Promotion of solar entrepreneurs through a new training program
- Solar energy supply for ten health stations in Uganda and Kenya
- New Sendea Academy training courses for solar technicians and freelancers



What we do

We promote the distribution of solar energy:

- On village development
- In schools
- In small and medium enterprises
- To improve the harvest
- For better health care

We promote the local solar trade:

- We train
- We support young entrepreneurs
- We create jobs
- We make micro-credits
- We alleviate poverty

Small and medium-sized enterprises are important factors in the fight against poverty and for job creation. Therefore, we always use our donation-funded projects to support local solar companies as well.

A dual approach that has proven its worth since 2004.

Here we are active

Country	Period	Our local partners
Ethiopia*	since 2004 (no projects at present due to the dangerous political situation)	Stiftung Solarenergie – Solar Energy Foundation, Addis Ababa
Kenya	since 2009	Stiftung Solarenergie – Solar Energy Foundation, Nairobi
Philippines	since 2010	FREED/Stiftung Solarenergie Philippines, Manila
Uganda	since 2015	Association of Sendea UG Ltd., Kampala

This is how you can support us

- Send this newsletter to interested people.
- Donate to our work:
 - 200 Euro: Light for a household (solar village)
 - 200 Euro: Solar training of a freelancer
 - 400 Euro: Training of a solar technician
 - 1,000 Euro: Solar light for a village school
 - 2,500 Euro: Solar light for a health station
 - 4,500 Euro: Solar fridge for medicine cooling in a rural health station
 - 30,000 Euro for a whole solar village

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