sopowerful

solar where it matters most

2024 REPORT

PREFACE

As we reflect on 2024, we are reminded that progress rarely follows a straight path. It is achieved by every-day efforts and overcoming of challenges. For Sopowerful it has been a year of growth: in terms of projects and impact, in terms of team, lessons learned and expertise. Because of this, an important focus has been on the implementation of (better) processes and standardization of tools and documentation. Steps that are key but easy to de-prioritize or even to forget, when one is strongly focused on successfully implementing projects.

In the face of global and local challenges, such as increased costs due to the strong currency devaluations in Malawi in 2023, or persisting shortage of fuel in multiple moments throughout the year, we deepened our commitment to tangible, local impact by welcoming to our team locally based people. Of course, other highlights have been the completion of our two largest projects, inaugurated by the local Ministers of Energy in both Malawi and Tanzania. An important indicator for the appreciation of our work, even if we do not operate in close collaboration or dependence of local governments or large organizations.

As large projects like these bring significantly increased complexities, I am very proud to see how our team has navigated these and how many 'lessons learned' have strengthened us for what is still ahead of us. Scale will become more important for us, but at the same time I am profoundly convinced that it remains equally important to keep empowering smaller, often ever more rural, projects and communities in the years to come. A heartfelt 'thank you' to our partner organizations and individual supporters for your continuous trust and support.

Stefano Cruccu, Director

Sopowerful at a glance

Launched in 2019, ANBI foundation registered in the Netherlands

Application of **small-scale solar energy** combined with related technology

33 running projects in 2024 and **+294.400 people impacted** in total

Made possible by **+30 international Partners**

Active in **Malawi and Tanzania**

Sopowerful at a glance

+15 years of solar expertise and local, community development experience

Boots on the ground: local presence and deep understanding of context, to come up with the best possible solutions

Selective: we believe no successful and sustainable project is possible without thorough assessment and real cooperation

Stimulate local entrepreneurship through close collaboration and continuous learning with **local installers**

Focus on **relevant, tangible, long term impact** instead of being driven by financial returns

AGENDA

1 STRATEGY

Vision & Mission
Malawi as starting point
Tanzania
Our contribution to the SDGs
Our approach

2 2024 RESULTS

Impact overview
Project overview
Projects implemented 2020-2024
Our contribution to the SDGs
Affordable Energy (SDG 7)
Healthcare (SDG 3)
Education (SDG 4)
Safe Water (SDG 6)
Food Security (SDG 2)

3 FINANCIAL STATEMENT

To be added soon, as we are awaiting the final numbers

4 SOPOWERFUL

About Sopowerful
Our Partners
Our Team

1 STRATEGY

1 STRATEGY — Vision & Mission

770 million

of us live without access to electricity

1/3 rd

of the world population has no access to safe water

50%

of the world population has no access to basic health services

+ 800 million

suffer from hunger and food insecurity

OUR VISION

Our “Why”

Access to reliable electricity is one of the keys to solving several of the hardest problems humanity is facing. Electrification through solar power can unlock opportunities for the most underprivileged communities in the most challenging and remote places.

OUR MISSION

Our “What”

‘Solar where it matters most’

Our aim is to make a real and long-term impact through application of solar energy where this empowers life-changing initiatives with relevant, tangible impact.

1 STRATEGY — Malawi as starting point

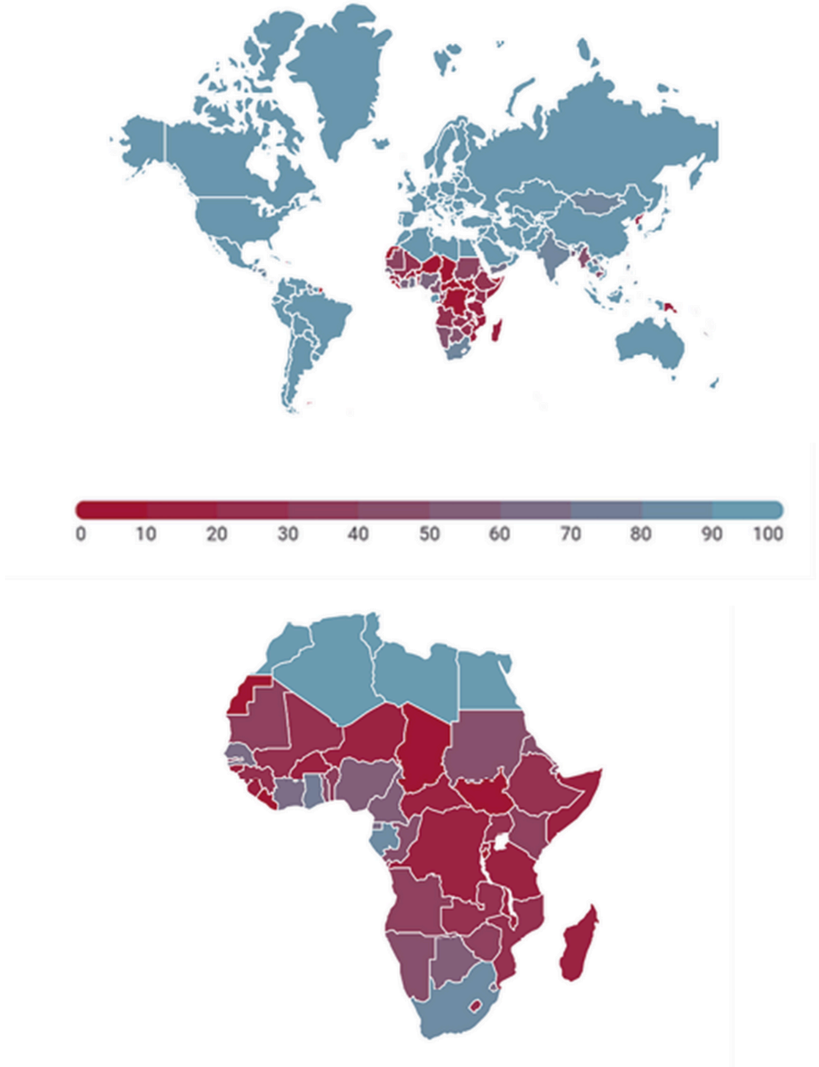
THE ELECTRIFICATION PROBLEM

In many places on our planet **we are used to constant access to reliable electricity**. This is at the core of developed societies and enables all kinds of building blocks that together create the wealth and wellbeing that is so easily taken for granted.

Unfortunately, **nearly 800 million of us have no, or very limited, access to electricity**, with all the limitations and challenges this implies.

As can be seen from the maps on this page, **the 'electrification problem' is concentrated in the sub-Saharan region**, with the color-scale indicating the percentage of population with access to electricity.

Malawi is one of the **poorest countries in the world,** and in rural areas **only 5% of the population has access to electricity**. This, together with the fact the country is fairly stable and safe, has made Malawi a very **'suitable' place to start pursuing our mission**. While every country is different and has its particularities, the lessons we have learned in Malawi have been very valuable in our first projects in Tanzania as well.



Source: World Bank, Sustainable Energy for All Database - Percentage of population with access to Electricity

APPLYING OUR YOUNG EXPERIENCE IN NEW PLACES

Tanzania

In 2022 we started our activities in Tanzania, besides remaining active in Malawi. We successfully implemented our first project and following projects, which you can read about further on in this report.

Tanzania borders with the North of Malawi and the context in certain areas is very similar. When we received the urgent request from **Mnero Hospital**, located in the South-East region of Lindi, our research proved that our experience obtained in Malawi would enable us to address the challenge and implement a solution.

Through a close collaboration with the hospital and the local contractor we were able to complete this project and change reality for the first time also in Tanzania.

The solar system at Mnero Hospital, our very first project in Tanzania

WHY WE USE THE SDGs

The **Sustainable Development Goals** (SDGs) are a set of 17 interconnected global objectives established by the United Nations in 2015 as part of the 2030 Agenda for Sustainable Development. They aim to address a broad range of issues to create a more sustainable, equitable and prosperous world.

To measure the (indirect) impact of our projects, we use the SDGs and its Global Indicator Framework. Although we are not yet able to measure every single thing, we aim to measure specific impacts per SDG.

THE GLOBAL GOALS

SDG	INDICATORS
 **SDG 7** Affordable and clean energy	• Number of panels installed • Installed PV capacity • Installed battery capacity • Estimated CO2eq emissions avoided (ton KG)
 **SDG 3** Good health and well being	• Growth in number of patients treated (%) • Decline in number of patients referred (%) • Additional services provided
 **SDG 4** Quality education	• Increase in number of students per gender (%) • Increase in passing rate (%) • Increase in ICT passing rate (%) • Increase in enrolment number
 **SDG 6** Clean water and sanitation	• Avarage decline in distance to water source (%) • Amount of water supplied (Qm)
 **SDG 2** Zero hunger	• Food Insecurity Experience Scale, decline (%) • Increase in land use for agriculture (%)

**Grey text means we are working on the data but cannot yet include this in the report*

OUR FIELDS OF IMPACT

The options for application of solar power are endless and bring **affordable and clean energy for everyone (SDG 7)**. Based on our research, observations and real-life experiences we have defined four areas where we see that electrification through solar (Photovoltaic) energy makes profound impact: **Healthcare (SDG 3), Education (SDG 4), Safe Water (SDG 6)** and **Food Security (SDG 2)**. The solar systems we implement make a tangible difference in at least one (but often multiple) of these areas.

Affordable Energy

Electrification of (rural) medical facilities, schools and agricultural project with affordable and clean energy

Healthcare

Electrification of (rural) medical facilities that are limited by the lack of (reliable) electricity supply

Education

Powering light and appliances at facilities that enable education, training or entrepreneurship

Safe Water

Solar powered water pumps that enable running water and better sanitation and hygiene (WASH)

Food Security

Solar powered water pumps that enable water supply for agriculture and irrigation of crops

APPROACH FOR LONG - TERM IMPACT

There are many operational risks related to solar systems and this is not less true in the places where we act. Making a solar system work optimally for the long term does not come without challenges. It requires an approach that is not only focused on achieving the implementation of a system, but equally on making sure the right conditions are in place for local ownership and empowerment of a beneficiary to take care of the system, resulting in a long-term impact.






1	2	3	4	5	6
(continuous) Fundraising	Research & Assessment	Selection & Agreement	Design & Egineering	Project Implementation	Monitoring & Impact

1 STRATEGY Our approach

1 Continuous Fundraising

Thanks to our Partners we have a base of funding for the projects we select. Project specific fundraising complements our continious fundraising efforts. Crowdfunding donations we receive are used exclusively for implementation of a system.

2 Research & Assessment

We further assess the beneficiary and research the needs, the community, conditions and electricity requitements, to determine priorities and understand how we can apply our funds in the most effective and responsible way.

3 Selection & Agreement

We carefully select our beneficiaries based on our criteria, such as local ownership and proactiveness, long-term reliability and determine the urgency for (and impact of) electrification in a specific project.

4 Design & Engineering

Based on our research and site visits, together with our local contractors we design and engineer the best solution for the specific needs and situation.

5 Implementation

During implementation of a solar system we are on-site for supervision of the installation by our local contractors. This way we can control progress, safety and quality. Training and capacity building takes of the beneficiary takes place and security measures are adopted.

6 Monitoring & Impact

A maintenance contract is in place between installer and the beneficiary. We keep track of the impact of our projects through the ongoing relationship with the beneficiary, yearly inspections, dedicated data gathering and online, remote monitoring.

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2024 RESULTS

2 RESULTS 2024 Impact overview

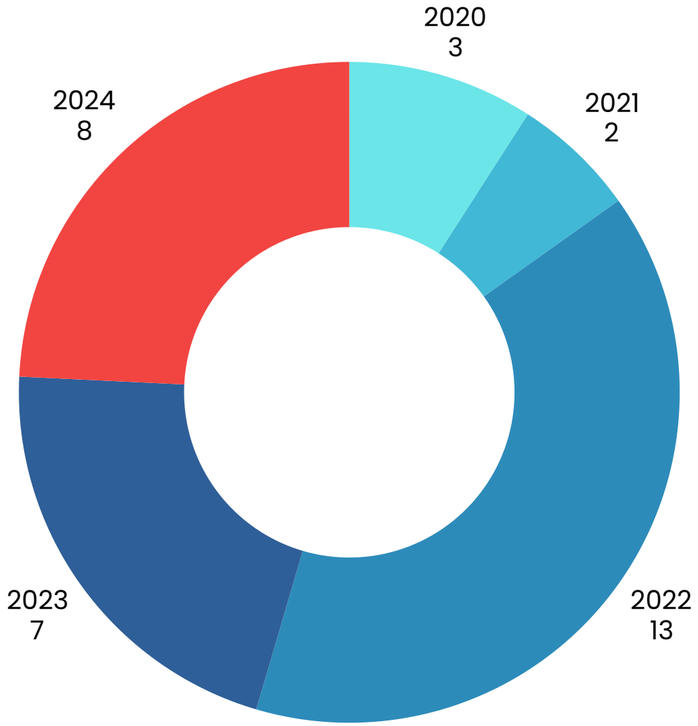
2024	UP TO DATE
8 new projects implemented in 2024	**33 running projects** by the end of the year
+67.300 lives impacted through projects implemented in 2024	**+294.400** people impacted in total
+588 MWh generated in 2024	**+967 MWh** generated since our start
+282 tons kg CO2 eq. avoided through clean electricity generated by our projects in 2024	**+535 tons CO2 eq.** avoided by our projects since our start
+47.730 m³ water supplied in 2024	**+104.970 m³ water** supplied since our start

2 RESULTS 2024 Project overview

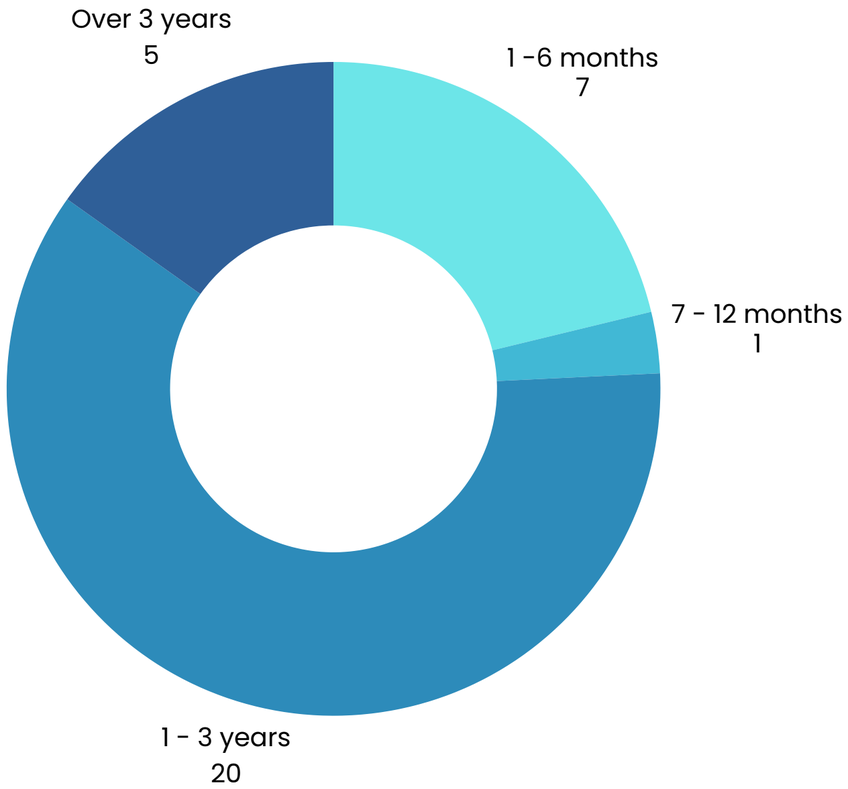
1	**Mwanyama clinic**	Malawi	02/28/2020
2	**Streetwise Orphanage**	Malawi	10/01/2020
3	**Kudziwa Center**	Malawi	10/01/2020
4	**Luntha Clinic**	Malawi	03/01/2021
5	**Mua School ftD - Hostel**	Malawi	11/02/2021
6	**Mchisa farming**	Malawi	01/01/2022
7	**Tiyenda School**	Malawi	01/14/2022
8	**Wandikweza**	Malawi	01/15/2022
9	**Mua Hospital**	Malawi	01/15/2022
10	**Tamkeen School**	Lebanon	03/29/2022
11	**Chagonta farming**	Malawi	05/27/2022
12	**Ndege School**	Malawi	08/15/2022
13	**Demera Cooperative**	Malawi	08/17/2022
14	**Likwenu CDSS School**	Malawi	08/29/2022
15	**Mwanga health center**	Malawi	09/5/2022
16	**Mnero Hospital**	Tanzania	09/19/2022
17	**Sparkle nursery school & clinic**	Malawi	10/22/2022
18	**Dzenza CDSS**	Malawi	12/23/2022
19	**Namulenga Health Center**	Malawi	03/30/2023
20	**Million Village**	Malawi	04/22/2023
21	**Dzaleka CDSS**	Malawi	04/28/2023
22	**Momella Clinic**	Tanzania	05/09/2023
23	**Mphanga Primary School**	Malawi	11/14/2023
24	**Chiringa Health Centre**	Malawi	12/13/2023
25	**Chikhwaza Secondary School**	Malawi	12/13/2023
26	**Mlambe Hospital**	Malawi	05/18/2024
27	**Matiya Health Center**	Malawi	07/17/2024
28	**Chisambe School**	Malawi	07/22/2024
29	**NkuyuSchool**	Malawi	09/04/2024
30	**Sengerema Hospital**	Tanzania	10/04/2024
31	**Sukasanje Health Center**	Malawi	10/30/2024
32	**Tillie School**	Malawi	11/13/2024
33	**Inuka School**	Malawi	11/25/2024

2 RESULTS 2024 Projects implemented 2020-2024

Number of Projects Completed in a year



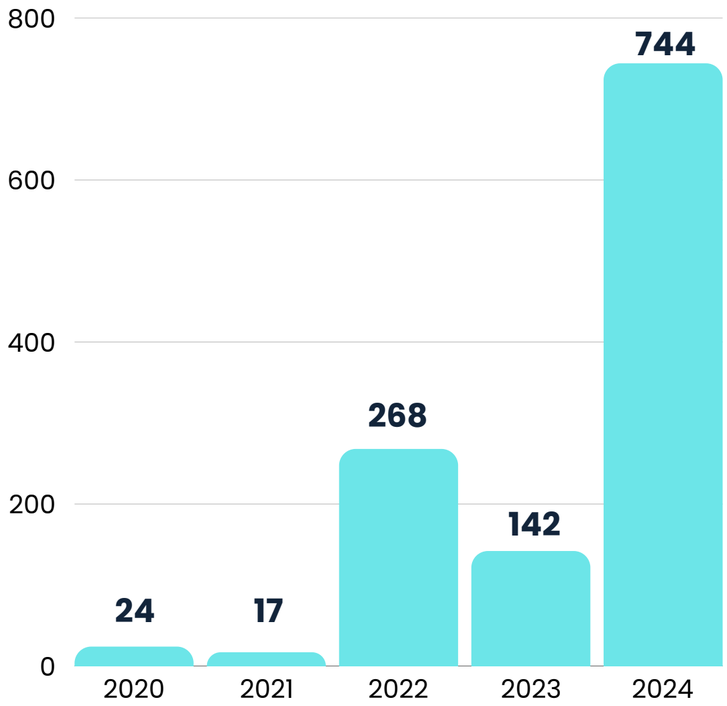
Life Time of our Projects



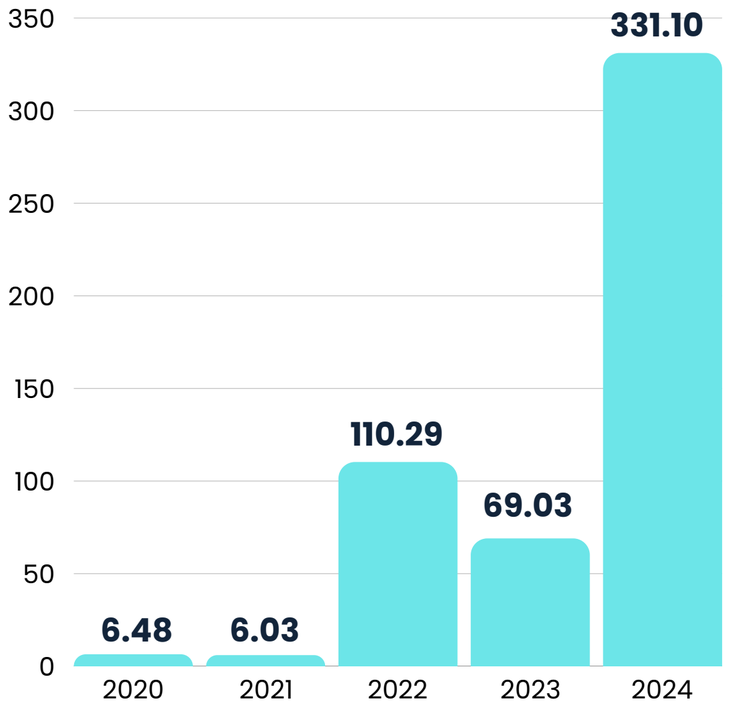
From 2020 to 2024, a total of 33 projects were completed. The yearly distribution is as follows: 3 projects in 2020 , 2 in 2021, 13 in 2022, 7 in 2023 and 8 in 2024. An important side note to the graphical representations above is that these numbers are based on the date of commissioning of a project. This means that part of the projects implemented (commissioned) in 2022, have been prepared during 2021. The same counts for the year after.

2 RESULTS 2024 Projects implemented 2020-2024

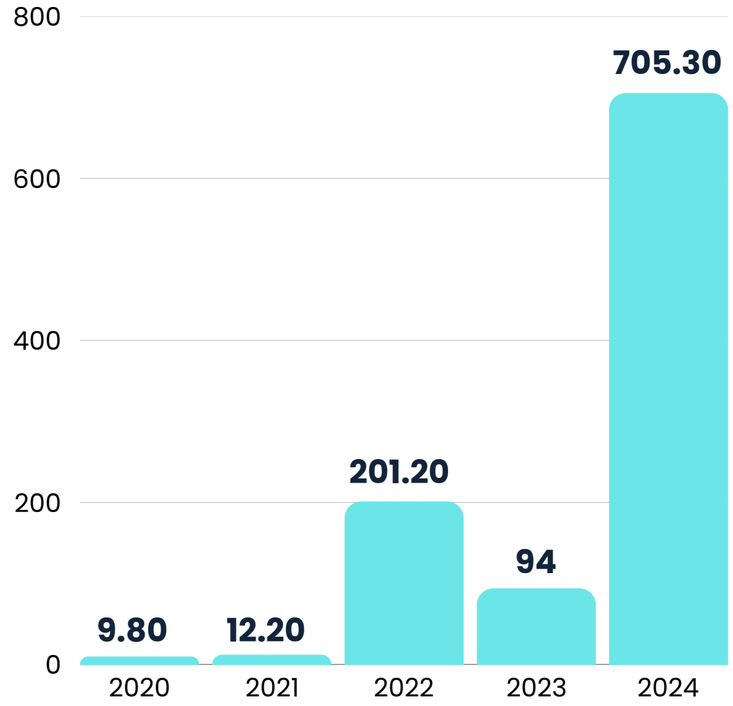
Number of Panels Installed



PV Capacity installed (kWp)



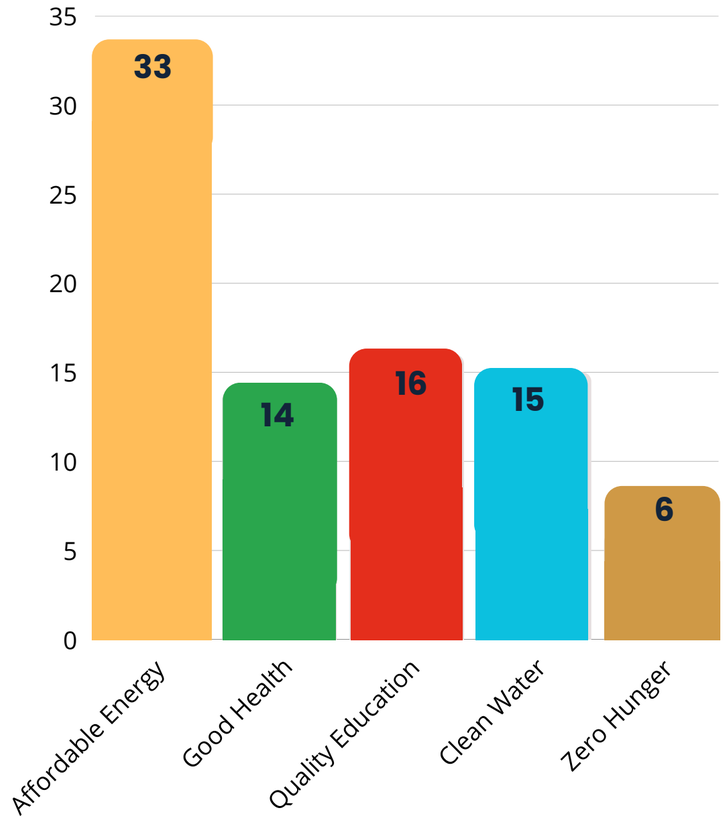
Battery Capacity installed (kWh)



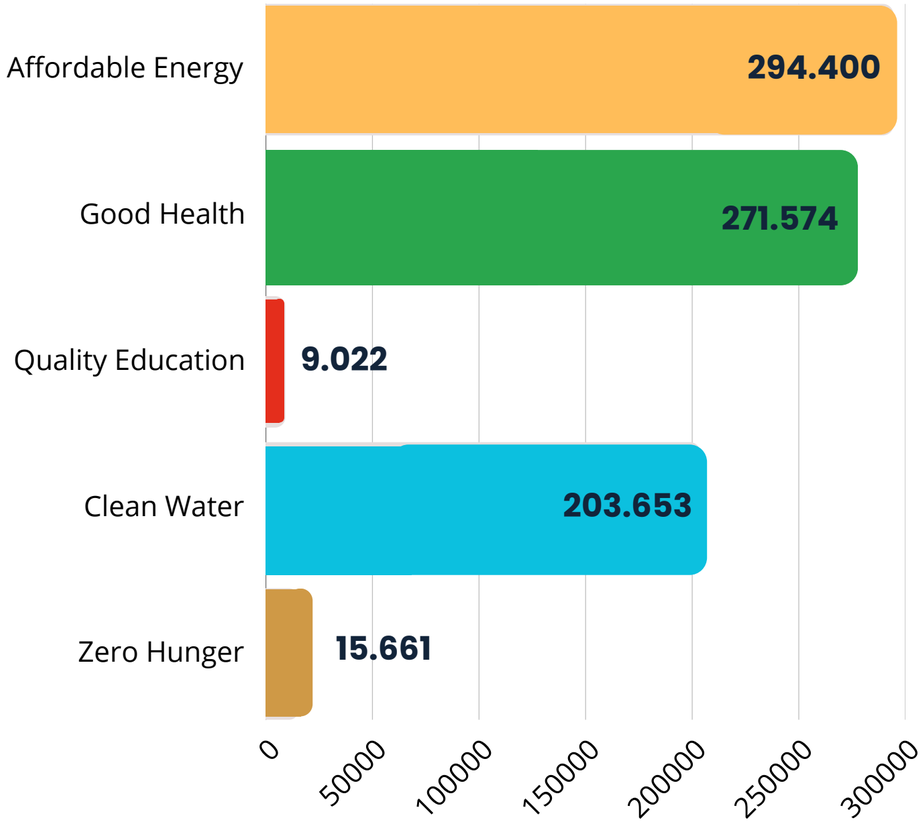
The ‘waivy’ yearly distribution of panels and battery capacity installed, which can be observed in the above graphs, is due to the fact that certain projects that have been commissioned in 2022 have been worked a lot on in 2021, and part of the projects we have commissioned in 2024 have been prepared in 2023.

2 RESULTS 2024 Our contribution to the SDGs

Number of Projects implemented per SDG (2020 - 2024)



People impacted per SDG (2020 - 2024)



All projects contribute to multiple SDGs, with all projects contributing to SDG 7, which focuses on ensuring access to affordable and clean energy.

2 RESULTS 2024 — Affordable Energy - SDG 7

Affordable Energy

Electrification of medical facilities, schools and farming activities through affordable and clean energy.

	2024	TO DATE
	8 projects implemented in 2024	**33 running projects** in total
	+67.300 lives impacted through projects implemented in 2024	**+294.400** people impacted in total

Communities benefitting from:

- **Clean, reliable and affordable** energy supply
- **Modern and safe** energy infrastructure
- **Lower dependence** on conventional grid and fossil fuels
- **Increasing the global share of renewable energy**

Affordable Energy - Sengerema Hospital Impact Story

In the heart of north-west Tanzania, Sengerema Hospital, serving over 64,000 people, has embraced a new era of clean, reliable energy. After decades of struggling with unstable electricity and high diesel costs, the hospital now runs on a powerful 198kWp solar system supported by 480kWh of battery storage.
Previously, power cuts and voltage fluctuations not only disrupted critical services but also damaged medical equipment, shortening its lifespan and inflating maintenance costs. Today, that reality has changed.

After the solar installation at Sengerema Hospital, there is a big change in electricity costs compared to before. Previously, we incurred huge expenses on electricity bills, which prevented the hospital's growth, limiting our ability to expand services, buy more medicines, or employ more specialists. Now, we have a reliable power supply, patients fully enjoy the services, and we have reduced our use of generators and grid electricity.
Leserian Saiguran, Hospital Secretary

2 RESULTS 2024 — Healthcare - SDG 3

Healthcare

Electrification of rural medical facilities that are limited by the lack of (reliable) electricity.

2024	TO DATE
4 projects implemented in 2024	**14 running projects** in Malawi and Tanzania
+66.200 lives impacted through projects implemented in 2024	**+271.500** people impacted in total

The main benefits for Health Facilities:

- **Reliable cold chain** for medicine and vaccine storage
- **Lights at night** for safety and better care
- **Medical equipment** for all kinds of medical care or interventions
- **No more damage** (costs) due to power outages/voltage fluctuations
- **Significant savings** on power costs (grid and diesel)

Healthcare - Mlambe Hospital Impact Story

In the southern region of Malawi, Mlambe Hospital has taken a major leap forward. Four months after the installation of the largest solar system among our projects in the country, the impact is already visible—every day, every night, in every ward.
Before the installation, power outages disrupted care, put patients at risk, and drove up operational costs. Today, Mlambe is powered by clean, reliable solar energy—ensuring uninterrupted services, better hygiene standards, and safer working conditions.

Our patient care has improved. We no longer struggle with power outages, medications are kept safe, water is always available, and the hospital runs smoothly, even at night. The hospital now uses solar-powered oxygen concentrators instead of expensive gas cylinders, ensuring a steady oxygen supply. Staff can work more easily with reliable equipment, and the mortuary stays running, preserving bodies with dignity. With lower energy costs, the hospital can now spend more on patient care.
Ms. Anna Balley, Principal Nursing Officer

2 RESULTS 2024 — Education - SDG 4

Education

Powering light and appliances at facilities that enable education, training or entrepreneurship.

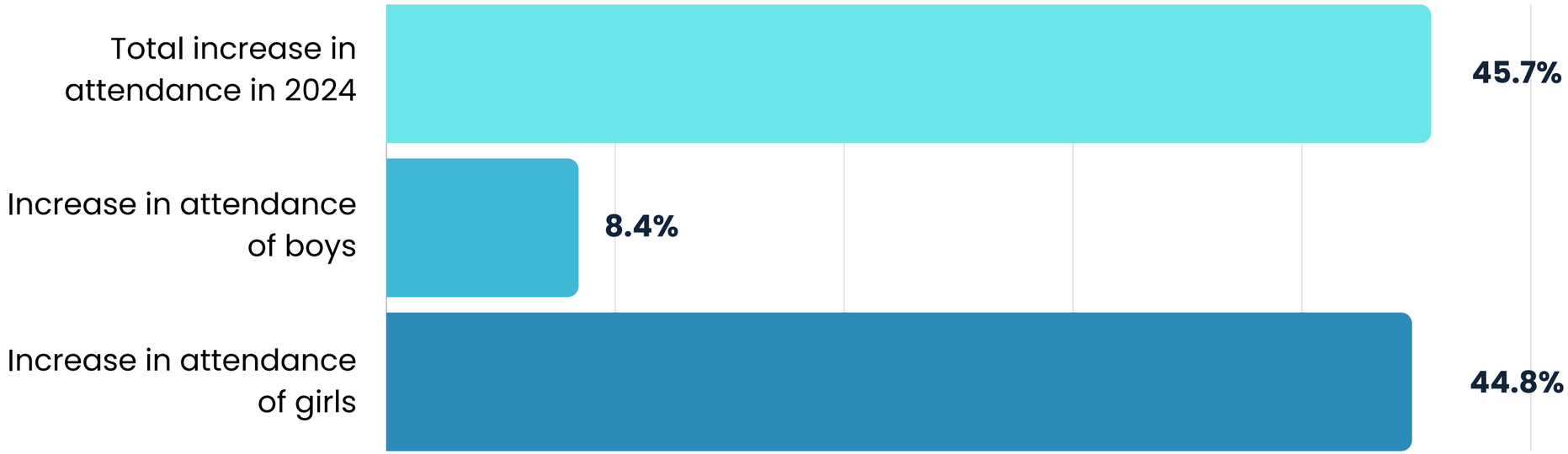
2024	TO DATE
4 projects implemented in 2024	**15 running projects** in Malawi and one in Lebanon
+1.090 people impacted through projects implemented in 2024	**+9.100** people impacted in total

Schools benefiting from:

- **Light** to study in the afternoons and at night
- **Light** for a safer environment
- **Educational tools** like projectors and laptops

Education

Research shows that our projects have a positive impact on school attendance, particularly among girls. This is mainly due to improved safety (lightning at nights) ad better hygiene (electric water systems). Water access allows girls in secondary school to attend classes also during times of menstruation, when hygene is even more critical.



Education - Nkuyu Primary School Impact Story

Nkuyu Primary school sitting 38 km from Blantyre city, meant a lot of problems due unavailability of electricity; the school had long struggled to provide quality education in the dark, teachers were reluctant to stay, digital learning was impossible, and students missed out on important opportunities. Thanks to the installation of a solar power system which has brought light, energy, and new life to the school and the community.

This solar power system has completely transformed our school. We now have light in our classrooms and staff houses, which means we can hold extra lessons, teachers are motivated to stay. The school is no longer just a place for children, it has become a center of opportunity for the whole community. We are planning to start offering adult classes and even explore income-generating activities like phone charging and barber services. Electricity has given us hope and a brighter future.

Mr. Mkwapatira, Head Teacher

2 RESULTS 2024 — Safe Water - SDG 6

Safe Water

Solar powered water pumps that enable running water and better hygiene.

	2024	TO DATE
	2 projects implemented in 2024	**15 running projects** by the end of the year
	+27.800 lives impacted through projects implemented in 2024	**+203.800** people impacted in total
	+38.156 m³ water supplied in 2024	**+77.418 m³** water supplied since our start

Average decline in distance to water tap of **81.18%** for projects with new water source

Communities benefiting from:

- **Easier or new access to water**
- **Decrease in distance to water access**
- **Improved hygiene**

Safe Water - Tiyende CDSS Impact Story

Tiyende CDSS, like many rural schools in Malawi, faced major challenges due to limited access to clean and safe water. Students and staff had to walk long distances to fetch water from a manual hand pump, impacting their time, safety, and hygiene. With the installation of a solar-powered water system, the school now has reliable access to clean water, improving sanitation and making activities like gardening easier and more effective. Girls can now focus more on their studies, freed from the daily burden of fetching water.

Girls and staff members had to walk a considerable distance from the school premises to fetch water from a hand pump borehole. This task was time-consuming, labor-intensive, and at times unsafe for the girls. Thanks to a steady water supply powered by solar energy, hygiene has improved and access to clean water has enhanced participation in extracurricular activities, such as gardening, which is now easier to manage and more effective for student learning. Most importantly, our girls now have more time to focus on their studies, no longer burdened by the daily chore of fetching water.

Josephine, Head Teacher

2 RESULTS 2024 — Food Security - SDG 2

Food Security

Solar powered water pumps that enable running water for irrigation of crops.

	2024	TO DATE
	No Project was implemented in 2024	**6 running projects** in Malawi
	-	**+15.600** people impacted in total
	9.574 m³ water supplied in 2024	**27.522 m³** water supplied since our start

An avarage decrease in food insecurity of **30%** in 4 (out of 6) projects

Communities benefitting from:

- **Easier or new access to water**
- **Improved food security**
- **Increased agriculture yields in the dry season**

Food Security - Mchisa Irrigation Scheme Impact Story

In the heart of Mangochi District, Mchisa struggled with the limitations of traditional, hand-dug well irrigation. Farmers dedicated hours to manually watering their crops, which limited cultivation expansion and yield improvements. The Food Insecurity Experience Scale (FIES) survey revealed that farmers were trapped in low-yielding harvests, hunger, and financial instability. In 2022, Sopowerful, together with its partner Formidable Joy, implemented a transformative solar-powered irrigation system in Mchisa.

The shift from water cans to the efficient solar irrigation system not only liberated us from hard and heavy work but also enabled us to cultivate larger plots of land in the same amount of time and with the same effort. Currently, I am able to pay school fees for my daughter and feed my family through the returns I get after selling the produce from my land. My life has changed for the better within these two years. All in all, this project is improving lives and ensuring food security for the Mchisa community.

Esnart Radson, farmer

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FINANCIAL STATEMENT

Our final financial statements will be added soon, as we are awaiting the audited numbers.

Please contact us at hello@sopowerful.org in case of urgent questions.

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SOPOWERFUL

OUR ORGANIZATION IN DETAIL

Sopowerful was founded with the desire to make a difference for the least priviledged among us, through solar power. Our culturally diverse team brings together a relevant mix of skills and experience and consists of driven people who share the ambition to apply '*solar where it matters most*'.

The **board of Sopowerful** consists of three members, who share the responsibility for the different roles together.
Our board members are:

- Mr. P.R.M. van der Linden
- Ms. L.R. van Os
- Mr. T.P. van Dorp

Our board operates on volunteering basis and does not receive any renumeration for their role and responsibilities.

Our **operational team** consists of the following members:

- Mr. S. Cruccu, in the role of 'Director'
- Mr. M. Jambo, in the role of 'Sustainability Manager'
- Mr. S. Pedra, in the role of 'Implementation Manager'
- Mr. G. Taulo, in the role of 'Project Engineer'
- Mr. C. Makina, in the role of 'Impact Assessment Manager'
- Ms. A. Mollel, in the role of 'Sustainability Manager'
- Mr. R. Gdalia, in the role of 'Project Manager'
- Mr. A. Desforges, in the role of 'Project Manager'

The operational team is involved in the daily activities of the foundation and does receive a renumeration for their efforts. Not all team members work full-time. Besides the above mentioned team members, we work with a growing number of volunteers, who do not receive a renumeration.

OUR ORGANIZATION IN DETAIL

Sopowerful is active since 2019 as a Foundation and officially recognized as ‘ANBI’. Our registered name is ‘Stichting Sopowerful’.

KvK / Chamber of Commerce: 76714411
RSIN / Tax Identification number: 860769438

Middenwillenseweg 157, 2805 KP
Gouda, the Netherlands

IBAN: NL30BUNQ2041201274
BIC/SWIFT: BUNQNL2A

www.sopowerful.org
hello@sopowerful.org

ANBI stands for ‘Algemeen Nut Beogende Instelling’. It is the official recognition of Public Benefit Organizations in the Netherlands, provided by the Dutch authorities.

Read more about ANBI here.

Sopowerful is registered in Malawi with NGORA, the local NGO Regulatory Authority.

Read more about NGORA here.

Sopowerful is member of Partin: a Dutch branch organization that promotes the interests of private initiatives involved in development work.

Read more about Partin here (Dutch).

WHO ENABLES OUR MISSION

We are proud and grateful to have the commied support of an increasing number of organizations: **our Partners**. Besides this, we rely on individual donations through Crowdfunding.

Our Partners

- consist of For Profit and Not For Profit organizations
- are based/headquartered in seven different countries
- represent a wide variety in size of organization
- all have the aim to make *'solar where it matters most'* possible.

We are thankful to our Partners for having joined us on our journey and for making a tangible and lasting impact with and through us.

BayWa r.e.
Voltiq renewable energy finance
ENCAVIS
LONGi
SUNROCK
GPSS Ignite your soul, not the Earth.
KLIMAATFONDS NEDERLAND
energy FOR FUTURE
GREEN HORSE
edp
STÄUBLI
solarpartners uw partner in zonne-energie
green arrow CAPITAL The Alternatives Platform
Higeco More
Enlight Energy Services
energienuove
AMERI POWER
WESSEL MANAGEMENT GMBH
Floating Solar
Joulz
ECORUS
Patronale solar
Raptech
ZIMMERMANN PV-Steel Group
cap global investors
GreenGo
rea reliable energy advisors
plain energy
SOLARFIELDS
sinergies group
BayWa Stiftung
PowerOneForOne Foundation
NEXTENERGY FOUNDATION
WILDE GANZEN FOUNDATION
earthheart Fondazione Cariello Corbino

PEOPLE OF SOPOWERFUL

Meet our dedicated team at Sopowerful. Each day, we put our energy and skills into bringing transformative changes to the most underprivileged communities. Thanks to our team efforts, we make a tangible difference by bringing '*solar where it matters most*'.

Tom van Dorp
Board Member

Lydia van Os
Board Member

Paul van der Linden
Board Member

Stefano Cruccu
Director

Myson Jambo
Project Manager

Sergi Pedra Blasi
Project Implementation

Goodwill Taulo
Solar Engineer

Arielle Iteriteka
Volunteer

Chikondi Makina
Impact & Reporting

Jacklien Quirijnen
Impact & Reporting

Sofia Fraga
Online presence

Corsa Liu
Communications

Theresa Achberger
Process Optimization

Raphael Gdalia
Project Manager

Kevin Osariere
Financial Administration

Martina Manzoni
Communications

Renzo Latorre
Partnerships Manager

Giulia Rossi
HR

SOPOWERFUL
2024