OFF-GRID Expo+Conference

Event Guide

OFF-GRID Expo + Conference December 1–2, 2022

OFF-GRID TechDay November 30, 2022

in Augsburg / Germany with digital livestream

www.off-grid-expo.com

Conference partner



Alliance for Rural Electrification Shining a Light for Progress



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Welcome

Dear exhibitors, visitors and conference participants,

In Europe today we are all caught up in discussions about stable and safe energy supplies. However, in considering our own issues, we must not lose sight of world regions where the basic supply is only possible through self-sufficient energy production.

Especially in rural areas and in emerging and developing countries, access to electricity and drinking water is critical. They are one of the two most important pillars of securing life and livelihoods - which is why they are also part of the United Nations' Sustainable Development Goals (particularly SDG 6 and 7).



Off-Grid solar, wind and hydropower systems are integral parts of a self-sufficient power supply. The local water extraction and treatment that they make possible are a decisive contribution to basic quality of life for many millions of people.

The OFF-GRID Expo + Conference (OEC) is a great platform for the necessary transfer of knowledge worldwide. This leads to innovative new technical solutions. Augsburg is a UNESCO World Heritage Site for its unique water management system, It serves as a model and inspiration. This trade fair is a link between our history and current innovations in the field.

UNIDO is glad to support this conference, which makes a valuable contribution to the achievement of SDG 6 and 7. UNIDO itself is a major player within the UN system to drive the transition of energy systems and industrial decarbonization. We do this through renewable energy sources for productive use (including green hydrogen), energy efficiency and food-water-energy nexus. We support countries through technical assistance, policy advice, and partnerships for investment and technology transfer.

I wish my colleagues from UNIDO Investment and Technology Promotion Office (ITPO) Germany as well as all exhibitors, partners and participants of this year's OEC a very successful exchange.

Together, we can find the solutions the world needs!

Dr. Gerd Müller Director General, United Nations Industrial Development Organization (UNIDO)

Welcome

Dear exhibitors and visitors to the OFF-GRID Expo + Conference,

I am delighted to welcome you all to Augsburg again for the annual OFF-GRID community event that rounds off the year. This congress trade fair is a unique international event in the sector, and the highlight in the calendar of the off-grid industry in Europe.

We will be holding a hybrid event again this year after our positive experience during Covid-19 when the conference was held both on and offline. We will be happy to welcome exhibitors and visitors from all over the world to Augsburg and online via their screens.



The conference was designed in partnership with the Alliance for Rural Electrification (ARE) and is the highlight again this year. I am particularly

looking forward to the contribution entitled "Women entrepreneurs as key players in off-grid renewable energy", which is supported by the Afrika Verein der deutschen Wirtschaft e.V. (German-African Business Association). This event addresses the huge potential of female entrepreneurship and showcases practical best cases. Other sessions at the conference are also packed with some fabulous topics - look forward to innovative solutions and practical food for thought to confront the challenges facing us all today.

May I take this opportunity to wish all participants an inspiring, intense and successful visit to the OFF-GRID Expo + Conference and many new contacts for their own network.

In this spirit: Welcome to Augsburg and welcome to the OFF-GRID Expo + Conference 2022.

Lorenz A. Rau CEO, Messe Augsburg

Welcome

Dear Off-Grid Experts,

We are proud to co-organise the OFF-GRID Expo + Conference on December 1-2, 2022. After a successful series, we are incredibly excited to welcome you to Augsburg, Germany.

As the conference partner of the event, this year, ARE is proud to join forces with UNIDO ITPO Germany and Messe Augsburg to deliver an exciting conference programme. We'll delve into new and intriguing topics highlighting off-grid cooling technologies, water-energy-food nexus, e-mobility with decentralised renewable energy, women entrepreneurship, energy storage and innovative financing.



Come and learn about the latest off-grid trends from the key experts in the sector and engage with them during and beyond the topical sessions!

Have a good show ahead!

David Lecoque CEO, ARE

Useful Information

Opening Hours

OFF-GRID TechDay (advance registration required) Conference Center 30 November 2022 09:00 am – 5:30 pm

OFF GRID Conference (hall 7 and online) 1 December 2022 09:00 am – 06:00 pm 1 December 2022 06:00 pm – 09:00 pm* 2 December 2022 09:00 am – 04:30 pm *(evening event, Invitation required)

The accompanying exhibition OFF-GRID Expo (hall 7) 1 December 2022 09:00 am – 06:00 pm 2 December 2022 09:00 am – 04:30 pm

Ticketshop

Tickets can only be purchased online. There is no ticket sale on-site. Please note: Online tickets cannot be returned.



Medical services

Our qualified medical personnel are available on-site at all times.

Digital OFF-GRID Expo + Conference (on www.talque.com)

All attendees with a conference ticket for Expo+-Conference on-site in Augsburg can also register on the digital platform Talque. For your registration please use the QR Code to download the App. During the entire Conference attendees can visit our exhibtors online.



QR Code Apple

QR Code Google

After registering in Talque, you have the possibility to create your account personally. The more information you provide, the better the content can be customized for you. On Talque itself, you can participate in the conference, make appointments with exhibitors or become part of our supporting program. The Chat function let you have spontaneous conversations with other participants.

Organisator's Office on-site

Lobby of Conference Center, Messe Augsburg

WI-FI

Network: messeaugsburg To use the free WI-FI, please open your browser and accept the terms and conditions

Cloakroom

Jackets and luggage can be left at the cloakroom in the lobby of the Conference Center.

Useful Information

Taxi

Phone Number +49 (0)821 35025

Train

Take the train from Augsburg central station to the "Augsburg Messe" station. The journey takes approx. 5 minutes. It's only a 10-minute walk from there to the trade fair ground.

Note: Enter "Messe DB, Augsburg" as the destination in the Deutsche Bahn travel planner.

Public transport

In addition to the train, you can also use the local public transportation of the Augsburger Verkehrs- und Tarifverbund (AVV) to travel to the trade fair grounds.

 By tram to Bukowina Institut/PCI, then continuing on foot or by bus

Take the **tram line 3** (via Königsplatz) in the direction of **Haunstetten West P+R** and get off at the stop **Bukowina Institut/PCI**. The journey takes approx. 12 minutes. From there you can either walk to the trade fair ground in about 7 minutes or take the bus and get off at the next stop. The bus will take you to the trade fair ground in both directions—either to the bus stop **Messe Süd** or to the **Messezentrum**.

 By tram to Königsplatz, then continue by bus

Take the **tram line 3** in the direction of **Haunstetten West P+R** and get off at the stop Königsplatz. Then take **bus no. 41** in the direction of **Maria Stern** or **Bergstraße**. Then get off at the stop **Messezentrum**. The whole journey takes approx. 15 minutes.

Smoking area

Smoking in the rooms and halls is not permitted at any time. Smoking areas are designated on-site.

Notice (photo, video)

The right to take photo, video and audio recordings of stands, exhibits or exhibitor staff is only permitted to persons authorised by Messe Augsburg.

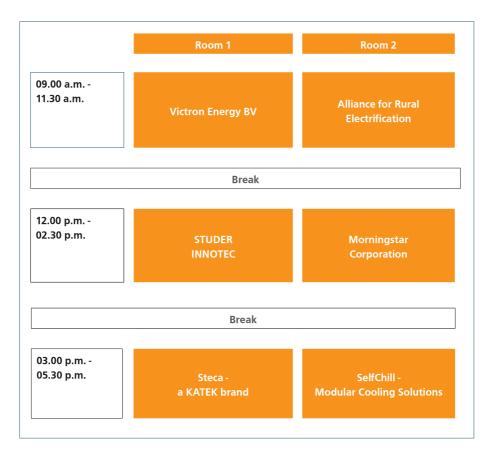
Location on-site

Messe Augsburg Conference Center and hall 7 Am Messezentrum 5 86159 Augsburg, Germany www.messeaugsburg.de www.off-grid-expo.com

OFF-GRID TechDay on November 30, 2022

On the day before the OFF-GRID Expo + Conference begins, some companies will be offering product training sessions. Participation is free of charge for conference participants and requires pre-registration. The TechDay takes place only on-site.

Program overview



Training Details

Room 1:

Victron Energy B.V.

The Victron Energy TechDay will inform about the newest inside information on the company.

- Topic 1: Product updates for Off-grid applications, like the MPPT charge controllers & Inverter/chargers
- Topic 2: Configuration tools for Victron Energy components for local and remote applications
- Topic 3: Monitoring solutions for a Victron Energy system for small, mid-size and large application including 3rd party components

There will be time for discussions.

De Paal 35 1351 JG Almere Netherlands



https://www.victronenergy.de sales@victronenergy.com

Studer Innotec SA

STUDER INNOTEC How STUDER new hybrid inverter enhances selfconsumption to complete solar autarky. The training is executed in English.

Rue des Casernes 57 1950 Sion Switzerland



http://www.studer-innotec.com info@studer-innotec.com

Steca – a KATEK brand

Steca has been a KATEK brand since 2019. The division develops and produces high-end power electronics for grid inverters, energy storage devices, OFF-Grid products, as well as control technology for photovoltaic systems and fuel cell systems.

With a history that goes back 40 years, it is one of the pioneers of the renewable energy industry in Germany. Its many years of manufacturing and engineering expertise ensure that its products are characterised by high quality and an outstanding price/performance ratio.

The production facilities are located in Memmingen (headquarters), Düsseldorf and Saedinenie in Bulgaria.

Mammostraße 1 87700 Memmingen Germany



http://www.steca.com contact@katek-group.com

Training Details

Room 2: Alliance for Rural Electrification

Why join an off-grid renewable energy industry association?

The trust of its members and partners has made the Alliance for Rural Electrification (ARE) the number one international trade association in the field of decentralised renewable energy (DRE) over the past 15 years. Attend the ARE membership services training session at the OFF-GRID Expo + Conference to learn more about ARE itself, its position and relevance in the DRE sector and how it can help off-grid companies with their business and market ambitions.

The Alliance for Rural Electrification aims to promote access to clean energy in Africa, APAC and Latin America and the Caribbean. ARE is building a sustainable decentralised renewable energy industry for the 21st century, activating markets for affordable energy services and creating local jobs and inclusive economies. With the strength and commitment of more than 200 members worldwide, ARE works to improve market conditions for off-grid renewable energy and promotes its members' business development through market intelligence, policy support, B2B and B2F events and targeted marketing approaches.

Rue d'Arlon 69-71 1040 Brussels Belgium



http://www.ruralelec.org d.mohapatra@ruralelec.org

Morningstar Corporation

Presenting our new Genstar DC System Controller. It integrates high-power MPPT charging with intelligent load control, external charge management and direct lithium battery communication. Our new Off-Grid inverter portfolio will also be shown.

8 Pheasant Run, Newtown, PA 18940 USA



https://www.morningstarcorp.com info@morningstar.com

Self Chill – Modular Cooling Solutions

SelfChill is an innovative concept for modular cooling solutions powered by solar.

Efficient, high-quality core components can be used to create a wide variety of system configurations for cooling milk, fruit, vegetables or fish.

SelfChill cooling systems can be locally assembled in different sizes for several applications such as cold rooms, milk tanks or ice-makers.

Donaustraße 38 87700 Memmingen Germany



https://www.selfchill.org info@selfchill.org

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tos: Getty Image









Framework program

Off Grid Water Alliance

The Off Grid Water Alliance will hold a session on offgrid water topics. Together with numerous members and supporters, the initiator Dr. Hamed Beheshti of Boreal Light / WaterKiosk is driving forward projects for drinking water supply in East Africa in particular.

Education Mile / Off Grid Challenge

Universities and institutes participate at the Education Mile presenting their projects and study programs. Some of their Bachelor and Master thesis will pitch at the Off-Grid challenge during the second day (December 2, 2022) in the Education Mile Area. The winners will be awarded at the end of the OFF-GRID Expo+Conference.

Off-Grid Sale

Parts, aids, components or finished products: The on-site sale offers a wide range of products - at favourable prices. The revenues are donated to KarEn e.V.. The sale is organized by Phaesun GmbH.



Evening event by OFF-GRID Expo + Conference

At the end of the first day of the event Messe Augsburg invites you - the off-grid community - to a social get-together on-site in hall 7. An invitiation is required for the participation.

OFF-GRID Expo + Conference 2022 in hybrid format

The hybrid concept is offering the opportunity to meet in person but also to meet on the digital platform Talque. Attendees of the conference can follow the program on-site or virtually. More details to the digital platform Talque and modus of onboarding see page 6.

B2B Matchmaking

The B2B Matchmaking session will enable participants to connect with potential partners, public and private investors, policymakers and others. Physical sessions will be held on both days in hall 7 at the Meet & Greet Area. More details in the program on page 13. During the entire event there is the opportunity to use the online B2B Matchmaking on the platform www.talque.com.



Program

CET 09.30 a.m. - 06.00 p.m. live in Augsburg and via livestream on www.talque.com

December 1,	2022			
09.00 a.m.	Opening OFF-GRID Expo, hall 7			
09.30 a.m.	Opening & Kick-off OFF-GRID Conference Plenum hall 7			
09.45 a.m	Keynote Ms. Ministerial Director Dr. Ulrike Wolf (Bavarian Ministry of Economics)	Com		
10.00 a.m.	Session I Women entrepreneurs as key drivers in the off-grid renewable energy sector, supported by Afrika Verein der Deutschen Wirtschaft e.V.	OFF-GRID Conference digital on www.talque.com	king	7
11.15 a.m.	Coffee-Break - Visit OFF-GRID Expo and networking	MM C	chma	o hall
11.45 a.m.	Session II Decentralised renewable energy and e-mobility	gital on	Online B2B Matchmaking	OFF-GRID Expo hall 7
01.00 p.m.	Lunchbreak - Visit OFF-GRID Expo and networking	ce di	ine B	FF-GR
02.00 p.m.	Session III Energy Storage Solutions - providing uninterrupted energy supply	onferen	Onl	Ō
03.15 p.m.	Presentation of Premium- und Eventpartners (exhibitors)			
	Wrap-up day 1	FF-GF		
03.45 p.m.	Coffee-Break - Visit OFF-GRID Expo and networking	0		
04.15 p.m.	Matchmaking-Session supported by UNIDO ITPO Germany - Africa Special, Meet & Greet Area, hall 7			
05.15 p.m.	Off-Grid Water Alliance: OffGrid Water, opportunities and challenges			
06.00 p.m.	OFF-GRID Evening get-together			

Subject to change

Program

CET 09.30 a.m. - 04.00 p.m. live in Augsburg and via livestream on www.talque.com

December	2, 2022				
09.00 a.m.	Opening OFF-GRID Expo, hall 7				
09.30 a.m.	Opening & Kick-off OFF-GRID Conference	E			
09.35 a.m	Session IV Powering innovative cooling applications with off-grid technologies	alque.con	bu		allenge
10.50 a.m.	Presentation of Premium- und Eventpartners (exhibitors)	ww.t	maki	all 7	D Cha
11.10 p.m.	Session V Water-Energy-Food WEF - A pioneering nexus for global development	OFF-GRID Conference digital on www.talque.com	Online B2B Matchmaking	ID Expo hall 7	Education Mile / OFF-GRID Challenge
12.30 p.m.	Lunchbreak, Networking & Exhibition	digi	ine B	OFF-GRID	Vile /
01.30 p.m.	Matchmaking-Session supported by UNIDO ITPO Germany - General and Iraq Delegation, Meet & Greet Area, hall 7	erence	onl	Ö	ation [
02.30 p.m.	Session VI Scaling up off-grid renewable energy financing for last-mile rural electrification	sRID Con			Educ
03.45 p.m.	OFF-GRID Challenge Award	OFF-0			
04.15 p.m.	Wrap-up and Closing				
	End of OFF-GRID Expo + Conference 2022				

Subject to change

Conference Day 1 - 01.12.2022

Welcome Remarks Mr. Lorenz A. Rau, CEO Messe Augsburg Mr. David Lecoque, CEO ARE & Kick-off 09.30 a.m. **Moderators** Ms. Ekaterina Léaustic, 09 45 a m Keynote Ms. Ministerial Director Dr. Ulrike Wolf. Bavarian Ministry of Economics 10 00 a m Session I Ms. Khadi Camara, Afrika Verein der Deutschen Wirtschaft e.V. Women entrepreneurs as key drivers in the off-grid renewable energy sector (German-African Business Association) The electrification of rural communities offers an unprecedented opportunity to expand economic opportunities for women, by creating an array of social and economic benefits. Evidence has demonstrated that women entrepreneurs are strong agents of change, and offgrid solutions have enabled unprecedented opportunities for women in rural communities Live & digital by improving both women's incomes and decision-making power in local communities. Despite the appeal of the sector, women face persistent barriers related to access to funding, networks, and lack of supportive policies for gender equality. Removing these barriers is essential to meet the growing demand for skills in an expanding off-grid renewable energy industry. Speakers will discuss the exciting potential in expanding women's entrepreneurship in the renewable energy sector in the off-grid setting. Ms. Mukabanji Mutanuka Head of Business Development- Southern Africa, **Engle Energy Access** Ms. Francesca Oliva COO, Equatorial Power Mr. Tom Stevenson Energy and Climate Analyst, Practical Action Ms. Eileen Phoebe Lara Chairperson and Co-founder. Women Renewable Energy Association Uganda Ms. Laura Corcoran Chief Business Development Officer, Aptech Africa Ltd Coffee-Break - Visit OFF-GRID Expo and networking 11.15 a.m.

CET 09.30 a.m. - 06.00 p.m. live in Augsburg and via livestream on www.talque.com

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Lecture program

Conference Day 1 - 01.12.2022

CET 09.30 a.m. – 06.00 p.m. live in Augsburg and via livestream on www.talque.com

	11.45 a.m.	Session II Decentralised renewable energy and e-mobility	Mr. Deepak Mohapatra, ARE Mr. Robin Kuranel, UNIDO ITPO Germany Mr. Michael Schmidt, UNIDO ITPO Germany
		When it comes to mobility in these rectly opt for low emission/eco-frier	e key to success in many emerging economies. regions, there is an enormous potential to di- ndly technologies to meet demands. This comes res with a large proportion of these vehicles
Live & digital		meet its energy requirements which high GHG (greenhouse gas) emission ture and development, rural areas of challenges, which pose a great hind of the areas. E-mobility bridges such transportation means, while also put the fuel dependency burden. The se	endant on conventional sources of energy to the contributes to air quality concerns as well as poss. Due to lack of proper transport infrastruc- usually in developing countries face mobility derance to the social and economic development the a gap by providing reliable and affordable roviding a promising alternative that will curb ession will mark the launch of the new publica- o Germany and ARE featuring discussion around
		Mr. Oliver Higson	CEO, Anywhere.Berlin GmbH
		Mr. Stefan Trittler	Project Principal, Asantys Systems GmbH
		Mr. Dr. Jürgen Perschon	Founder & Executive Director, EURIST e.V. Euro- pean Institute for Sustainable Transport
		Ms. Shantha Bloemen	Director & CEO, Mobility for Africa
		Mr. Dr. Wolfgang Schade	Co-Founder & CTO, Voltaview
	01.00 p.m.	Lunchbreak - Visit OFF-GRID Exp	o and networking

Conference Day 1 - 01.12.2022

CET 09.30 a.m. – 06.00 p.m. live in Augsburg and via livestream on www.talque.com

	02.00 p.m.	Session III Energy Storage Solutions - provi- ding uninterrupted energy supply	Mr. Peter Rechberger, Cluster Leistungselektronik
		tor. However, the variable generation po provide power 24x7. Energy storage con suitably deployed, gives system operator manage variability in generation and loa	energy sources is a good sign for global power sec- tential from solar and wind makes it challenging to nes as a key to such challenges. Energy storage, if is a flexible and fast response resource to effectively d and hence provide uninterrupted power supply. ergy storage" and the vital role it plays in decentra-
gital		Mr. Ralph Stephan	Deputy Director – Global Business Development, AZELIO AB
Live & digital		Mr. Christopher Schöpf	Founder & CEO, e.battery systems GmbH
Live		Mr. Nico Peterschmidt	Co-founder & Managing Director, INENSUS GmbH
		Mr. Mark Kargh	Founder & CTO, Off-Grid Europe GmbH
		Ms. Carla Diaz	COMET
	03.15 p.m.	Presentation of Premium- und Eventpartners (exhibitors)	- Agentur für Wirtschaft & Entwicklung - e.battery systems GmbH - Boreal Light GmbH - Phaesun GmbH - Steca - a KATEK Brand - STUDER INNOTEC
		Wrap-up day 1	
	03.45 p.m.	Coffee-Break - Visit OFF-GRID Expo a	nd networking

Lecture program

Conference Day 1 - 01.12.2022

CET 09.30 a.m. – 06.00 p.m. live in Augsburg and via livestream on www.talque.com

04.15 p.m.	Matchmaking-Session supported by UNIDO ITPO Germany - Africa Special, Meet & Greet Area, hall 7
05.15 p.m.	Off-Grid Water Alliance: OffGrid Water, opportunities and challenges
06.00 p.m.	OFF-GRID Evening get-together

Conference Day 2 - 02.12.2022

CET 09.30 a.m. – 06.00 p.m. live in Augsburg and via livestream on www.talque.com

	09.00 a.m.	Opening OFF-GRID Expo	
	09.30 a.m.	Opening & Kick-off OFF-GRID Conference	Mr. Deepak Mohapatra, ARE Ms. Ekaterina Léaustic, Messe Augsburg
	09.35 a.m.	Session IV Powering innovative cooling applications with off-grid technologies	Ms. Géraldine Quelle, Phaesun GmbH
Live & digital		hoods. In the health sector, more live cooling that enables their distribution not only losses are reduced but also t sed food security and food safety. Da with the intervention from innovative It is therefore essential for global deci- financing towards integrating cooling areas without access to electricity and global south. Speakers will showcase	ision-making institutions to focus on R&D and g technology for those living in rural and remote d cooling. These areas are mostly found in the their solutions and discuss the need for off-grid teed for cooling systems in the most underserved
		Mr. Yusuf Bilesanmi	Role-Founder / CEO, Eja-Ice Ltd
		Ms. Temitope Udo-Affia	Technical Coordinator - Off-grid Regulation and Market Development, GET.Transform
		Mr. Joseph Shreshta	CEO, REVERSE VENDING MACHINE NEPAL PVT LTD
		Ms. Sonja Mettenleiter	COO, SolarCooling Engineering
		Mr. Jeremy Tait	Sustainable Products Director, Tait Consulting GmbH
		Presentation of Premium- und	- Sunfire Fuel Cells GmbH
	10.50 a.m.	Eventpartners (exhibitors)	- Summe ruer Cens GmbH - UNIDO ITPO Germany - Victron Energy BV - WM aquatec GmbH & Co. KG

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Lecture program

Conference Day 2 - 02.12.2021

CET 09.30 a.m. – 04.00 p.m. live in Augsburg and via livestream on www.talque.com

	11.10 a.m.	Session V Water-Energy-Food (WEF) - A pioneering nexus for global development	Mr. Deepak Mohapatra, ARE
		an integrated approach, considerin with each other. The Water-Energy different SDGs that are complex an ways. In this session, the speakers of	Sustainable Development Goals (SDGs) call for g the fact that many SDGs are interconnected -Food (WEF) Nexus answers the call by addressing ad transdisciplinary in integrated and innovative will focus on examples of how using the WEF Nexus ons to human well-being and poverty alleviation by
-ive and digital		Ms. Lucia Kamati	International Business Development Senior Manager, Africa GreenTec AG
ive and		Mr. Manutscher Malakuti	Business Development Manager, BERNT LORENTZ GmbH
		Mr. Dr. Hamed Beheshti	CEO & Co-Founder, Boreal Light GmbH
		Mr. Carlo Taconelli	CEO, EnGreen SRL
		Mr. Simon Zimmermann	CEO & Co-Founder, SOLARBAKERY GmbH
	12.30 p.m.	Lunchbreak, Networking & Exhi	bition
	01.30 p.m.	Matchmaking-Session supported General and Iraq Delegation, Ma	

Conference Day 2 - 02.12.2021

CET 09.30 a.m. – 04.00 p.m. live in Augsburg and via livestream on www.talque.com

02.30 p.m.	Session VI Scaling up off-grid renewable energy financing for last-mile rural electrification	Mr. Jens Jaeger, ARE
	significant progress and, as a result from its current levels. Traditional fi to finance off-grid technologies, be would benefit from off-grid renewa fragile or have inadequate financial financing mechanisms of raising fu SDG7. Therefore, the session will bi lenges and share their insights on h	mpered by insufficient access to energy, despite t, renewable energy finance needs to be scaled up inancing mechanisms are not considered sufficient occuse many isolated and rural communities that able energy technologies are also economically infrastructures. These challenges call for innovative nds in support of rural electrification to ensure ring together expert financiers to address the chal- now new and innovative financial resources can be need the energy goals in the off-grid context.
	Ms. Vivien Barnier	CEO, EnAccess Foundation
	Ms. Lily Beadle	Acceleration Manager, Energy Catalyst
	Mr. Simon Batchelor	Director & Research Coordinator, Loughborough University
	Ms. Preeti Kumari	Project Associate, Oorja Development Solutions India Private Limited
	Ms. Virginia Sibanda	CEO, VIRL Finance Services
03.45 p.m.	OFF-GRID Challenge Award	
04.15 p.m.	Wrap-up and closing	
	End of OEC 2022	

Program status per November 21, 2022 | subject to change Latest update on www.off-grid-expo.com/program

Education Mile / OFF-GRID Challenge

Universities and institutes are represented at the Education Mile with their own exhibition stands. On the 2nd day, the Off-Grid Challenge will take place in hall 7 - C05.

Students will present their Bachelor's and Master's theses in a pitch. A jury of experts will award three winners, who will receive a prize money sponsored by id-eee GmbH & Co. KG, fothermo System AG and Solar Cooling Engineering GmbH.



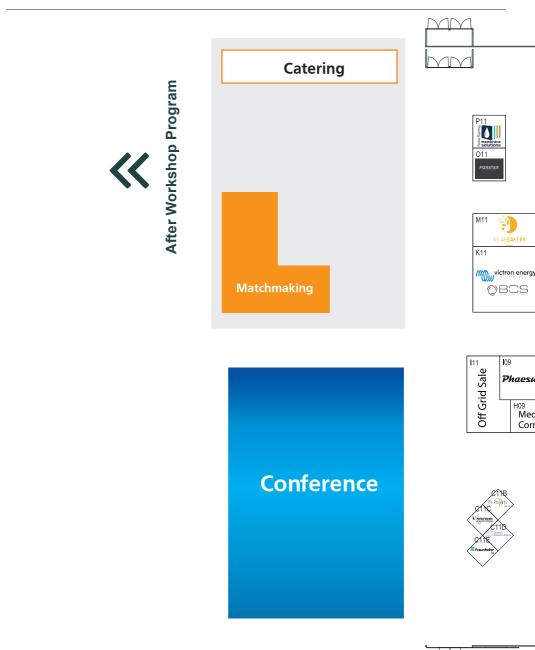
fothermo

Time	Speaker	Торіс	University
09:30-09:45	Ms Janica Bortloff	Economic analysis of a small wind turbine using the example of SAILWIND 12- A dynamic investment calculation with parameter study	HTWG Konstanz
09:45-10:00	Mr Benedikt Sporer	Development of cooling for accumulators	HS Kempten
10:00-10:15	Mr Magnus Erne, Jonas Dress, Luca Badstuber, Matthias Hirschle	Multistage - charge controller	HS Ulm
10:15-10:30	Mr. Mohamed Diop	Preliminary study of green hydrogen production potential in Senegal	HNU / Gas- ton Berger University in Senegal
10:30-10:45	Mr. Tribikram Mishra	Islanding detection and verification in a DC Network integrated with distributed generations	Uni Oldenburg
10:45-11:00	Mr. Ahmad Allahham	Fully automated solar irrigation systems based on Soil`s Moisture	Uni Oldenburg
11:00-11:15		Break	

Time	Speaker	Торіс	University
11:15-11:30	Mr. Md Abu Saleh	Optimal placement of blackstart capab- le unit in medium voltage future smart off-grid network for power restoration	Uni Oldenburg
11:30-11:45	Ms. Eleonora Nezgodinski	Possibility of household resilience through balcony power stations?	HS Ulm
11:45-12:00	Mr. Mathis Kremling	Agri-PV-Hopfenanlage - Self-sufficiency through intelligent land use	HS Ulm
12:00-12:15	Mr. Tematio Nankeng, Stephan Brice	MEXLE-Pvlab	HS Heilbronn
15:45	Off Grid Awarding Cerem	ony	



Hall plan





Partners / Exhibitors

Premium partners
Steca - A KATEK Brand
STUDER INNOTEC SA
Victron Energy BV
Event partners
<mark>Event partners</mark> Agentur für Wirtschaft & Entwicklung
•
Agentur für Wirtschaft & Entwicklung

UNIDO ITPO Germany

WM aquatec GmbH & Co. KG

Conference partner

Alliance for Rural Electrification

Specialist and network partners

Afrika-Verein der deutschen Wirtschaft e.V. (German-African Business Association)

Bayern Innovativ GmbH

Berlin Brandenburg Energy Network e.V.

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

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IHK Schwaben

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29

Exhibitors

Premium partners

Booth number: 102

Founded in 1976 as Steca Elektronik GmbH, today's KATEK Memmingen GmbH has been part of the KATEK Group since 2019. The company develops, produces and distributes high-quality power electronics for household appliances, industry, medical and automotive technology.

Mammostr. 1 87700 Memmingen | Germany www.katek-group.com info.katek-mm@katek-group.com +49 (0)8331-85580

Booth number: 101

Studer Innotec is a 35-year-old company manufacturing in Switzerland inverters, inverter/chargers, MPPT solar charge controllers and accessories for all kind of batteries. In 2021, we launched the next3, hybrid 16 kVA 3ph inverter with integrated 16kW high-voltage MPPT solar charge controller.

Rue des Casernes 57 1950 Sion | Switzerland www.studer-innotec.com info@studer-innotec.com +41 (0)27-2056080

1351 JG-Almere-Haven | Netherlands www.victronenergy.de sales@victronenergy.com

Booth number: K11

The Dutch company Victron Energy B.V. has been active in the field of energy supply for 45 years and is on the road in more than 60 countries worldwide. The MultiPlus, Quattro and Phoenix inverters as well as Smart Solar Chargers are used there.

De Paal 35 +31 (0)36-5359700







Exhibitors

Event partners



The Agency for Business & Development is funded by the German Federal Ministry for Economic Cooperation and supported by the Gesellschaft für internationale Zusammenarbeit GmbH (GIZ) and the Deutsche Investitionsund Entwicklungsgesellschaft (DEG).

Agentur für

Wirtschaft & Entwicklung

Since 2016, it has been the central point of contact for German and European companies looking to increase their economic engagement in developing countries. The AWE informs and advises private-sector actors on possible funding and financing opportunities and networks you with the relevant organizations and institutions. Furthermore, the AWE Helpdesk for Business and Human Rights supports and advises on the implementation of human rights due diligence processes within corporate supply chains.

Am Weidendamm 1A 10117 Berlin | Germany www.wirtschaftentwicklung.de



Booth number: O01

Boreal Light GmbH is a Berlin based company specialized on enewable energy solution for water treatment facilities. The company designs and manufactures affordable solar water desalination systems for off-grid communities around the globe. Systems manufactured by Boreal Light are already installed in 11 countries around the world and are capable of delivering high quality hygiene drinking, irrigation, fish farm and sanitation water from any kind of high saline and polluted water resources. Powered fully by solar, simplicity of the design and affordability of the cost of the systems manufactured by Boreal Light are the three great competences the company is proud of.

Schichauweg 52 12307 Berlin | Germany www.winture.de



Booth number: H02

e.battery systems develops and produces individual high-performance electronics, cell cooling systems and energy storage systems. We research the future and develop innovative applications for electromobility and second-life concepts.

Holzriedstraße 33 6922 Wolfurt | Austria www.e-batterysystems.com info@e-bs.at +43 (0)5574-73275 **Exhibitors**

Booth number: K05

Booth number: K04

Sunfire-Remote is the ideal off-grid power generator for oil & gas, security & safety and telecommunication industries. As a durable and robust fuel cell solution, it brings autonomy to critical infrastructures.

Lindenstr 45 17033 Neubrandenburg | Germany www.sunfire-fuel-cells.de info@sunfire-remote de +49 (0)395-351733

> https://itpo-germany.org itpo.germany@unido.org +49 (0)228-8150550

73268 Erkenbrechtsweiler | Germany

Platz der Vereinten Nationen 1 53113 Bonn | Germany

Booth number: M08

sector."

WM aquatec is a medium-sized company specialising in decentralised/ mobile water treatment. Our main focus is water disinfection by means of UV-C led (12VDC) as well as drinking and industrial water preservation without electricity with Silvertex®.

developing countries and economies in transition. It is ITPO Germany's

vision to make investments and sustainable technologies a catalyzer

in achieving the sustainable development goals by 2030. The office

contributes to this vision through the mobilization of knowhow, expertise, technology and capital, while working closely with the private

Conference partner

Booth number: N04

The Alliance for Rural Electrification (ARE) is an international business association that promotes a sustainable decentralised renewable energy industry for the 21 st century, activating markets for affordable energy services, and creating local jobs and inclusive economies.

Rue d'Arlon 69-71 1040 Brussels | Belaium www.ruralelec.org l.ng@ruralelec.org +32 (0)2400-1000

Uracher Str. 22

www.wm-aquatec.de

info@wm-aquatec.de +49 (0)7026-9321090







🛦 sunfire

Specialist and network partners

Booth number: C11C



Afrika-Verein der deutschen Wirtschaft (German-African Business Association) is the nationwide, cross-industry foreign trade association of German companies and institutions interested in economic cooperation with the states of the African continent. As an excellently networked link, it promotes exchange between German and African representatives from business and politics. In doing so, he advocates a new image of Africa in Germany: Africa as a continent of opportunity.

The association informs about countries and markets in Africa, establishes contacts and represents the interests of its members at home and abroad. The currently approx. 600 members are provided with a comprehensive range of services, which they can access at any time. Through a close network of contacts in Africa, the Africa Association of German Business feels the pulse of the markets. Members thus hear about new developments and business opportunities in a timely and targeted manner.

Bleichenbrücke 9 20354 Hamburg | Germany post@afrikaverein.de www.afrikaverein.de +49 (0) 40 41 91 33 0

bayern () innovativ

As a company for innovation, technology and knowledge transfer in Bavaria we provide tailor-made innovation services, especially for SMEs, implement their ideas more quickly and successfully. We network companies with universities, research institutes and many other institutions. The focus is on new developments in the fields of digitization, energy and health, Material and mobility. Thinknet Bayern combines experts and expert knowledge with modern methods of innovation and technology management. In addition, we actively support our customers and partners in marketing their products and in accessing and developing new markets. We also provide competent advice on funding opportunities, property rights, international projects or on business models in the cultural and creative industries. Am Tullnaupark 8 90402 Nürnberg | Germany www.bayern-innovativ.de info@bayem-innovativ.de +49 (0)911 206710 The Berlin-Brandenburg Energy Network e.V. (BEN) is the association of renewable energy and related scientific institutions in the capital region. We act as an intermediary between business, politics, and science to promote solutions for the effective implementation of the energy transition in the region and support entrepreneurial activities of the industry at national and international level with Urban Innovation.

Albrechtstraße 22 10117 Berlin | Germany www.bbenergynetwork.de info@bbenergynetwork.de



BERLIN ENERGY

energie.blog - The World of Smart Energy sees itself as an info platform for people interested in specialist information in the fields of energy, heat and mobility transition, renewable energies, energy efficiency, sector coupling, IT/IoT/digitization, innovation, etc. All companies, organizations and actors who are active in these and related fields, who want to provide factual information and stimulate the expert discourse are welcome as active contributors. energie.blog is media partner of the OFF-GRID Expo+Conference.

eneravpedia

Energypedia is a wiki platform for collaborative knowledge exchange on renewable energy, energy access, and energy efficiency topics in developing countries. Started in 2007 as an internal GIZ platform for Energizing Development, energypedia was outsourced in 2012 as an independent non-profit organization. In the last 10 years, energypedia has established itself as a reputed source of RE information.

Our vision is a world where everyone has access to sustainable energy services. Our mission is to empower energy practitioners worldwide by fostering free knowledge exchange, global collaboration and mutual learning on renewable energy, energy efficiency and energy access. Sandforther Straße 51 33803 Steinhagen | Germany www.energie.blog/ info@energie.blog

König-Adolf Str. 12 65191 Wiesbaden | Germany www.energypedia.info info@energypedia.info

Specialist and network partners



ERNEUERBARE ENERGIEN DAS MAGAZIN FÜR WIND-SOLAR- UND BIO'RMERGE

photovoltaik - Solar technology for installers, planners and architects presents the essential facts and figures of the markets in Germany, Austria, Switzerland and South Tyrol in a clear and concise manner. Essential cornerstones of success are the technology-focused, target group-oriented reporting, independent, market-accompanying reports and product overviews, and the opening of new markets in electricity storage, electric heat technology, electricity trading, hybrid systems and electromobility.

ERNEUERBARE ENERGIEN provides information on the latest industry trends in exciting journalistic magazine articles. The focus is on new technical developments from the research laboratories and design offices of the industry. Technical articles and interesting facts about products, people and companies in the renewable energy sector round off the topics.



GOGLA is the global association for the off-grid solar energy industry. Established in 2012, GOGLA now represents over 180 members as a neutral, independent, not-for-profit industry association. Its mission is to help its members build sustainable markets, delivering quality, affordable products and services to as many households, businesses and communities as possible across the developing world. The products and solutions that GOGLA members sell transform lives. They improve health and education, create jobs and income opportunities and help consumers save money.

Johan Cruijff Boulevard 91 1101 DM, Amsterdam Zuid-Oost Netherlands www.gogla.org info@gogla.org

Forststr. 131 70193 Stuttgart Germany www.gentner.de



The Chamber of Industry and Commerce for Ostfriesland and Papenburg (IHK) represents the interests of the companies in the districts of Aurich, Leer and Wittmund as well as in the cities of Emden and Papenburg as an organization of economic self-administration. All companies, whether they are industrial, commercial or service companies, are obliged by law to be members of the IHK. This makes the IHK a strong community of solidarity, which can act in a balancing way for the interests of all its members. More than 30,000 companies are members of the IHK. Around 1,400 volunteers are involved on a voluntary basis - as examiners, experts, committee, general meeting or presidium members. The general assembly is the highest decision-making body of the IHK. There, 50 entrepreneurs determine the strategic goals of the IHK work. These goals are implemented by the approximately 60 full-time employees of the IHK.



The IHK Schwaben has more than 140,000 member companies and is the self-governing body of the economy. The work of the chamber includes the representation of its members' interests, the promotion of regional companies and the provision of services on behalf of the state, e.g. the organisation of training.

As the Business Promotion Agency of the State of Bavaria, Invest in Bavaria supports companies from Germany and abroad and from a wide range of sectors in finding the ideal location in Bavaria, so that they can be successful right from the moment they settle here. Stettenstraße 1+3 86150 Augsburg | Germany www.schwaben.ihk.de info@schwaben.ihk.de

Prinzregentenstrasse 22 80538 Munich | Germany www.invest-in-bavaria.com +49 89 24210-7501

Ringstraße 4 26721 Emden | Germany www.ihk-emden.de info@emden.ihk.de

Specialist and network partners

pv magazine group

Since the publication of its first magazine in 2008, pv magazine has evolved into the top international publication for solar decision makers and is now leading the global solar media market.

Over the past decade, pv magazine has expanded its global network and reach, to become the number one knowledge platform in the solar industry. The digital media portfolio from pv magazine complements its print publications, with a dynamic and fast-growing suite of regional news platforms, e-newsletters and a range of interactive, highly engaging and popular events.

REPIC 🛡

REPIC is an interdepartmental platform of four Swiss federal offices. Its aim is the transfer of knowledge and technology for the dissemination of renewable energies, energy and resource efficiency in developing and transition countries.



The Bavarian Solar Energy Promotion Association (SeV) was founded in 1997 as a non-profit organisation in order to reintroduce income generated by the 1 MW PV system Solardach München-Riem at the Munich Trade Fair Centre into the promotion of renewable energies.

Startup|Energy

Startup | Energy is a joint initiative of the University of Freiburg and the Solar Energy Foundation (Freiburg) to promote regional and international exchanges between start-ups in the field of decentralised, renewable energy supply in Germany and East Africa. Kurfürstendamm 64 10707 Berlin | Germany www.pv-magazine.com/

Waldweg 8 CH-1717 St. Ursen | Swiss www.repic.ch/repic-en info@repic.ch +41 (0)26 494 00 30

Friedrich-List-Str. 88 81377 München | Germany www.sev-bayern.de info@sev-bayern.de +49 (0)89-27813428

Basler Landstr. 8 79111 Freiburg | Germany www.startup-energy.org mail@startup-energy.org +49 (0)761 888 573 10

Partners / Exhibitors

Wipro GmbH is located in the renowned Technologie Zentrum Dresden since it was founded its foundation in 2002. Our core business is the development of micro projects for Sub-Saharan Africa in the renewable energies. We realize the projects in connection with the NGO with partial funding from the Saxon State Chancellery, Federal Ministry of International Cooperation and larger foundations. Our focus in Africa is on Anglophone Africa and the East African community, i.e. Tanzania, Uganda, Rwanda, Ethiopia.

Exhibitors

Booth number: 008

Africa GreenTec AG, a German-African joint venture, provides, implements, operates and finances German energy and water technologies in Africa. Its vision is to develop Africa to 100% independence from fossil fuels. Außenliegend 19 63512 Hainburg | Germany www.africagreentec.com info@africagreentec.com +49 (0)6182 8438717

Booth number: P11

🞇 | Africa Technology Partners

With a focus on water and waste water management, sanitation and solar-irrigation, Africa Technology Partners offers environmental technologies and innovative solutions engineered in Germany and beyond to countries in Sub-Saharan Africa. Werftstr. 5 20457 Hamburg | Germany www.africatechnology-partners.com/ info@africa-tp.com +49 (0)40-59371434





Gostritzer Str. 63 01217 Dresden | Germany info@wipro-dresden.de www.wipro-dresden.de +49 (0)351 871 8356

Exhibitors

Booth number: C11C

Afrika-Verein der deutschen Wirtschaft (German-African Business Association) is the nationwide, cross-industry foreign trade association of German companies and institutions interested in economic cooperation with the states of the African continent. As an excellently networked link, it promotes exchange between German and African representatives from business and politics. In doing so, he advocates a new image of Africa in Germany: Africa as a continent of opportunity.

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Bleichenbrücke 9 20354 Hamburg | Germany www.afrikaverein.de/ post@afrikaverein.de +49 (0)40-4191330

Christinen Str. 35 10119 Berlin | Germany www.anywhere.berlin forgetroads@anywhere.berlin

Booth number: K04

Africa. Deliver Wild. Forget Roads.

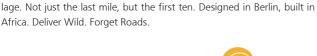
Booth number: K04

Asantys is a solar system integrator specialized in hybrid and solar solutions for your rural electrification projects Planning, worldwide EPC, maintenance - we would be happy to assist you with 15 years off-grid market know how and experience.

Am Schneitbach 12 77716 Fischerbach-Hofstetten Germany www.asantys.com nicolas.rohrer@asantys.com +49 (0)7832-9992210



Afrika-Verein er deutschen Wirtschaft Energy



Exhibitors

Booth number: L01

Since 1899 BAE stands synonym for reliability in the market for industrial lead batteries. BAE excels in its customer orientation and quality is our hallmark. Nowadays the core business is the production of reliable batteries for stationary and renewable energy applications.

Booth number:C11D

The BayFOR provides comprehensive advisory services on EU research and innovation funding and can assist you to put together your application and identify suitable project partners.

Booth number: R02

(B)energy provides a ready to implement biogas business to local distributors incl. technology, training, IT-service tools, marketing material, etc. It offers a business package that consists of technical components for household biogas: biogas digester, biogas backpack and biogas stove. Designed for business implementation it includes a whole service infrastructure with digital tools, online trainings, marketing collateral, technical guides etc. With the unique digital tools it is possible to keep track of installations to guarantee the functionality of (B)energy systems. The distributor role is suitable for any business man or women looking to take responsibility in the local energy sector without foreign aid or carbon finance.

Booth number: C8D



Wilhelminenhofstr. 69/70 12459 Berlin | Germany www.bae-berlin.de/ sales@bae-berlin.de +49 (0)30 53001-0

Prinzregentenstr. 52 80538 München | Germany www.bayfor.org info@bayfor.org +49 (0)89-99018880

Westerwaldstr.11 56335 Neuhäusel | Germany www.be-nrg.com info@be-nrg.com



energy





Booth number: 106

International Logistics company with focus on Africa. 23500 employees in Africa with own offices in 45 countries in Africa. Worldwide in 106 countries and 607 locations



BOS AG is a German manufacturer of modular storage systems with a focus on modern lithium technology and intelligent load control. As well as expert in bankable off-grid solutions with products from 3Wh - 10kWh, remote monitoring and PAYG access.

Booth number: K04

"United Electric Vehicles AG" (UEV) is aiming to run a platform where companies and partners from all around the world can work together to foster a common aim: Electro Mobility. This common aim is to expand the vital manufacturing infrastructure of electric vehicles in emerging economies with local content to envision a future of zero-emission and unlimited mobility. A global e-Community!

Cargo City Süd Geb. 571 60549 Frankfurt | Germany www.bollore-logistics.com info@bayfor.org +49 (0)69-697155127

Böttgerstr. 2/2 89231 Neu-Ulm | Germany www.bos-ag.com contact@bos-ag.com +49 (0)731-72544107

> Kurfürstendamm 119 10711 Berlin | Germany stefan.simon@ corporate-energies.com

Erkrather Str.401 40231 Düsseldorf | Germany www.de.empo-ni.de office@empo-ni.de +49 (0)211-36184864

Booth number: K04

EMPO-NI off-grid solutions is an innovative German company that develops and produces in Germany solar battery chargers and solar direct drives for irrigation, water supply, productive activity and food processing for use in off-grid or poorly served areas worldwide.

With our well thought-out, solid devices and clever applications, livelihoods can be secured, small businesses developed, added value generated and thus self-confidence and social security secured. You can find more at www.empo-ni.de



BOLLOR



off-grid soluti

Exhibitors

Booth number: H06

We are a non-governmental organisation promoting policies that improve the environmental, social and economic sustainability of transport and mobility around the world. Our work focuses on the relation between transport and CO2 emission reduction, transport and the SDGs, Poverty Alleviation, Environmental Protection, Road Safety and Freight. EURIST is based in Hamburg, Germany's second biggest city and economic hub for northern Europe. We work with an extensive network of national and international partners.

Booth number: O11

Forster Individual Batteries Always the right battery for your application In order to optimally meet or even exceed all requirements of previous batteries with lithium batteries, FORSTER INDIVIDUAL BATTERIES has divided and matched the batteries into different series. Depending on the area of application and requirements, the batteries in these series are designed differently and specially adapted to the needs. Don't just choose any lithium battery, check the application and select the optimised version for your area of application for optimum performance. Gewerbestr. 11 85652 Pliening | Germany www.forster-batteries.de info@forster-batteries.de +49 (0)89 2454181380

Booth number: 006

Fosera, founded in the south of Germany in 2011, focusses on manufacturing and the provision of solar home systems for rural electrification in the global south. Innovation, repairability and reliability are fundamental to our design process. Beim Mühlbach 3 89171 Illerkirchberg | Germany www.fosera.com info@fosera.com +49 (0)7346-9246973



FORSTER



Weidenbaumsweg 13-151 21029 Hamburg | Germany www.african-ebike.de info@eurist.info +49 (0)40-53278740

fOthermo

Booth number: 004

Hot water through cheap photovoltaic electricity. Off-grid boilers from fothermo revolutionize the heating industry and provide access to hot water all over the world. All at lower costs and without CO2 emissions.

Beim Mühlbach 3 89171 Illerkirchberg | Germany www.fothermo.com info@fothermo.com

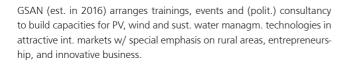


PV-Pro

Booth number: C11E

The Fraunhofer Institute for Solar Energy Systems ISE creates the technical prerequisites for an efficient and environmentally friendly energy supply, both in industrialised and in emerging and developing countries. With its main research areas of energy generation, energy efficiency, energy distribution and energy storage, it contributes to the broad application of new technologies for the transformation of our energy system towards sustainable and renewable sources. Heidenhofstr. 2 79110 Freiburg | Germany www.ise.fraunhofer.de/ +49 (0)761 4588-0

Booth number: C11B



Fontanestr. 32 12049 Berlin | Germany www.pv-pa.com raab@pv-pa.com +49 (0)162-8002010



Booth number: C8B

GREEN Solar Academy offers short courses in the field of solar PV. GREEN has branches in South Africa, Angola, Botswana, Ghana, Mozambique, Namibia and Zimbabwe.

The courses range from beginner to advanced level and the target group is professionals who are already in the PV industry or plan to change careers, with and without technical background. The flagship course is the SuperSolarSchool, a 5-day comprehensive on-site course that covers everything one needs to know about solar energy.

GREEN also offers curriculum, and teaching and learning material development, training of trainers and training implementation in the field of solar energy as a service. In Germany, its partner the German Solar Energy Society DGS offers training for NGOs with a focus on off-grid PV. 8 Kloof Street 8001 Cape Town | South Africa +27 (0)1-03126724

Booth number: C11A



Siemensstr. 24 14482 Potsdam | Germany www.greenjobs.de info@greenjobs.de +49 (0)331-2909865

Booth number: C3B

Heilbronn University of Applied Sciences is one of the the major institutions of Higher Education in Baden-Württemberg with 8,300 Students in Engineering, IT and Economics. It is the regional leader in technology-driven applied research.

Booth number: C3C

Since its foundation in 1994, HNU has become an indispensable educational institution in the Neu-Ulm/Ulm region. More than 3,900 students are now studying at the three faculties of Health Management, Information Management and Economics, as well as at the Centre for Continuing Education. The university has been active on the African continent since 2005 and has integrated all resulting activities in research, teaching, learning, innovation and transfer in the Africa Institute.

tim.fischer@hs-heilbronn.de +49 (0)7131-504290

74081 Heilbronn | Germany

Max-Planck-Str. 39

www.hs-heilbronn.de

Wileystr. 1 89231 Neu-Ulm | Germany www.hnu.de/africa-Institute elmar.steurer@hnu.de +49 (0)731 9762 1400

Booth number: R07

HomeBiogas develops compact biogas systems that upcycle waste into a resource on-site: gas that can be used for cooking and bio-fertilizer to grow healthy crops. Our goal is to improve waste management and renewable energy creation across all urban, rural, off-grid, and commercial sectors

Booth number: 105

HOPPECKE is Europe's largest privately owned manufacturer of industrial batteries. Since 1927, the German company has been developing, producing and marketing high-quality and reliable energy storage systems worldwide.

P.O. Box 1672 4029300 Beit Yanai | Israel www.homebiogas.com +972 (5)232-13426

Bontkirchener Str. 1 59929 Brilon | Germany www.hoppecke.com ulrich.preuss@hoppecke.com +49 (0)2963-61421



HOPPECKE POWER FROM INNOVATION

HomeBiogas



University of Applied Science

Exhibitors

Booth number: P06

Providing fuel cells for backup & true 365-24/7 continuous power supply that can deliver environmentally friendly technology today without compromising commercial viability & operating performance!

HYREF GmbH offers fuel cell systems that can use +bio-/methanol as well as hydrogen+ as an energy source. The Fuel Cells are infrastructure-independent without requiring structural measures, they are flexible in use and can be implemented ad hoc.

With long operating times and scalability from 2.5 -50kW, HYREF's the fuel cells can be used in many applications with an energy source that is readily available and can be used in almost all areas (e.g. in Class 1 environmental protection areas).

Booth number: C8C

The id-eee is an institute of the Ulm University of Technology. The aim of the institute is to support decentralised electrification. id-eee provides technical advice, analyses and supports entrepreneurs in Europe as well as in African and Asian countries

Booth number: R03

The KATADYN GROUP is a globally active group of companies that specializes in the field of self-sufficient food and drinking water supply with the brands Katadyn, Trek'n Eat, Optimus and others.

Booth number: P05

LAGAZEL designs and manufactures a range of sturdy and durable solar equipments for lighting, phone charging and powering small electrical equipments through local production facilities in Burkina Faso, Benin, Senegal and France.

Kniebrecher 1 97355 Castell | Germany www.hyref.eu info@hyref.eu +49 (0)9325-9803238

Beutelreusch 44 89171 Illerkirchberg | Germany www.id-eee.net info@id-eee.net +49 (0)7346-9246981

Pfäffikerstr. 37 8310 Kemptthal | switzerland www.katadyngroup.com +41 (0)44-8392111



KATADYN GROUP

Route de rivas La Grange 42330 Saint-Galmier | France www.lagazel.com contact@lagazel.com +33 (0)427-643051





Booth number: R02

LETZTEST MAKES WATER QUALITY TESTING AN EASY EXPERIENCE FOR ALL As a german company and an internatinal team of water quality experts, we offer unique water testing equipment that is more independent, easier to transport an more reliable in off-grid locations. In addition, with a unique training approach, we support the development of decentralised water testing laboratories as success business models.

Berrenrather Str. 260 50939 Köln | Germany www.letztest.com info@letz-test.com

Booth number: N06

LORENTZ is the global market leader in solar-powered water pump solu-Siebenstücken 24 tions. LORENTZ technology harnesses the power of the sun to provide 24558 Henstedt-Ulzburg | Germany water for people, animals and plants. www.lorentz.de Quite simply - sun. Water. Life.

LORENIZ

marketing@lorentz.de +49 (0)4193-8806700

Epinal Way Loughborough

www.lboro.ac.uk/ enquiries@lboro.ac.uk +44 (0)1509-222222

Booth number: C8A

Booth number: R08

Lumiax conceives, develops and manufactures Photovoltaic system components for user friendly energy solutions. Company is ISO9001 and ISO14001 certified; Supply chain Partners are ISO9000 and ROHS certified/compliant. Lumiax has so far delivered more than 6M of extremely reliable charge controllers, for all sorts of "Off-Grid" applications. We are the leading innovators of Solar Powered Street Lighting systems. Our product offering also including DC/AC inverters provides clean and reliable Energy where, when and in the form required by the application.

NO.192, Zhuzhou Road Qingdao | China www.lumiax.com solar@lumiax.com +86 (0)532-80776757







Lumiax

Booth number: K05

Mission Critical Energy is a specialized provider and integrator of off-grid electrical generating equipment including FlexSCADA Monitoring and control systems designed for off-grid use. 20+ years' experience in harsh and hostile environments!

North French Rd 1801 14068 Getzville, NY | USA www.MissionCriticalEnergy.com Dettmer@MissionCriticalEnergy.com +1 (0)716-2768468

Booth number: H04

Morningstar Corporation is a world-leading manufacturer and supplier of solar charge controllers & inverters. Since our inception in 1993, over four million Morningstar units have been installed in over 100 countries around the world

Booth number: P01

nOa climate stands for investing in the future, for taking actions today that ensure a healthy living for future generations. We imagine a future where the products we offer become the driving force for a cleaner tomorrow.

Booth number: K08

Off-Grid Europe - experts for off-grid energy systems. We offers fully customised, air conditioned power containers as well as the Off-Grid Controller to monitoring and control existing or newly installed offgrid systems worldwide.

8 Pheasant Run PA 18940 Newtown | USA www.morningstarcorp.com info@morningstarcorp.com +1 (0)215-3214457

> Limastr. 22 14163 Berlin | Germany www.noaclimate.com mail@noaclimate.com +49 (0)176-23346899

Vorhof 1 88633 Heiligenberg | Germany www.off-grid-europe.com info@off-grid-europe.com +49 (0)7554-9896935





UFF-GRID EUROPE off-arid energy experts

Booth number: 109



20 exciting years Phaesun has now experienced! Since the company was founded in 2001, Phaesun has specialised in the sale, customer service and installation of off-grid photovoltaic and wind power systems. As one of the world's leading system integrators of off-grid power supply systems, Phaesun offers products from all renowned manufacturers in this industry. International project management, targeted customer training and technical support complete the comprehensive range of services. The main applications of Phaesun solutions are rural electrification, solar-powered water pump systems and off-grid power supply for industrial applications. In addition, the company has access to a worldwide network of partners and distributors. Brühlweg 9 87700 Memmingen | Germany www.phaesun.com info@phaesun.com +49 (0)8331-990420



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Booth number: N05

Booth number:H05

SkySails Power is the first market-ready producer of airborne wind energy systems. The innovative SkySails Power system harnesses the wind's untapped supplies at altitudes of up to 400 meters with a kite. SkySails kites are lightweight and highly efficient and will profoundly alter wind energy's impact in achieving the global energy transition. Wendenstr. 375 20537 Hamburg | Germany www.skysails-power.com power@skysails.de +49 (0)40 702990

48

Exhibitors

Booth number: 108

Learn how to design, produce and assemly your own solar cooling systems for different agricultural value chains. Battery-Free refrigerators, ice-makers, cold rooms or milk tanks can be scaled up and adapted using the same components such as our SelfChill solar cooling units. The SelfChill concept focuses on the use of key components for scalable solar cooling solutions to facilitate local assembly and distribution.

Booth number: M11

SOLARBAKERY is the world's first provider of fully-equipped, mobile and energy-autonomous container bakeries. The sustainably produced baked goods promote local value chains and open up new perspectives. In the next 5 years, SOLARBAKERY aims to establish 100 bakeries in 10 countries, supply 1 million people with food every day and create prospects and jobs for 15,000 people.

Booth number: P11

Founded in 2009, SolarSpring specializes in decentralized water production and distribution. Our product portfolio covers the entire process chain from pumping and cleaning to disinfection, storage and distribution of drinking water.

Booth number: C3E

THU offers business, technical and IT degree programs with a focus on energy and the environment: both for exciting jobs in Germany, but also internationally! In some cases with a mandatory semester abroad. Many courses in English, projects and practice in and with future-oriented companies around the world. Quellenstr. 7a 70376 Stuttgart | Germany www.solarbakery.com info@solarbakery.com +49 (0)160-92314665

Christaweg 40 79114 Freiburg | Germany www.solarspring.de mail@solarspring.de +49 (0)761-6105083

> Prittwitzstraße 10 89075 Ulm |Germany www.hs-ulm.de info@thu.de +49 (0)73150-28158



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SOLABBAKERY



Donaustraße 38 87700 Memmingen | Germany www.solar-cooling-engineering.com info@solar-cooling-engineering.com

Booth number: C3A

The Postgraduate Programme Renewable Energy has been training international engineers and scientists in the field of renewable energy sources since 1987, with a focus on off-grid and countries of the South.

Booth number: C3A

The Postgraduate Programme Renewable Energy has been training international engineers and scientists in the field of reanewable energy sources since 1987, with a focus on off-grid and countries of the South. Carl-von-Ossietzky-Str. 9 - 11 26129 Oldenburg |Germany www.ppre.de hans.holtorf@uol.de +49 (0)441-7983338

> Post Office Box 214 Sunyani |Ghana www.uenr.edu.gh

Booth number: K04

Hinter dem Kirschgarten 30 99510 Wiegendorf |Germany www.voltaview.de info@voltaview.de +49 (0)36462-33880

Wörthstr. 40 89129 Langenau |Germany www.vp-energie.de info@VP-Energie.de +49 (0)176-72240214

VP Energietechnik manufactures innovative photovoltaic kits that are particularly easy, safe and convenient to install and operate. The readyto-plug-in operating units are ready for use in a few minutes and are manufactured in Germany.

Carl von Ossietzky Universität Oldenburg



University of Energy and Natural Resources

Can we help you?



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