Newsletter 3 / 2022

Dear friends and supporters of the Solar Energy Foundation,

Our work in East Africa (Ethiopia, Kenya, Uganda) has changed since we started 20 years ago. In the beginning, it was mainly about proving that solar energy is a reliable, affordable and environmentally friendly solution by replacing traditional kerosene lamps with solar energy.

In the meantime, solar products are widespread in East Africa: the market is dominated by non-African companies that sell their solar products there, mostly produced in China, financed by loans from non-African investors. Thus, the value creation remains largely outside the continent.

In view of this development, a critical question arises:

Is this the way to build a sustainable solar economy in Africa?

I don't think so. We need more African-led solar companies, solar production facilities in Africa and investors who do not immediately withdraw their money from the continent.

We cannot change this development, but we can show that it can be done differently:

Many young East Africans see solar technology as an opportunity to build up a business for themselves. That is why we support the Ugandan cooperative SENDEA: an association of local solar companies that we helped to initiate.

We support SENDEA among other things by:

- the (co-)financing of training courses
- the implementation of solar villages
- the provision of micro-credits to small solar enterprises

Read more about this in the current newsletter. I would be pleased if you would continue to accompany and support our work.

Enjoy reading!

Au/Freiburg, December 2022

Harald Schützeichel, Director

SENDEA Academy

The graduates of the solar technician training course, November 2022

The growing solar sector in Uganda needs more and more well-trained professionals. For a long time, Ugandan solar companies 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 2018, has changed this situation. The independent training institution is run by the Ugandan cooperative SENDEA, an association of currently seven local solar companies.

The head of the SENDEA Academy is Loy Florence Kyozaire, a Ugandan engineer with many years of experience as a solar entrepreneur.

One of our graduates: Nabwire Dorah

Nabwire Dorah is an electrical engineer and successfully completed our training course in solar technology.

This helped her to get a job at a local solar company, for which she is now responsible for installing solar systems. Thanks to the solar training she completed, her salary is significantly higher than what she was earning before.

"I have made many new friends in the solar industry and am now better connected," says Nabwire Dorah, explaining another benefit of the solar training.

What the SENDEA Academy offers

Training with state certificate

- Solar Energy for Beginners / Freelancers
  6-week basic course for solar installers in rural regions
- Solar energy for Professionals
  5-week course mainly for graduates of vocational schools

Workshops and block courses

- *Technology*
  - Micro Grid
  - Solar water pumps
  - IT-support for remote monitoring
  - Correct sizing of solar systems
  - Maintenance and Service
- Company management
  - Accounting and financing
  - Sales and marketing
  - Logistics
  - Customer relationship
  - Corporate governance

More offers

- Training courses for other organisations
- Scholarships for engineering studies

Statistics of graduates 2018 - 2022

- Solar Energy for Beginners: 182
- Solar energy for Professionals: 122
- Workshops and block courses: 170
- Scholarships: 4

The female quota is 28%.

For us, the success of the dual and company-independent training concept is shown above all in the **successful integration of the graduates** into the Ugandan labour market:

- Some of the graduates had a job at a local solar company when they started the training and were employed there after the training with a better salary.
- Some found employment with national or international solar companies in Uganda after the solar training, usually with much better salaries than they had previously.
- Others have set up their own businesses and offer services ranging from installation to maintenance and service.
- Finally, some graduates have decided to study engineering at university.

The biggest sponsors in 2022:

Training pictures 2018 - 2022

Support in setting up a small solar business

Doreen Nabwire (24) runs a small shop selling electronic parts in Kamuli Buwenge, about 2.5 hours' drive north-east of the capital Kampala. Batteries, light bulbs and electrical wires make up a significant part of her turnover.

Doreen wants to develop herself and her business and is therefore interested in solar energy. She has successfully completed the basic course at the SENDEA Academy and is now ready to take her first steps in the solar business by selling solar kits.

Reagan Kiyimba (27) comes from a small village east of Kampala in Mukono District. After training as an electrical engineer, he successfully completed the SENDEA Academy training programme in solar technology in 2022.

Reagan's goal: to start his own small solar company. Because he is convinced that this technology will have a great future in his country. What he expects from SENDEA: practical support from other solar entrepreneurs and a basic stock of products.

After completing their solar training at the SENDEA Academy, selected students will receive several months of support to set up their solar company as part of a funding programme starting in 2023.

The participants will be able to run their small solar business independently and professionally at the end of the six-month programme.

Here's how it works:

Our support programme emphasises that the support is provided by experienced local entrepreneurs. This is because it is less about theoretical training and more about practical implementation in everyday business life.

The content of our programme includes areas such as product purchasing, customer acquisition, customer care, financing, accounting and business management in general.

Upon successful completion of the development programme, participants receive an interest-free loan in kind of up to 500 euros from a fund set up for this programme. The loan is granted in the form of solar products. If repayment is successful, the loan amount can be successively increased.

A special feature is that the SENDEA cooperative offers long-term support from local experts. This also includes the reliable supply of suitable solar products - often a bottleneck for small enterprises.

SENDEA member companies also benefit from this programme:

- on the one hand, the new solar companies can become customers in their own area of operations and/or refer customers;

- on the other hand, they need good project-related workers themselves and can now fall back on known and experienced workers.

The programme is among others supported by:

sez
Stiftung Entwicklungs-Zusammenarbeit
Baden-Württemberg

Above: Village street in rural Uganda
Below: A proud couple from the solar village Ruhita with panel of her new solar system

Solar villages

Solar village Rema: Ethiopia (2005)

For almost 20 years, we have been pursuing the concept of solar villages, which has since become a successful model for our work in Africa and Asia.

Individual concept for each village

The basic concept of a solar village has remained the same since the first solar village in Ethiopia in 2005:

1. The Solar Energy Foundation provides all households with a basic power supply with solar energy as a start-up aid at a subsidised price: it consists of 2-3 LED lamps as well as the possibility to charge a mobile phone. The price paid by the households is based on what the poorest families in the village can afford. This is to ensure that each family can receive a basic electricity supply.
2. The people use the system and now pay for solar power instead of kerosene. The subsidised solar system is paid for in monthly instalments over a period of 6 to 12 months. The instalments are used to finance maintenance and service by local companies. Once the instalments have been paid, the solar systems become the property of the families.
3. Training through practice: The solar village projects are always carried out by local solar companies. For their employees, it is an ideal training programme: from talking to customers about the technically correct installation of the solar systems, the necessity of their regular maintenance, to being trained in how to efficiently collect small amounts of money each month and how to manage them in a clean way from an accounting point of view.
4. Promotion of local handicraft: For the commissioned solar company, such a solar village is both a reference object and an advertisement for the reliability of its own work.

   And because all households only receive a basic supply of solar electricity as part of the foundation project, the solar company is also the first point of contact for the residents when it comes to extensions and additional requirements.

In each household, the solar system replaces two to three kerosene lamps.

Solar village Kinabi in Uganda (2022)

Many solar villages were realised through multiple donations from organisations and private individuals. Some solar villages were completely financed by individual companies:

PHOENIX CONTACT

GLAS HENRICH

Many thanks to all donors!

Other activities of the Solar Energy Foundation

Startup|Energy held another Energy Camp in October in Kigali for eight startups from five African countries. The startups developed new products and services for energy storage, battery recycling, cooling, agriculture, e-mobility and health.

At the end, the startups presented themselves to investors and potential project partners. The successful Startup|Energy initiative will be continued in 2023.

Health stations - Ethiopia

The Ethiopian Solar Energy Foundation, on behalf of the Rotary Club of Mainz, will check all the solar systems that were installed two years ago in a joint project in rural health stations.

The opportunity is also taken to re-train staff in the use of the solar systems. This is both a refresher for staff who were already present during the installation of the solar systems and an introduction for new staff.

Re-use of batteries - Kenya

Since 2010, around 200 million off-grid solar products have been sold or given away in sub-Saharan Africa. On the one hand, this spread is positive, but on the other hand, the batteries used in these products threaten to become an environmental problem that has so far gone largely unnoticed. In Kenya alone, 130 tonnes of used lithium batteries are already lying around at local e-waste companies.

Yet lithium batteries in particular are relatively easy to refurbish for reuse.

To promote the recycling of old lithium batteries, the Solar Energy Foundation is working with the Kenyan start-up Inno-Neat. The first renewed batteries have already been successfully tested in use by our partner company SunTransfer Kenya. Inno-Neat is also a Fellow of our Startup|Energy programme.

What we do in Ethiopia, Kenya and Uganda

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 2003.

Here we are active

Country	Period	Our local partners
Ethiopia*	since 2004	Stiftung Solarenergie – Solar Energy Foundation, Addis Ababa Director: Samson Tsegaye
Kenya	since 2009	Stiftung Solarenergie – Solar Energy Foundation, Nairobi Director: Gathu Kirubi
Uganda	since 2015	Association of Sendea UG Ltd., Kampala CEO: Loy Florence Kyozaire

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)
  - 300 Euro: Solar training of a freelancer
  - 500 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

Contact:
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