ANNUAL REPORT

2022

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1. Introduction

Energypedia UG hosts www.energypedia.info, a wiki-based platform for collaborative knowledge exchange on renewable energy and energy efficiency in the context of development cooperation. By offering user-friendly tools, we enable stakeholders engaged in the energy sector to share their practical experience and to collaborate worldwide. Securing access to modern and sustainable energy services in developing countries is among the most important challenges for development.

In 2021, energypedia.info continued to play an important role in sharing knowledge and experience on clean, sustainable and renewable energy and energy efficiency in developing countries. With **5,508** articles contributed by an increasing community of **11.766** registered users, as of December 2022, our outreach is constantly growing.

Thank you all for your commitment to our shared mission and for giving your time, skills and knowledge to energypedia!

1.1 Vision and approach

Vision

A world where everyone has access to sustainable energy services.

Mission

Our mission is to empower energy practitioners by fostering free knowledge exchange, global collaboration and mutual learning on renewable energy, energy efficiency and energy access.

Energypedia provides an online platform to collect and disseminate free, relevant and high quality information. Our user-friendly tool allows experts to write about and share their experiences.

1.2 Scope of the report

Scope	This annual report gives an overview on all activities carried out by nonprofit energypedia UG (haftungsbeschränkt) and the achieved results in 2022.
Reporting period	Reporting period is the calendar year 2022, thus from the 1st of January to 31st December.
Application of SRS	This is the eight time energypedia uses the Social Reporting Standard. The report is based on the SRS version from 2014. The SRS is published by the Social Reporting Initiative (SRI) e.V. Association under the Creative Commons license BY-ND 3.0
Contact persons	Managing director Robert Heine (Robert.heine@energypedia.info)

2. Fighting Energy Poverty through Knowledge Exchange

2.1 The social problem – energy poverty and development

Access to sustainable energy services can power opportunities for environmental, social and economic development. Yet, today almost 800,000 people worldwide lack access to electricity, while every third person cooks on unhealthy open fireplaces and traditional stoves. The lack of energy is also affecting small and medium-sized enterprises as well as public facilities that depend on reliable and affordable energy supplies.[1]

Without sufficient energy services, people are unable to cook their food, heat their homes or store their medications in a cool place, not to mention learning and reading in the evening. Taking part in economic or political processes via modern communication channels likewise remains impossible.[2]

Poor access to sustainable energy services not only has negative economic and ecological impacts on societies and the environment, but also on people's health. According to the World Health Organization (WHO) the acrid smokes from traditional cookstoves and fuels resulted in almost 4 million deaths in 2016.[3]

In times of climate change, it is also of the utmost importance to make energy supply sustainable. Energy-saving technologies and the use of renewable energy sources can really make a difference in developing countries. Furthermore, in remote areas a decentralized energy supply using renewable sources such as sun, wind, water or wood and other biomass will remain the only option for the next decades as national grids are unlikely to be expanded to these regions.[4]

Both, granting people access to modern and climate-friendly energy sources and promoting energy efficiency is therefore a key challenge of the 21st century, as highlighted by the United Nations (UN), declaring 2014-2024 as the Decade of Sustainable Energy for All.[5]

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, also puts emphasis on sustainable energy and energy access. **Sustainable Development Goal 7** (SDG7), stresses the importance of ensuring access to affordable, reliable, sustainable and modern energy for all.[6] Furthermore, energy is relevant also for the achievement of a number of other SDGs, such as poverty, health, climate, education, and gender.[7]

However, there is still a lack of first-hand knowledge on modern and sustainable energy solutions when it comes to their sustainable diffusion in developing countries.[8][9] This knowledge often only exists locally or in single implementing organizations and is thus difficult to access for individuals or even other organizations and governments. There is a great need to facilitate and expand the diffusion of these technologies in developing countries through practical knowledge exchange and collaboration, not only from developed to developing countries but also among developing countries. This knowledge should be freely accessible and thus cross-sectoral cooperation potentials should be promoted.

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1 IEA, IRENA, UNSD, World Bank, WHO. 2021. Tracking SDG 7: The Energy Progress Report. World Bank, Washington DC. https://www.irena.org/publications/2021/Jun/Tracking-SDG-7-2021

2 International Energy Agency (2017): Energy Access Outlook 2017. From Poverty to Prosperity. World Energy Outlook Special Report. https://www.iea.org/publications/freepublications/publication/WEO2017SpecialReport_EnergyAccessOutlook.pdf

3 WHO (2018): Factsheet on Household Air Pollution and Health. http://www.who.int/news-room/fact-sheets/detail/household-air-pollution-and-health. WHO Global Health Observatory Data: Household air pollution in 2016. http://www.who.int/gho/phe/indoor_air_pollution/en/

4 IRENA (2018): Off-grid renewable energy solutions. https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2018/Jul/IRENA_Off-grid_RE_Solutions_2018.pdf

5 United Nations Decade of Sustainable Energy for All 2014-2024. A/RES/67/215: http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/67/215

6 UN Sustainable Development Goal 7: https://sustainabledevelopment.un.org/sdg7

7 Energy and the Sustainable Development Goals. Energypedia: https://energypedia.info/wiki/Energy_and_the_Sustainable_Development_Goals#Energy_and_other_SDGs

8 E/CN.17/2001/19 - Report on the 9th Decision on International Cooperation for an Enabling Environment. See recommendation 29. https://sustainabledevelopment.un.org/topics/energy/decisions

9 Samuel Chisa Dike (2018): Adequate Education and information sharing: Key to attaining access to sustainable energy. https://www.researchgate.net/publication/323551131_ADEQUATE_EDUCATION_AND_INFORMATION_SHARING_KEY_TO_ATTAINING_ACCESS_TO_SUSTAINABLE_ENERGY

„Grundsätzlich gilt: Alle im Auftrag einer Kooperation entstandenen Informationsprodukte oder Standards sollten für alle Kooperationspartner gemeinsames Eigentum und für alle Interessenvertreterinnen und -vertreter frei zugänglich sein. Das Ziel sollte es sein, offenen Zugang zu Informationen und offene, gemeinsame Wissensproduktion zu ermöglichen. So entstehen gemeinsam entwickelte und neue Informations- und Wissensprodukte, sogenannte „Wissensallmende" (wie Wikipedia, Energypedia etc.)." (BMZ) [10]

In recent years, **knowledge sharing** has become a core component of achieving the goals of SDGs, alongside the provision of financial and technical support. The exchange of knowledge is an effective means for professionals to:

- learn from each other what works and what doesn't, so that the trial and error process can be shortened and the wheel does not have to be reinvented,
- catalyse innovative solutions by sharing ideas and knowledge on specific topics,
- replicate and extend successful solutions,
- promote cooperation across regions and themes for an integrative exchange of knowledge - also in South-South cooperation.

The direct exchange of knowledge between energy experts can also unfold at institutional and systemic level and influence developments there. It is therefore crucial to strengthen the capacity for knowledge exchange so that the core knowledge can be identified, captured and shared in order to expand energy projects that work at the national and international level.[11]

The general need for partnerships between governments, civil society and the private sector is also reflected in SDG 17 Partnership for the Goals, which i.e. targets at enhancing "North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing…".[12]

2.2 Solution attempts made to date

There is no institutionalized structure in place for sharing knowledge and practical expertise about renewable energy and energy efficiency across individuals from different organizations, institutions, private sector, and academia on local, national and international levels. Thus, besides sporadic conferences or workshops, there are few possibilities for practitioners, experts and scientists to directly exchange experience, new findings and lessons learnt regarding sustainable energy access.

2.3 The solution – connecting people and knowledge

Recognizing that development in the 21st century requires that all actors have access to information, energypedia is using Web 2.0 technologies to remove knowledge barriers and expand the diffusion of information on how universal and sustainable energy access for all can be achieved.

Through hosting the platform www.energypedia.info, we strive to create the right environment and provide the right tools for stakeholders engaged in the energy sector to collaborate, create and share knowledge and practical experience.

10 BMZ (2019): Toolkit 2.0 - Digitalisierung in der EZ 2.0; page 158. Translation: "As a general rule, all information products or standards developed on behalf of a cooperation should be jointly owned by all cooperation partners and freely accessible to all stakeholders. The goal should be to enable open access to information and open, joint knowledge production. In this way, jointly developed and new information and knowledge products, so-called "knowledge almende" (such as Wikipedia, Energypedia, etc.) are created."

11 World Bank: The Art of Knowledge Exchange. https://openknowledge.worldbank.org/handle/10986/29355

12 https://www.un.org/sustainabledevelopment/globalpartnerships/

www.energypedia.info is a wiki platform offering free access to expert information on renewables, energy access and energy efficiency in developing countries. All content on energypedia is open source, meaning everyone can use it freely as long as the author and the source are acknowledged.

All visitors of the site can freely access and read articles and content on energypedia. Once registered, users can also easily create, modify and share content and all their contributions will directly be accessible online. In this way, energypedia supports the necessary international knowledge exchange between experts and practitioners in civil society, academia, the public as well as the private sector. Thus, energypedia not only facilitate knowledge exchange between industrial and developing countries, but also promotes the direct exchange of experience among people in developing countries.

Most information on energypedia is clustered into portals, which serve as an entry point to the interested readers. A wide range of topics is covered by the portals, i.e. from solar energy to hydro, biogas, improved cooking, impacts, and country-related information.

As of end 2022, the following portals were online:

Energy Access | Solar | Improved Cooking | Hydro

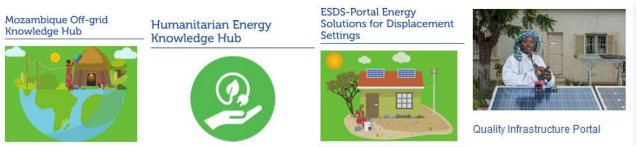
Bioenergy (with sub portals biogas, solid biomass and biofuels) | Wind

Mobility | Countries | Impacts | Climate Change

Grid | Mini-grid | Productive Use | Finance& Funding

Powering Agriculture

Special knowledge hubs:



We believe: knowledge sharing is power!

Did you know?

Wikis are websites that can be modified by users without any programming expertise. The best known and most successful example is Wikipedia.

Energypedia uses the open-source software Mediawiki, which is also used by Wikipedia. All articles and files shared on energypedia are published under the Creative Commons Attribution-Sharealike 3.0 Unported License (CC-BY-SA) and the GNU Free Documentation License (GFDL).

2.3.1 Work performed (output) and direct target groups

Our direct target groups are people worldwide who are dealing with energy access issues in developing countries. This includes energy experts and practitioners who are active in the field, academics and researchers, government officials as well as the general interested public and other stakeholders. Users of energypedia come from public and private sectors as well as from civil society and academia.

To offer them a platform for knowledge exchange and for fostering the spread of renewables in developing countries, energypedia UG hosts and maintains the free wiki platform www.energypedia.info. This includes not only providing the technical infrastructure and further IT development and handling the whole registration process of users, but also means giving support to our community. We constantly give feedback to authors on how to improve the quality of their articles in terms of formatting, structuring and tagging the content. We try to engage users via our newsletter and social media channels, and we offer tutorials on how to work on energypedia. The latter is done via email, phone, skype and tutorial videos.

We also provide information on relevant events, jobs and opportunities on our platform and via the monthly newsletter. In addition, we constantly try to increase our reach and expand our offer by cooperating with relevant networks, organizations and institutions.

Furthermore, we participate in events and conferences to inform people: a) about the relevance of energy access and the role of renewable energy and energy efficiency in developing countries, and b) about energypedia's offer to energy experts and other interested stakeholders.

Over the past years, we have continuously grown, both in terms of content and in terms of reach.

2.3.2 Intended results (outcome/impact) on direct and indirect target groups

By doing all the work described above, we aim to achieve the following results:

First, we want to make stakeholders aware of energypedia.info and the options it offers for worldwide knowledge exchange on sustainable energy in developing countries.

Second, we want to enable our target groups to use energypedia in the best way and to exchange their knowledge and experience with other energy experts / academics / researchers / stakeholders.

The assumption behind this is that once people start sharing their knowledge, they can learn from each other in terms of both what works and what not in supporting energy access, renewable energy and energy efficiency in developing countries. Using web 2.0 tools offers a much wider exchange also across national, regional, organizational or even sectoral boundaries than conventional tools used within organizations, workshops or conferences.

Further, we expect people to use the knowledge, which they gained on energypedia in their own work. Ultimately, by supporting knowledge sharing, we aim to contribute to reducing energy poverty by making access to renewable energy and energy efficient technologies widely available. Thus, our indirect target groups are people, institutions and small and medium enterprises in developing countries lacking access to energy. We are aware of the difficulty of finding robust evidence to show our impact on these indirect target groups.

2.3.3 Presentation of the impact logic

Target groups	Work performed (output)	Use of output	Expected results (outcome)	Higher aggregated results (Impacts)
Energy experts / practitioners with focus on developing countries Academics / Researchers People working for NGOs, companies, governments and other institutions, who deal with energy issues in developing countries	Running of collaborative wiki platform www.energypedia.info: • Registration of new users • Answering questions from users • Supporting users and giving feedback on articles • Solving IT problems • Wiki gardening (restructuring, tagging, quality control) • Webinars and trainings on how to use energypedia (online, skype, telephone, emails) Participation at national and international energy / development events to inform target groups about renewable energy and energy efficiency in developing countries and about the offer of energypedia in this context. Providing target groups with relevant news about energy issues in developing countries (newsletter, use of social media, publications) Engaging with international networks and alliances Building-up a cooperation with universities, organizations and institutions, provide them with relevant information and offer them the possibility to document conferences and other events on energypedia.info	Energypedia is well known and used by target groups: • Number of unique visitors of the platform increases • Number of registered users increases • Number of cooperation increases • Publications and articles referring to energypedia as a source of information Visitors and registered users are satisfied with content of platform • According to user surveys	Users know how to work on energypedia, write new articles and edit existing ones Users exchange their experience on energypedia and learn from each other Users know more about renewables, energy efficiency and energy access in developing countries People use their knowledge from energypedia in own projects / research	More people in developing countries get access to sustainable energy (renewable energy, energy efficiency) Energy poverty is reduced

3. Resources, Work Performed and Results

3.1 Resources used (input)

In 2022, we continued our project with Green People's Energy Mozambique, in order to support and promote knowledge exchange by compiling information, building up a knowledge hub and implementing webinars for Mozambican energy experts. We continued our work with the International Committee of the Red Cross to support the humanitarian energy sector with knowledge exchange activities.

In addition, we received a grant from the Physikalisch-Technische Bundesanstalt in Germany to create a small hub on quality infrastructure of renewable energy.

In total, we spent 151,600.53 Euros, mainly for staff and external service providers such as IT experts.

We also have drawn on the knowledge of our energypedia community that contributed voluntarily content to the platform and to our newsletters. Our online platform energypedia.info runs on the open source software mediawiki, thus no licenses are used.

3.2 Work performed (output)

Running of the collaborative online wiki platform www.energypedia.info

- Technical hosting and maintenance of the platform
- We handled the registration process of 397 new users
- We answered questions of registered users and visitors - be it on how to use the platform or on renewable energy issues
- We gave constant support to our users on how to write, upload and link content (mainly via email or video calls)
- We gave feedback on articles written by our community

Knowledge creation and support of knowledge exchange on renewable energies in developing countries

- Mozambique Off-grid Knowledge Hub on energypedia:
    - Further development of the knowledge hub on off-grid energy in Mozambique in both English and Portuguese. The hub includes specific sections on solar, cookstoves, mini-grids, productive use to make information and knowledge available to different stakeholders in the sector (private sector, civil society organizations, government and academia).
    - Creation of four case studies in English and Portuguese on various technologies and applications (e.g. electrification of rural health stations).
    - Creation of a knowledge portal on the subject of mini-grids (local power grids for areas that are not connected to the national power grid).
    - Development of a portal for the productive use of energy in Portuguese and English, with a focus on solar-powered irrigation, market information and application tools. Development of a price scenario with fuel prices, acquisition costs, etc. to show that solar irrigation is possible in Mozambique.
    - Organisation of a writing competition for Mozambican students, in partnership with our local partner organisations, the Association for Renewable Energies (AMER) and the Eduardo Mondlane University.
    - Planning and implementation of a workshop in Maputo, Mozambique for around 30 participants in November, 2022. Participants came from solar and cookstove companies as well as from non-governmental organisations. The objective of the workshop was to support knowledge exchange on cooking and solar energy topics and to showcase best practice projects. The workshop was planned and implemented together with our partner AMER.

- Updating of several articles on solar energy and cooking energy, based on expert interviews conducted in Maputo, Mozambique and online. Translation into Portuguese.
- Continued steering of a LinkedIn and a Facebook group for renewable energy experts in Mozambique to support further information exchange.
- Webinars in English and Portuguese (together with AMER), on clean cooking and on solar irrigation in Mozambique, with together 300 registrations and 175 participants.
- Help webinar in English and Portuguese (implemented by us together with AMER) to show how to work on the platform.

- Humanitarian energy on energypedia:
  - Planning, conducting and documenting three webinars on the topic of energy and living conditions in displacement situations to share knowledge about the context, challenges, planning and implementation of projects, as well as financing options. On average, 70 people from various humanitarian and energy organisations took part in each webinar.
  - Pre-launch of the Humanitarian Energy Knowledge Portal at the Humanitarian Energy Conference, Kigali, Rwanda, May 2022.
- Launch of a knowledge portal on quality infrastructure for sustainable energy, in cooperation with the Physikalisch-Technischen Bundesanstalt (National Metrology Institute of Germany (PTB).
- Updating of articles, e.g. energy access figures, grain mills, results-based financing, energy and the sustainable development goals, solar drying.
- Researching and writing an article about green hydrogen (basics, application in developing countries).
- Research and promotion of relevant energy events, opportunities and jobs in the area of renewable energies, energy access, and energy efficiency in developing countries.

Participation at national and international events

- Information stand at the 'European Development Days' conference in Brussels, organised by the European Commission, which is aimed at non-profit organisations in development aid. Two days of intensive discussions with around 150 people, presentations, and the development of a quiz on the topic of basic energy supply, to draw attention to the topic in a fun way.
- Participation in the Berlin Energy Transition Week, organised by the German Federal Foreign Office. Speaker in a panel discussion on capacity building in the renewable energy sector in developing countries.
- Participation and talks at the Sustainable Energy for All conference in Kigali, Rwanda.
- Presentation of energypedia and the topic of energy access in Mozambique at the GOGLA Forum, a conference of the off-grid solar industry.

Provide target groups with relevant news

In 2022, we carried on with our **social media** engagement (Facebook, twitter, LinkedIn) in order to promote knowledge and experience exchange, spread news about energypedia, energy sector news as well as news from other organizations regarding renewables in developing countries.

The following table lists our followers at the end of 2022:

Facebook	Twitter	LinkedIn	Newsletter
2,335 (+153 compared to 2021)	2,864 (+363 compared to 2021)	2,025 (+580 compared to 2021)	5,969 (-169 compared to 2021)

We also publish our monthly „Energypedia Newsletter", containing information e.g. about new content on energypedia, relevant publications in the renewable energy sector, relevant news from other organizations and countries, as well as latest energy events, jobs, and opportunities.

For the Mozambique project, we developed a special news page on energypedia in English and Portuguese, which was updated every month to inform about latest developments from the Mozambique Off-grid Knowledge Hub.

Cooperation

In 2022, we cooperated with the following organizations and initiatives in order to promote the exchange of knowledge and experience as well as research on energy issues in developing countries.

- Continued cooperation with the 'Green People's Energy (GBE) Mozambique' programme of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH as part of a grant. The aim of the cooperation is to develop a knowledge portal for off-grid energy in Mozambique and to research and compile relevant information on technologies, the market, the institutional structure and background information on the country. The aim is to support private sector companies and other actors in becoming involved in the market, exchanging knowledge and making the sector more transparent and accessible in order to promote access to renewable energies in the country.
- AMER: the Mozambican Association of Renewable Energies is a non-profit association whose mission is to promote renewable energies in Mozambique. Being our local partner organization in the Mozambique Off-grid knowledge hub project, we collaborate intensively with the objective to research and provide knowledge and to involve the Mozambican renewable energy sector. In addition, we train a representative of AMER on how to work on the platform and how to conduct and facilitate online seminars. The capacity building is done on a continuous basis.
- Continuation of cooperation and collaboration with the International Committee of the Red Cross (ICRC) and the United Nations Institute for Training and Research (UNITAR). We want to raise awareness of and disseminate knowledge about sustainable energy technologies, best practices and their impact in the humanitarian field by organising webinars. In addition, the funding will also be used to establish a knowledge centre for humanitarian aid to make information and knowledge more accessible to the sector.
- Media and knowledge partner of the 'Efficiency for AgTech campaign' as part of the partnership with the Efficiency for Access Coalition. Between February and April 2022, various energypedia articles, such as one about solar irrigation, were shared via social media.
- Cooperation with the Physikalisch-Technische Bundesanstalt (PTB) on a knowledge portal about quality infrastructure for sustainable energy.

Please read more about our partnerships, cooperation and networks in chapter 5.3.

3.3 Results achieved (outcome/impact)

The number of articles increased by 431 to 5,508. However, this steep increase in article numbers is not reflected in the number of active users, which decreased from 23 to 18 a month.

The number of unique visitors per month also went a bit down from 87.491 in 2021 to 77,063 in 2022, with a maximum in March of 92,436. Similarly, the number of visits decreased by 12.8% and the page views decreased by 15.5% compared to 2021.

Key Figures	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Registered Users**	2,216	3,029	4,174	5,378	6,836	7,932	8,949	9,920	10,786	11,369	11,766
Unique visitors/month*	8,612	15,471	23,220	35,825	45,290	41,697	50,093	64,812	78,815	87.491	77,063
Active users/month**	33	34	38	39	46	41	42	37	27	23	18
Visits per year	135,775	228,034	347,167	536,134	673,926	639,037	768,603	988,875	1,214,084	1,304,098	1,137,471
Articles***	771	1,138	2,291	2,961	3,806	4,190	4,511	4,725	4,809	5,077	5,508
Page edits**	55,126	68,126	93,110	110,577	134,488	152,598	171,390	184,078	194,997	208,046	221,231
Page Views per year	352,376	480,365	716,831	1,097,816	1,260,495	1,141,133	1,294,633	1,651,884	1,901,076	1,975,879	1,669,356
Files**	2,927	3,675	4,994	5,806	6,719	8,165	9,449	10,332	11,178	++	++
Downloads per year	13,257	25,671	48,880	80,066	102,211	108,545	133,806	172,827	193,906	192,765	174,901

* Unique visitors per month on average. The unique visitor number counts the number of individuals who access energypedia within each month.
** Active users per month on average. Active users are all users who performance any kind of activity.
***Articles are all content pages contributed by users on renewable energy topics, numbers are accumulative.
**** Accumulative numbers since energypedia.info was set up
++ no updated numbers available

3.5 Provisions taken for the accompanying evaluation and quality assurance

Evaluation and quality assurance within energypedia has several facets.

On an organizational level, we use an internal wiki to organize our work and for our own knowledge management. Within that frame, we also have an operations manual defining key processes and responsibilities. Furthermore, we have planning workshops, weekly meetings and we usually discuss urgent issues within the team on a day-to-day basis.

Regarding the monitoring and evaluation of our platform energypedia.info we use Matomo (former Piwik) and Heatmaps to collect data on key performance indicators such as number of unique visitors, number of visits, referring websites, most visited pages, etc. With wiki software inherent statistics, the number of registered users and active users as well as the number of content pages are collected. We analyze this data on a monthly basis.

When it comes to the quality assurance of articles on energypedia, we have a two-fold approach: on the one hand, we make sure that articles fulfil certain formatting and layout standards and are not commercial advertisement pieces. We give authors and editors any support they need in order to make the best of their articles. On the other hand, we follow the wiki philosophy that registered users can edit whatever they want. We do not want to judge on the content of their articles as we assume they are the experts on the specific topic they are writing about. Therefore, we also try to encourage our community to participate in quality assurance in terms of updating information, adding relevant content, deleting wrong or outdated information and discussing controversial issues.

3.6 Previous year comparison: Objectives achieved, learning experience and success

For 2022, we set the following targets:

- Secure funding in and beyond 2022
    - Grant from Grüne Bürgerenergie / GIZ Mozambique originally running from 03/21 - 06/22 could be extended for one year until 06/2023. Objective of the grant agreement is to research and consolidate renewable energy knowledge and information by creating a knowledge hub and bringing energy experts from different sectors together to exchange experience. Activities include also webinars and workshops together with our local partner organisation AMER. Furthermore, the handover process to the AMER should be accompanied through concept development and further training.
    - Energypedia was contracted already in 2020 via a small service provider contract by Physikalisch-Technische Bundesanstalt (PTB) to put factsheets about quality infrastructure projects from PTB online and create overview pages. Due to different reasons the work could only be finalised and paid for in late 2022.
- Keep the level of roughly 90,000 unique visitors as occurred in 2021
    - In 2022, we achieved over 77,000 unique visitors per month on average, which is around 10,000 visitors less per month on average compared to 2021. We don’t know whether or not this caused by the ending pandemic or other reasons.
- Increase the participation of users from around the world and encourage them to become active contributors of knowledge
    - The number of registered users increased by 397 people, from 11,369 at the end of 2021.
    - In 2022, people from 206 distinct countries accessed the platform. The majority of visitors came from North America (57%), followed by Europe (28%) and Asia (9%). However, due to changes in our statistics software following European privacy law, these figures are not very reliable anymore and should be read with caution.
    - Similar to the decrease in unique visitors, the number of active users decreased from 23 on average in 2021 to 18 on average in 2022.

- Increase the number and quality of articles
    - 2022 has been a year of growth in terms of new articles. Thanks to the grant for the Mozambique Off-grid Knowledge Hub we could research and write on many topics related to energy access and renewables in Mozambique.
    - We updated the articles on Energy Access Figures, Energy and the SDGs, Grain Mill, Results-based financing, Solar drying and researched and wrote an article about Green hydrogen.

4. Planning and Forecast

4.1 Planning and targets

For 2023, we set the following targets:

- Secure funding in and beyond 2023
- Increase the level of roughly 77,000 unique visitors as occurred in 2022
- Increase the participation of users from around the world and encourage them to become active contributors of knowledge
- Increase the number and quality of articles

4.2 Influence factors: chances and risks

In September 2015, the UN Summit for Sustainable Development adopted the 2030 Agenda for Sustainable Development and agreed upon 17 Sustainable Development Goals (SDGs) to end poverty, fight inequality and injustice, and tackle climate change by 2030.[13] With SDG 7, energy is finally being recognized as a key enabler for development. Universal access to energy, a higher share of renewable energy and massive improvements in energy efficiency are now part of the top global priorities for sustainable development in the years to come. Therefore, the framework conditions for an independent knowledge and experience platform on renewables, efficiency and energy access are quite good in terms of the relevance of the topic.

At the same time however, knowledge exchange is not necessarily an attractive topic, which donors or other stakeholders would be eager to finance. Experiences from previous years show that if they invest funds in this area, they would rather build up their own new platform, in order to raise their public profile and not financing an independent platform, which is open to all stakeholders in the area. Therefore, raising funds is, and will probably remain, one of our biggest challenges.

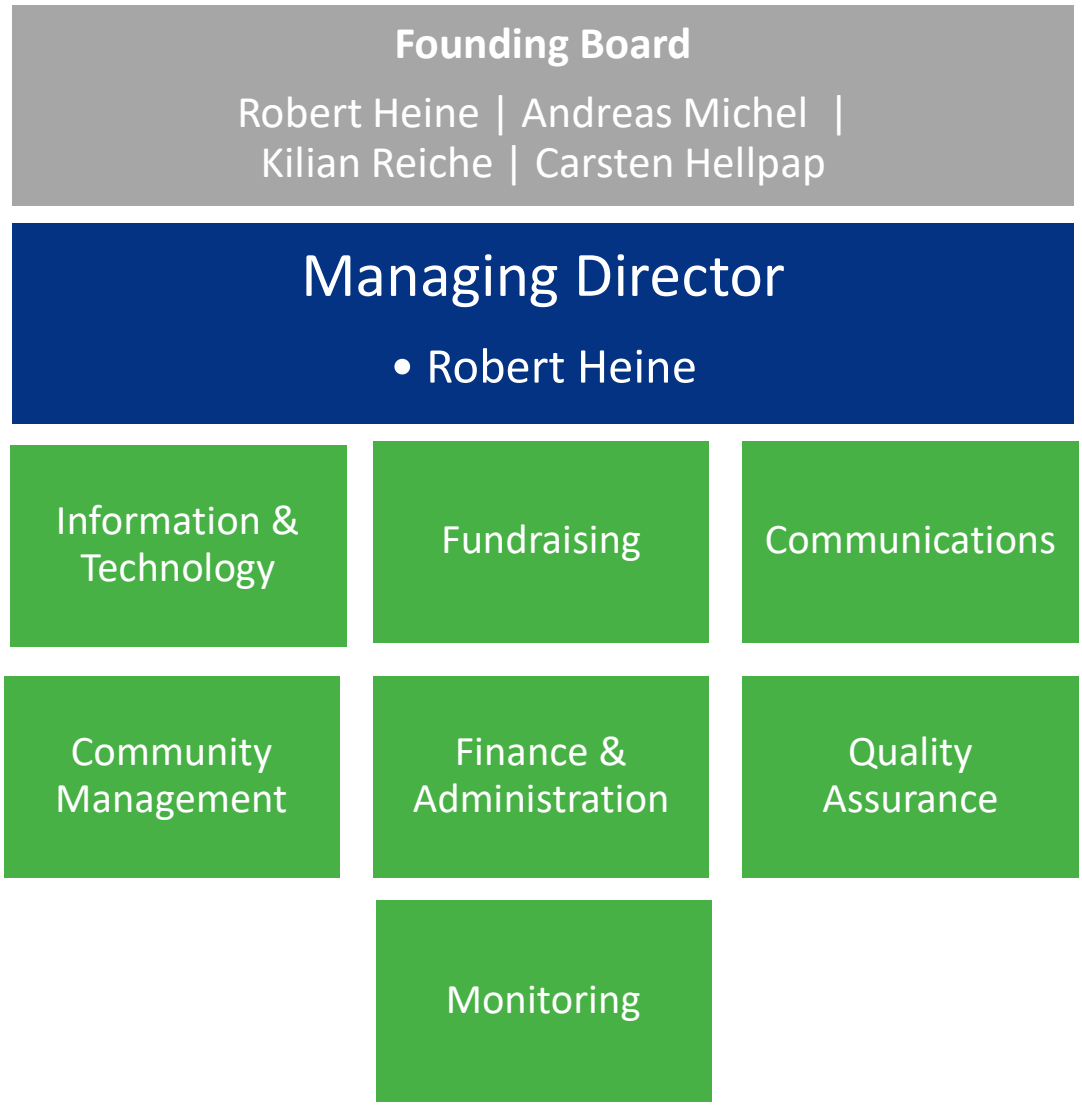
13 https://sustainabledevelopment.un.org/sdg7

5. Organisational Structure and Team

5.1 Organizational structure

The energypedia nonprofit UG (haftungsbeschränkt) team consists of a committed group of founding partners and members. It was founded in 2011 and currently has four shareholders: Kilian Reiche, Andreas Michel, Carsten Hellpap and Robert Heine.

In 2022, energypedia UG had seven employees (mostly working part time). The illustration shows the different sections or task areas.



5.2 Introduction of the participating individuals

Ranisha Basnet joined energypedia in spring 2014. She is the main person for running energypedia, taking care of all platform and user relevant issues. She is responsible for energy access research and partnerships and cooperation.

Lisa Feldmann has been part of the energypedia team since its beginnings in 2012, when she managed the whole start-up phase. She is responsible for awareness raising, renewable energy technologies, and quality issues.

Fernanda Wynter works as an energy researcher for the Mozambique Off-grid Knowledge Hub on energypedia.

Robert Heine is a managing director of energypedia. His main responsibilities are finance and administration as well as information technology. He is acting on a part time basis.

Hector Alfaro works part time and supports the team in all questions regarding user registration and IT support.

Diane Röschen is a communications expert and supports the energypedia team with newsletter and social media activities.

Agnès Ferretto, working student, supports the team with communication and research.

5.3 Partnerships, cooperation and networks

Energypedia is a member of VENRO, the association of development and humanitarian NGOs in Germany.

Ongoing cooperation and partnerships include the following organizations, programs and institutions:

UNITAR / ICRC

We continued our cooperation with The United Nations Institute for Training and Research (UNITAR) and the International Committee of the Red Cross (ICRC) with regard to Sustainable Energy in Humanitarian Settings. By organizing joint webinars and providing resources for the sector, we want to raise awareness and spread knowledge about different technologies, best practices and impacts in the humanitarian setting.

AMER

The Mozambican Association of Renewable Energies is a non-profit association whose mission is to promote renewable energies in Mozambique. We partner with them within the framework of the Mozambique Off-grid Knowledge Hub.

ACCESS Coalition

The ACCESS Coalition consists of a range of civil society organizations (CSOs), both international and national working to deliver universal energy access, particularly within Sustainable Energy for All (SEforAll), Sustainable Development Goal 7 (SDG7) implementation and other global energy initiatives.

Efficiency for Access

Efficiency for Access is a coalition promoting energy efficiency as a potent catalyst in global clean energy access efforts. Coalition programs aim to scale up markets and reduce prices for super-efficient, off- and weak-grid appropriate products, support technological innovation, and improve sector coordination.

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Energypedia works closely together with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, where the concept of energypedia was initially developed. In particular, we cooperate(d) with Grüne Bürgerenergie Mozambique, HERA (program for poverty-oriented basic energy services) and EnDev (Energising Development Partnership) in promoting access to renewable energy and their sustainable and efficient use.

Energy Sector Management Assistance Program (ESMAP) and others

We partnered with the Energy Sector Management Assistance Program (ESMAP) and the Public-Private Partnership in Infrastructure Resource Center (PPPIRC) of the World Bank, reeep, OpenEI, Wuppertal Institute and Natural Resources Canada to host the Clean Energy Project Resource Center on energypedia.info. This database offers project-relevant renewable energy and energy efficiency documents to the global energy community. It includes sample Terms of Reference, examples of Economic and Financial Analysis, sample Legal & Procurement Documents, Case Studies with analysis of success factors lessons learned, and more.

Hydro Empowerment Network (HPNET) in South and Southeast Asia

Together with the Hydro Empowerment Network (HPNET), we created the Micro-Hydro Library, which enables users to upload publications and documents on micro hydro topics. We furthermore cooperate in general to exchange and spread information on micro hydro energy, e.g. via webinars.

UNFCCC

Since 2018, energypedia is one of the Official Observers to the United Nations Framework on the Convention on Climate Change.

ALER

ALER (Lusophone Renewable Energy Association) is a non-profit association with the mission to promote renewable energy in Portuguese-speaking countries. ALER's scope covers all technologies and types of projects, whether on -grid, off-grid or mini-grid systems.

Power for All

Power for All advances renewable, decentralized electrification solutions as the fastest, most cost-effective and sustainable approach to universal energy access.

SUSANA

The Sustainable Sanitation Alliance (SuSanA) is an open international alliance with members who share a common mission on sustainable sanitation and are dedicated to understanding viable and sustainable sanitation solutions.

Read here more about our partnerships, networks and cooperation partners.

6. Organizational Profile

6.1 General information about the organization

Energypedia is an organization based in Germany. Its official legal form is "Unternehmergesellschaft (haftungsbeschränkt)" which is comparable with the British Limited Company (Ltd.). Due to energypedia's activities in promoting development cooperation through knowledge and technology transfer, it has been recognized by German tax authorities as a nonprofit organization. As a result, while energypedia is organized as a company, it follows non-profit goals. Our main focus is on running the platform energypedia.info.

The energypedia wiki was developed within the Energising Development Programme (EnDev), a joint impact-oriented global program of Germany, the Netherlands, Norway, Australia, United Kingdom and Switzerland, with additional co-funding from Ireland and the European Union. EnDev is implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). Serving as an internal tool for knowledge management in the beginning, it went public in 2011; it was outsourced in 2012 and handed over to energypedia UG.

Organization name	energypedia UG (haftungsbeschränkt)
Organization location	König-Adolf-Str. 12, 65191 Wiesbaden, Germany
Organization Founding	2011
Further branches	-
Legal form	Gemeinnützige Unternehmergesellschaft (haftungsbeschränkt)
Contact details	König-Adolf-Str. 12, 65191 Wiesbaden, Germany Phone +4961118195032 info@energypedia.info www.energypedia.info
Link to Articles of Association (URL)	energypedia's charter can be read here: https://energypedia.info/wiki/Energypedia_-_Charter
Registration • court of registry • registration number • date of registration	Wiesbaden HRB 31545 22.11.2011
Charity or non-profit organization • latest acknowledgment or confirmation of tax exemption by the relevant authority • Issuing authority • Statement of non-profit purpose	• 27.06.2024 • Finanzamt Wiesbaden I • Promotion of development coperation; Promotion of science and research

Employee headcount	2022
Total number of workers	7
thereof on full-time basis	1
thereof on part-time basis	6
thereof on freelance basis	0
thereof on voluntary basis	0*

*All registered authors contribute voluntarily to the content on energypedia. In 2022, we had more than 11,760 registered users; of this group, an average of 18 made a voluntary contribution each month.

6.2 Governance of the organization

Management

Managing director of energypedia is Robert Heine. The managing director has been appointed by energypedia's shareholders. The managing director is responsible for the operational implementation of strategic decisions, personnel, and organizing the day-to-day business. He acts as the representative of energypedia in all affairs.

Conflicts of interests

Robert Heine is both, shareholder and managing director of energypedia. However, he holds merely 38% of energypedia's shares and thus has a voting power of 38%. For most decisions, a simple majority is needed. For very relevant decisions (e.g. liquidation of the company, increase in capital stock etc.) a ¾ majority of votes is necessary. This means that the power of Robert Heine being both shareholder and managing director at the same time is limited, reducing the probability of potential conflicts of interest.

Internal control systems

Our controlling is done every month based on the business assessment provided by our tax consultant. Additionally, an internal liquidity management system is used for calculations and projections of expenditures and earnings. This is carried out by the managing director.

Monitoring data on the use of our internet platform is collected on a monthly basis. In weekly meetings, activities and achieved results are discussed within the team.

6.3 Ownership structure, memberships and associated organizations

Ownership structure of the organization

Energypedia has five shareholders:

Robert Heine	38%
Andreas Michel	30%
Carsten Hellpap	25%
Kilian Reiche	7%

Voting power: each Euro is equivalent to one vote.

The shareholders act on a voluntary basis. Generally, they meet once a year for a general shareholder meeting where they formally approve the actions of the managing directors and get informed about the annual financial report and activities carried out during the last year. Furthermore, they discuss strategic issues and take decisions, which have to be implemented by the managing directors. Further meetings are organized if necessary.

Associated organizations

Energypedia holds 49% of the shares in energypedia consult GmbH, a commercial subsidiary which offers IT solutions for web based monitoring, knowledge and project management in the field of development cooperation. Voting rights: 49%. Energypedia is sharing its offices with energypedia consult.

Memberships

energypedia is a member of VENRO, the association of development and humanitarian NGOs in Germany.

6.4 Environmental and social profile

Energypedia is not only carrying the idea of renewable energy and energy efficiency but also doing its best to implement the idea of green thinking into the daily working live. We are aware of our own responsibility regarding ecological sustainability. Thus, energypedia tries to minimize its ecological footprint as far as possible. This includes:

- most of our computers are refurbished
- most of our furniture is second-hand
- we only order office materials from an eco-friendly supplying company
- we only buy recycled printing paper and print as little as possible
- all materials like factsheets, flyers and business cards are printed with high ecologic standards. We commission only printing companies using recycled paper, electricity from renewable energy and compensate CO_2 emissions.
- within Germany we travel by train only and for international flights we compensate our CO2 footprint
- our server is running on “green power”, meaning we don’t use electricity from nuclear power or coal plantations
- we switch off electrical devices before going home
- our office uses eco-friendly electricity supply from renewable energy resources

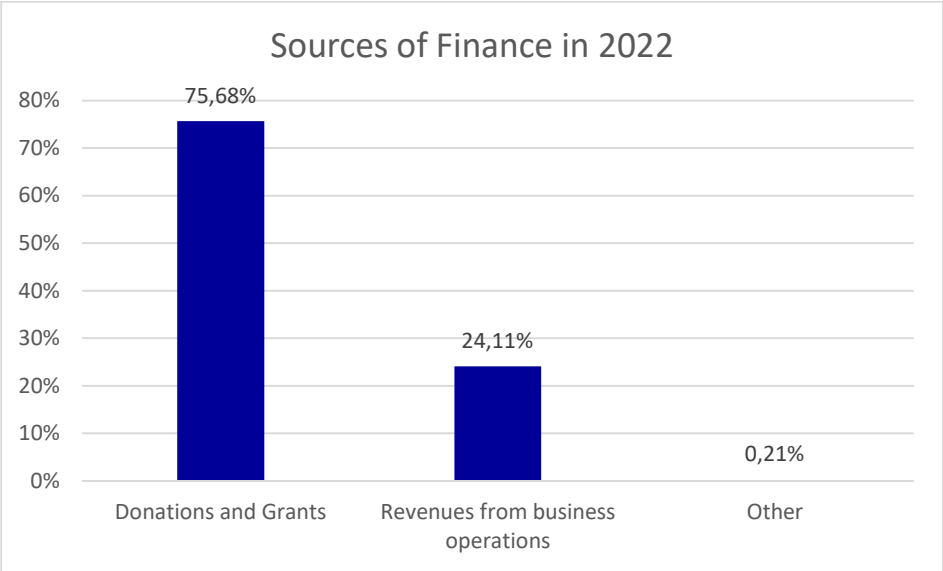
Energypedia considers itself a responsible organization also with regard to its employees. Our social profile entails:

- flexible working times
- flexible home office days
- overtime can be balanced out with free time
- educational leaves and trainings are supported
- annual appraisal interviews
- highly participatory approach: most decisions are taken within the team
- “open-door-policy” of the managing director
- diverse team of males and females, from Germany, Mexico, and Nepal.

7. Finance and Accounting Practices

Energypedia UG is a nonprofit company financed by grants from implementing organizations and foundations, own business operations and donations from private individuals and companies.

In 2022, energypedia had a total income of 124.416,14 Euros. We incurred expenses of 151.600,53 Euros.



*Other includes income from reversal of provisions for liabilities

In determining the advertising and administrative costs, we followed the guidelines of the German Central Institute for Social Issues (DZI). Due to the small size of our organization, we have used careful estimates. According to DZI, the sum of advertising / fundraising and administrative costs should not exceed 30 percent of an organization's total expenditure. In 2022, 15% of our total expenditure was spent on administrative cost (administration, business operations, insurances etc.), fundraising and public relations (e.g. newsletter creation, social media).

7.1 Bookkeeping and accounting

Double-entry bookkeeping and accounting is done by an external tax advisory and accounting firm, Dr. Christian Gastl in Wiesbaden. This firm is also creating the annual financial statement, which follows the rules of German Commercial Code (HGB) with special regards to §§ 266 and 275 HGB.

7.2 Financial situation and planning

Although our total income was quite high, our financial situation became difficult due to high personnel cost.

7.2 Activities and Balance Sheet for 2022

Statement of Activities (all amounts in Euros)	
Revenue	
Not taxable revenues third country	20,000.00
Revenues 19% turnover tax	10,000.00
Revenues 16% turnover tax	0.00
Other revenues 19% tax	0.00
Total revenue	**30,000.00**
Other Earnings	
Income from reversal of provisions for liabilities	260.41
Reimbursements	0.00
Grants and donations	94.155,7300
Total other earnings	**94,416.14**
Material Costs	
Cost of raw materials, consumables and supplies and of purchased merchandise	0.00
Cost of purchased services	10,627.71
Total Material Costs	**10,627.71**
Personnel Expenses	
Salaries and wages	102,813.09
Social contributions	24,808.51
Total personnel expenses	**127,621.6**
Depreciation	75.00
Operating Expenses	
Occupancy costs	0.00
Insurances and other contributions	524.70
Travel costs	5,324.90
Repair and maintenance	51.00
Operating expenses	7,300.36
Other expenses	63.33
Total operating expenses	**13,264.29**
Earnings from shares in affiliated companies	0.00
Interests paid	11.93
Interest earnings	62.50
Result from ordinary operations = Annual net income (taxes = 0)	**- 27,121.89**
Profit Carried Forward	181.88
Allocation to reserves	2,516.00
Withdrawals from reserves	11,00.00
Balance Sheet Loss	**18,456.01**

Balance Sheet (all amounts in Euros)	
Assets	
Fixed assets	
Furniture and fittings	161.50
Shareholdings (49% energypedia consult)	23,030.00
Total fixed assets	**23,191.50**
Current Assets	
Liquid assets	0.00
Receivables from deliveries and services	1,140.77
Total current assets	**1,140.77**
Total assets	**24,332.27**
Liabilities, owners' equity and reserves	
Owners' equity	
Capital stock	7,000.00
Retained profit	15,849.00
Balance sheet profit	- 18.456,01
Total owners' equity	**4,392.99**
Reserves	
Accrued taxes	182.02
Other reserves	5,477.00
Total Reserves	**5,659.02**
Liabilities	
to credit institutions	117.73
from deliveries and services	10,128.99
Other liabilities	4,033.54
Total Liabilities	**14,280.26**
Total liabilities, owners' equity and reserves	**24,332.27**

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Managing directors

Robert Heine

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