

### **CONFERENCE PROGRAMME**

# 5th International Conference on Solar Technologies & Hybrid Mini Grids to Improve Energy Access

September 4 – 6, 2024

www.energy-access-conferences.com





### **WEDNESDAY SEPTEMBER 4**

# SIDE EVENT 1 [Parallel Side Event] Energy Access Innovation Lab Session

When: Wednesday September 4, 09:00 - 12:30

**Hosted By:** Waterloo Institute for Sustainable Energy/ Affordable Energy for Humanity (AE4H) Program (Canada)

& Reiner Lemoine Institute (Germany)

Where: AB03



**The goal of the 'Innovation Lab' is** to develop and stress test a specific set of solutions for rapid implementation in the context of energy access in a disadvantaged community. We will rely on the divers, but, deep expertise that each participant brings to the lab. It is a dynamic learning platform that relies on a multi-disciplinary approach to provision of energy services for the very poor.

The objective of this half day session is to kick-off the S-@ccess conference with an engaging set of in-depth discussions on 'what you want to do next' in the field of energy access. This contrasts with the primary mode of traditional conferences, which asks 'what you have done before'. The goal is to provide open space for new collaborations and project ideas to emerge, which can then be discussed informally throughout the rest of the conference and pursued thereafter.

### **SIDE EVENT 2** [Parallel Side Event]

# An Interactive Workshop on Sustainable Cooling to Unlock Food Security

When: Wednesday September 4, 09:00 - 12:30

Hosted By: Efficiency for Access (United Kingdom)

Where: Sala d'Actes



Efficiency for Access is a global coalition working to promote high-performing appliances that enable access to clean energy for the world's poorest people. The Low Energy Inclusive Appliances (LEIA) programme is Efficiency for Access' flagship initiative. LEIA is funded by UK aid, from the UK government via the Transforming Energy Access platform and the IKEA Foundation.'

The objective of this half day workshop is to facilitate an interactive learning experience where participants improve their understanding of solar cooling technologies. During this workshop, participants will engage in a basic training on solar cooling systems, hear about real-world examples of value chains and business models, and take part in interactive discussions.

By participating in breakout group sessions and exchanging insights, participants will have the opportunity to share innovative ideas and gain a deeper understanding of the varying perspectives of different stakeholders. This workshop will not only provide a platform for learning but also facilitate the establishment of new connections.



	I
13:15	REGISTRATION OPEN
	OPENING SESSION
	Opening Address
14:00 – 14:30	Dr. Andreu Moià, UIB - University of the Balearic Islands (Spain)
	Xavier Vallvé, TTA - Trama TecnoAmbiental (Spain)
	Werner Weiss, AEE-INTEC - Institute for Sustainable Technologies (Austria)
	Diego Viu Domínguez, Director General of Circular Economy, Transition and Climate
	Change, Balearic Islands (Spain)
	<b>Dr. Jaume Carot</b> , Rector of UIB - University of the Balearic Islands (Spain)

	SESSION 1: PROGRESS AND CHALLENGES IN ACHIEVING SDG 7  \$\infty SALA D'ACTES\$  Chairs:  Daniel Zimmerle, Colorado State University, (USA)  Werner Weiss, AEE-INTEC - Institute for Sustainable Technologies (Austria)	
14:30 – 14:45	What is the Real Competition to Solar Mini-grids? Peter Lilienthal, University of Colorado/ EarthSpark International (USA)	
14:45 – 15:00	Solar Electric Cooking: Addressing Upfront Costs Through Innovative Carbon Finance Methodologies Richard Sieff, MECS - Modern Energy Cooking Services (United Kingdom)	
15:00 – 15:15	Health and Safety Support Service Design Phase Gabrielle Coeuille, Carbon Trust (United Kingdom)	
15:15 – 15:30	Discussion	
15:30 – 15:45	Reaching 100% Electrification in LAC Roberto Estevez, GEAPP - Global Energy Alliance for People and Planet (USA)	
15:45 – 16:00	Co-Producing Community Sustainability: Introducing the Let Communities Lead Knowledge Repository Saurabh Biswas, University of Saskatchewan (Canada)	
16:00 – 16:15	Reframing Decentralized Energy Space to Unlock Mini-Grids Development Randa Mrabat, ENGIE Energy Access (France)	
16:15 – 16:30	Discussion	

16:30 -	COFFEE BREAK
17:00	



INDUSTRY FORUM		
INNOVATIVE SYSTEMS AND PRODUCT PITCHES		
	Session Organizer:	
	Ingo Vosseler, S-@ccess Conference Manager (Spain)	
	CEGASA (Spain)	
	ComAP (Czech Republic)	
17:00 – 17:15	ENGIE (France)	
	SMA (Germany)	

	SESSION 2: POSTERS PITCH
17:15 – 18:30	Chairs:
	Samson Mhlanga, National University of Science and Technology, (Zimbabwe)
	Ingo Vosseler, S-@ccess Conference Manager (Spain)

	Increase of Flexibility for Off-Grids by Using AC-Coupling
	Sebastian Seidl, SMA Solar Technology AG (Germany)
	2024 Mini-Grid Global Market: The Data Collection Challenge
	Irene Calvé Saborit, SEforALL - Sustainable Energy for All (Austria)
	Design of a Low-Cost Solar Tracker
	Tovondahiniriko Fanjirindratovo, University of Toliara (Madagascar)
Block A	Techno-Economic Analysis of Wastewater Heat Recovery for a Domestic Laundry
	Washing Machine
	Kago Rabasoma, University of Botswana (Botswana)
	Digital Transformation in Buildings
	Bhekani Ntuli, SANEDI - South African National Energy Development Institute (South
	Africa)
	Solar Power Assisted High Temperature Pyrolysis of Agricultural Waste Streams to
	Produce Clean Cooking Gas
	Dr Abdullah Malik, CTO, Hybrid Gasification Ltd. (United Kingdom)



	Onsset-MG: A Python-Based Tool for Automated Techno-Economic Optimization and Spatial Distribution Design for Mini-Grids
	Andreas Sahlberg, SEforALL (Austria)
	Exploiting Flexibility Under Regulatory Constraints in a Microgrid with Highly Variable Power Profiles
	Radu Plamanescu, Politehnica Bucharest, (Romania)
	Methods to Host Randomly Distributed Large Stochastic Active Loads in Weak Low
Block B	Voltage Distribution Grid with Localized Voltage Control System
DIOCK D	Daniel Boateng, Colorado State University (USA)
	Knowledge Exchange on Microgrids and Joint Development of an Energy
	Management System to Strengthen Energy Supply in Rural Areas in Morocco Based
	on Renewable Energy
	Carlo Mol, VITO - Flemish Institute for Technological Research NV (Belgium)
	Design and Simulation of a Hybrid Renewable Energy System for the Kahroxas Farm
	Community  James Katende, NUST - Namibia University of Science and Technology (Namibia)
	James Rateride, NOST - Natifibia Offiversity of Science and Technology (Natifibia)
	Comparative Study of Two Rural Electrification Communities in Madagascar
	Rakotomahevitra Andrianelison, Institut pour la Maîtrise de l'Energie (Madagascar)
	Soltrain Solar Water Heating Systems (SWHS) in Bhutan Sustainability, Capacity
	Building and Monitoring Results
	Moschik Rudolf, AEE INTEC (Austria)
Block C	Energy Communities in Colombia Offer a New Approach to Providing Sustainability for Rural Electrification Projects
	Dario Mayorga, Global Green Growth Institute (Colombia)
	Solar Cooking Experiences and Practical Aspect to be Investigated
	Celestino Ruivo, University of Algarve (Portugal)
	Enabling access to light for underserved communities Anna de las Heras Carles,
	Signify Foundation (Netherlands)
	Earth Observation – The Chance to Better Understand the Environment
	Elke Kraetzschmar, IABG (Germany)
	Power Systems Expansion Planning Through an Efficient Methodology
	Josep Fanals i Batllori, eRoots Analytics (Spain)
	Market Growth of Solar Thermal in Zimbabwe
Block D	Gilbert Munhuwamambo, National University of Science and Technology (Zimbabwe)
	Assessing the Viability of Mini-Grids in Rural Electrification: Overcoming Challenges
	and Exploring Sustainable Business Models
	Ayodeji Adekanbi, Energy Gist Limited (Nigeria)
	Implementation of Tokenization for Collaborations within the Energy Sector
	Andreu Moià-Pol, UIB (Spain)
	Alialea Mola-rul, Oib (Spaill)

Version:28.08.24



	From Fossil Fuels to Solar Power: A Case Study of Five Haitian Hospitals Léonidas P. Davoust, Energy Cell of MTPTC/UNOPS (Haiti)
	Gender Mainstreaming: Contributing to the South African Energy Sector
	Bhekani Ntuli, South African National Energy Development Institute – SANEDI (South
	Africa)
Block E	Open Source for Energy Access: Opportunities and Challenges
BIOCK E	Clara Donadello, EnAccess Foundation (Netherlands)
	Creation of Solar Lab as an Opportunity to Develop Energy Access
	Heriarivelo Risite, Physics and Environment Laboratory - University of Toliara
	Madagascar (Madagascar)
	Empowering Diversity: Insights from the SOLTRAIN Solar Thermal Course and Gender
	Mainstreaming Initiatives  Rhologi Nauli Couth African National Engage Pour Development Institute (Couth Africa)
	Bhekani Ntuli, South African National Energy Development Institute (South Africa)
	Enhancing Capacity: Exploring Field Experiences in Solar Cold Storage for Tomatoes in Nigeria
	Ana Salvatierra, Solar Cooling Engineering GmbH (Germany)
	Small-scale Solar PV Renewable Energy Certificate Trading as a Secondary Revenue
	Stream for Remote Area Solar PV Mini-Grid to Increase Profitability and Financial
	Sustainability
Block F	Andre Susanto, Inovasi Dinamika Pratama (Indonesia)
DIOCK F	Agrovoltatics for Multi Usage in Georgia
	Dr. Kakha NADIRADZE, Association for Farmers Rights Defense, AFRD (Georgia)
	Comparing Practical Lessons from Mature Access Programmes: Can Countries with
	Low Access Rates Learn from those Targeting the Last Few Percent?
	Kilian Reiche, iidev (Germany)
	Capacity Building Initiatives at Alliance for Rural Electrification
	Deepak Mohapatra, ARE - Alliance for Rural Electrification (Belgium)

18:30 -	WELCOME RECEPTION
20:00	S EXHIBITION AREA – ES MERCAT

Version:28.08.24

7/17



### **THURSDAY SEPTEMBER 5**

SESSION 3: EMPOWERING VILLAGES THROUGH ENERGY ENGAGEMENT  \$\infty \subseteq SALA D'ACTES  Chairs:  Jessica Berneiser, ISE - Fraunhofer Institute for Solar Energy Systems (Germany)  Saurabh Biswas, University of Saskatchewan (Canada)	
9:00 – 9:15	Empowering Communities for Sustainable Energy Transition in Nigeria Paula Preuss, Reiner Lemoine Institut GmbH (Germany)
9:15 – 9:30	SURINAME - Bio-Economy Empowerment in Suriname Indigenous Communities Through Access to Water, Energy, and Telecommunications (Bio-SWEET) Sergio Enrique Ballon, IDB-BID, Interamerican Development Bank (LATAM)
9:30 – 9 :45	It Starts with Power: Zambia's First Rural Electric Cooperatives Frank Bergh, NRECA International (USA)
9:45 – 10:00	Resilient Appliances – Delivering Rural Economic Growth & Emissions Reductions Sumedha Awasthy, CLASP (India)
10:00 – 10:15	Discussion

10:15 – 11:00	COFFEE BREAK AND VISIT TO INDUSTRY AND POSTER EXHIBITION: Posters Blocks A, B, C  \$\times \text{EXHIBITION AREA} - \text{ES MERCAT}\$
------------------	--



SESSI	SESSION 4A - PARALLEL SESSION: POLICY, REGULATIONS AND ENABLING FACTORS	
	S SALA D'ACTES	
	Chairs:	
Ashish S	Ashish Shrestha, ESMAP – Energy Sector Management Assistance Program, World Bank Group (USA)	
	Kilian Reiche, iiDevelopment GmbH (Germany)	
11:00 -	Planning Framework to Support Vanuatu's National Energy Road Map for Achieving	
11:10	100% Renewable Energy to the Grid	
11.10	Janendra Prasad, University of New South Wales (Australia)	
11.10	The Impacts of SOLTRAIN Project in the Namibian Solar Thermal Sector	
11:10 – 11:20	Helvi Ileka, Namibia Energy Institute-Namibia University of Science and Technology (Namibia)	
44.20	Towards a More Justice Oriented Indicator for Access to Electricity in Rural	
11:20 – 11:30	Communities of Latin America: The Guatemalan Case	
11.50	Alonso Alegre-Bravo, Cornell University (USA)	
44.30	The Role of Policy and Regulation in Improving Off Grid Sustainable Energy Access -	
11:30 – 11:40	Mozambique	
11.40	Laura Nhancale, Regulatory Authority of Mozambique (Mozambique)	
11:40 – 12:00	Discussion	
	Building a "Mini Grid" Policy Eco-System to Transition to a Distributed Clean Energy	
12:00 -	Future	
12:10	Larisa Dobriansky, General MicroGrids (USA)	
12:10 – 12:20	Quantifying the Electric and Electronic Waste from Solar PV Technologies in the UEMOA Region	
12.20	Georgios Xenakis, TTA (Spain)	
12:20 -	The Case for Renewable Energy Microfinance Models in Africa	
12:30	James Kakeeto, WWF - World Wildlife Fund for Nature (Uganda)	
	BOAT: A New PPP Modality Designed for a Haiti World Bank Project Allows Fast PV	
12:30 -	Scale-Up Despite Incomplete Information	
12:40	Kilian Reiche, iidev (Germany)	
12:40		
12:40 – 13:00	Discussion	
13:00 -	LUNCH, NETWORKING AND VISIT TO INDUSTRY AND POSTER EXHIBITION	
14:00	ECINCH, NETWORKING AND VISIT TO INDUSTRY AND POSTER EXHIBITION  SP EXHIBITION AREA – ES MERCAT	
14.00		



	SESSION 4B - PARALLEL SESSION: DESIGN ASPECTS & TECHNOLOGY
	<i>☆ AB03</i> Chairs:
	Werner Weiss, AEE-INTEC - Institute for Sustainable Technologies (Austria)  Andreu Moià, UIB (Spain)
11:00 -	Monitoring Results of a Pumped Solar Water Heating System at Katutura Hospital Maternity Ward, Namibia
11:10	Joseph Shigwedha, NEI - Namibia Energy Institute, NUST - Namibia University of Science and Technology (Namibia)
11:10 -	Enhancing Energy Efficiency in Vegetable Dehydration: Active Air Ventilation Leveraging Solar Thermal and PV Technologies
11:20	João Garcia, Lisbon Superior Institute of Engineering (Portugal)
11:20 – 11:30	Understanding Financial Capacity of Mini-Grids Customers through Community Engagement
	Mirko Sowa, Community Energy Toolkit – COMET (Malaysia)
11:30 – 11:40	Best Practices for Sustainable Cold Rooms Powered by Solar Victor Torres, Solar Cooling Engineering GmbH (Germany)
11:40 – 12:00	Discussion
12:00 -	Industrialization of Mini-grids Construction
12:10	Fabien Leterrier, ENGIE Energy Access (France)
12:10 -	Stabilizing Weak Grids through Machine Learning in End of Line Communities in North Africa: An Overview of the SWITCH Project
12:20	Kedar Mehta, Institute of new Energy Systems, Technische Hochschule Ingolstadt (Germany)
12:20 – 12:30	Productive Use of Renewable Energy (PURE) as Driver for a Green Development Stefan Trittler, Asantys Systems GmbH (Germany)
12:30 – 12:40	OptiMG: Optimizing Integrated Mini-Grids for Water-Energy-Food Simone Paolacci, EnGreen / Reiner Lemoine Institut (Italy/ Germany)
12:40 – 13:00	Discussion
13:00 -	THINCH NETWORKING AND VISIT TO INDUSTRY AND DOSTED EVAURITION
14:00	LUNCH, NETWORKING AND VISIT TO INDUSTRY AND POSTER EXHIBITION  \$\times \text{EXHIBITION AREA} - \text{ES MERCAT}



	SESSION 4C - PARALLEL SESSION: CAPACITY BUILDING	
	Chairs:	
	Boaventura Cuamba, Eduardo Mondlane University (Mozambique)	
	Tjut S. Devi, Retraceindo Energi Persada (Indonesia)	
11:00 -	Presentation of the IEA PVPS Task18 Working Group	
11:10	Michael Müller, IEA - International Energy Agency, PVPS TCP Task18	
11:10 -	Empowering Sub-Saharan Africa with Clean Energy: The Role of Open Access Resources	
11:20	Luca Battistella, JRC - Joint Research Centre - European Commission (Europe)	
11:20 –	Energizing Tomorrow: Scaling up Energy Access with Digital Solutions	
11:30	Avia Linke, Reiner Lemoine Institut (Germany)	
11:30 – 11:40	Capacity-Building for Agrivoltaics in Namibia: An Evaluation of a Training Program Jessica Berneiser, Fraunhofer Institute for Solar Energy Systems ISE (Germany)	
11:40 – 12:00	Discussion	
12:00 -	Measuring the Multiplication of Women in the SOLTRAIN+ Project	
12:10	Karen Gibson, So Solar (Pty) Ltd (United Kingdom)	
12:10 -	Walk-In Cold Rooms, a Practitioner's Technical Guide	
12:20	Jakub Vrba, Efficiency for Access / Energy Saving Trust (United Kingdom)	
12:20 –	Global Knowledge Sharing on Energy Access and Renewables	
12:30	Lisa Feldmann, Energypedia (Germany)	
12:30 -	Enhancing Security of Supply Through Grid-Connected Rooftop Solar PV Systems	
12:40	Prof. Imad Ibrik, Energy Research Centre, An Najah National University (Palestine)	
12:40 – 13:00	Discussion	

13:00 –	LUNCH, NETWORKING AND VISIT TO INDUSTRY AND POSTER EXHIBITION
14:00	



	SESSION 5: PRACTITIONERS ROUND TABLES		
	DIFFERENT ROOMS (Refer to conference Info Desk)		
		Chair: Dan Zimmerle, Colorado State University (USA)	
	1.	Topic: LV Microgrids, ELV Meshgrids and Resilient Appliances (SHS): Competing or Complementary Technologies?  Moderator: Roberto Estevez, GEAPP - Global Energy Alliance for People and Planet (USA)  Rapporteur: Peter Lilienthal, University of Colorado (USA)	
	2.	Topic: Digital O&M Tools for Operators: Practical Benefits or Theoretical Barriers?  Moderator: Fabien Leterrier, ENGIE Energy Access (France)  Rapporteur: Magda Moner-Girona, Scientific Consultant JRC (Italy)	
	3.	<b>Topic:</b> Food-Water-Energy Nexus Integrated Approach: Feasibility and Practical Considerations <b>Moderator</b> : Jatin Nathwani, WISE - University of Waterloo (Canada) <b>Rapporteur</b> : Ana Salvatierra Rojas, Solar Cooling Engineering GmbH (Germany)	
14:00 – 15:10	4.	Topic: Empowering Safety: Advancing Health & Safety in Energy Access Moderator: Gabrielle Coeuille, Carbon Trust (United Kingdom) Rapporteur: Christoph Peters, TTA (Spain)	
	5.	Topic: Solar Process Heat for Industry and Agriculture on the Move  Moderator: Werner Weiss, AEE-INTEC - Institute for Sustainable Technologies (Austria)  Rapporteur: Samson Mhlanga, National University of Science and Technology, (Zimbabwe)	
	6.	<b>Topic:</b> 2024 Mini-Grid Global Market: The Data Collection Challenge <b>Moderator:</b> Irene Calvé Saborit, SEforALL (Austria) <b>Rapporteur:</b> Nicolás Larrañaga, SEforALL (Austria)	
	7.	<b>Topic:</b> Optional requested by participants during registration on site. <b>Moderator:</b> TBC <b>Rapporteur:</b> TBC	

	SESSION 6: LESSONS LEARNED	
	Chairs:	
	Gabrielle Coeuille, Carbon Trust (United Kingdom)	
	Roberto Estevez, GEAPP - Global Energy Alliance for People and Planet (USA)	
15:15 – 15:30	Last Mile Electrification in Iberoamerica Roberto Ayala, MAUE (Spain)	
15:30 – 15:45	Off-Grid Solar Mini-Grids in Southern Ethiopia – Loads and Impacts Erik Ahlgren, Chalmers Univ of Technology (Sweden)	
15:45 – 16:00	Solar PV Mini-Grid Best Practices and Mobile Application Based Commissioning: Results from Inspection and Surveys of 400 Solar PV Mini-Grids in Indonesia Andre Susanto, Inovasi Dinamika Pratama (Indonesia)	
16:00 – 16:15	Discussion	

16:15 – 17:00	COFFEE BREAK AND VISIT TO INDUSTRY AND POSTER EXHIBITION Posters Blocks D, E, F  \$\times \text{EXHIBITION AREA} - \text{ES MERCAT}\$



	SESSION 7A - PARALLEL SESSION: TECHNICAL INNOVATIONS  \$\times \text{SALA D'ACTES}	
	Chairs:	
	Dr. Lucas Rafael do Nascimento, Federal University of Santa Catarina (Brazil)	
	Celestino Ruivo, ISE, University of Algarve, ADAI (Portugal)	
17:00 –	Lithium-Ion Batteries in PV Off-Grid Applications	
17:10	Michael Müller, IEA - International Energy Agency, PVPS TCP	
17:10 -	Haitian-Led Innovation in Off-Grid Electrification	
17:20	Roberto Estevez, GEAPP (USA)	
17:20 –	Solar Green-Hydrogen Production for Productive Applications in Isolated Mini Grids and Amazon Decarbonization	
17:30	Dr. Lucas Rafael do Nascimento, Universidade Federal de Santa Catarina (Brazil)	
17:30 -	Hybrid Solar Cooking with Thermal and Green Hydrogen	
17:40	Andreu Moià-Pol, UIB (Spain)	
17:40 – 17:50	Discussion	
	The Role of Green Hydrogen Technology as Seasonal Storage for Island	
17:50 – 18:00	Electrification – Case Studies from the Pacific Islands	
18:00	Katrin Lammers, Reiner Lemoine Institut (Germany)	
10.00	The Power of Predictability: Demonstrating the Value of Marine Hydrokinetic	
18:00 – 18:10	Power Systems in Mini-Grids	
10.10	Brendan Cahill, ORPC (USA)	
	Technological Innovations in Off-Grid Applications: Gasification as the Primary	
18:10 -	Generation Source (Reffect-Africa Project) and Load Management (Water	
18:20	Production and Cold Storage)	
	Yann Deferne, ITC - Canary Islands Institute of Technology (Spain)	
18:20 – 18:30	Empowering Rural Communities with a Decentralised Hybrid Biomass Gasification Solar PV Power Plant	
10.30	Howard Piwang, Mandulis Energy (Uganda)	
18:30 – 18:45	Discussion	



SESSION 7B - PARALLEL SESSION: DESIGN AND OPTIMIZATION		
<i>\$</i> → AB03		
	Chairs:	
	Peter Lilienthal, University of Colorado (USA)	
	Helvi Ileka, NUST - Namibia Energy Institute (Namibia)	
17:00 –	Renewable Energy for Assisting Communities Tool	
17:10	Carmen Ruiz Garrido, acciona.org Foundation (Spain)	
17:10 -	Drinking Water & Community Energy for Suriname: A Collaboration for System	
17:20	Design	
	Grietus Mulder, VITO - Flemish Institute for Technological Research NV (Belgium)	
17:20 –	Techno-Economic Analysis of a Domestic Solar Water Heating System Using System	
17:30	Advisor Model Software	
	Kevin Nnanye Nwaigwe, University of Botswana (Botswana)	
17:30 –	Evaluation of PV Solar-Hydro-Battery Coordinated Dispatch and Control via	
17:40	Controller Hardware in the Loop (CHIL) Studies	
	Daniel Arenas, GE Vernova (Italy)	
17:40 – 17:50	Discussion	
17.50		
17:50 –	Analysis of the Financial and Economic Viability of Medium Voltage Mini Grids for	
18:00	Islands and Rural Electrification in Ghana	
	Seth Agbeve Mahu, Ministry of Energy of Ghana (Ghana)	
18:00 -	Energy Access Explorer - The Digital Public Good to Deliver Climate-Compatible	
18:10	Energy Transitions for Everyone	
	Dr. Dimitrios Mentis, World Resources Institute (USA)	
40.40	Pathway to Sustainable Operation and Performance of Mini-grids: Lessons Learned	
18:10 – 18:20	from Namibia  Portha I wakatara Institute of New Energy Systems, Technische Hechschule	
10.20	Bertha Lwakatare, Institute of New Energy Systems, Technische Hochschule Ingolstadt (Germany)	
	Understanding and Reducing the Environmental Life Cycle Emissions of a Solar-	
18:20 – 18:30	Powered Cold Room	
	Stuart Walker, University of Sheffield / Efficiency for Access (United Kingdom)	
18:30 – 18:45	Discussion	

14/17



#### SESSION 7C - PARALLEL SESSION: FROM MARKET PLANNING TO BUSINESS MODELS SALA DE GRAUS B **Chairs:** Richard Sieff, MECS - Modern Energy Cooking Services (United Kingdom) Ashish Shrestha, ESMAP – Energy Sector Management Assistance Program, World Bank Group (USA) The Impacts of Remote Monitoring on Improving Services for Health Facilities 17:00 -**Electrification in Benin** 17:10 Magda Moner-Girona, JRC (Italy) The Agricultural Cold Chain Access Planning Tool (AgCAP) 17:10 -17:20 Andreas Sahlberg, SEforALL (Austria) A New Solar Electricity Access Model for Rural Malawi Centered on Clean Cooking 17:20 -17:30 Robert D. Van Buskirk, Solar4Africa.org (USA) Smart Business Models and Incentive Schemes to Unlock Private Investments in 17:30 -**First-Mile Solar Cooling** 17:40 Dr. Georgia Badelt, GeoCode International GmbH (Germany) 17:40 -Discussion 17:50 Integrated Energy Planning - The Key to Strengthening the Utilization of Mini-Grids 17:50 for eCooking 18:00 Richard Sieff, MECS - Modern Energy Cooking Services (United Kingdom) **Mutual Gain of Electric Markets and Agricultural Microgrids** 18:00 -Pierre Damien Uwitjie, University of Rwanda Chalmers University of Technology 18:10 (Rwanda) **Empowerment Through Appliances: Insights from the Humanitarian Energy Sector** 18:10 -18:20 Liya Bensy Thomas, Efficiency for Access / Energy Saving Trust (United Kingdom) Community Ownership Models for Decentralised Renewable Electricity Systems in 18:20 the Global South - Lessons for Nigeria 18:30 Sophia Schneider, Wuppertal Institute for Climate, Environment and Energy (Germany) 18:30 -Discussion 18:45

20:30	CONFERENCE DINNER WITH POSTER AWARD  **RESTAURANTE CA N'EDUARDO - C/ Contramuelle Mollet, 3, 07012 Palma, Balearic Islands  Jatin Nathwani, WISE - University of Waterloo (Canada)  Helvi Ileka, NUST - Namibia Energy Institute (Namibia)  Kilian Reiche, iiDevelopment GmbH (Germany)
-------	---



## FRIDAY, SEPTEMBER 6

	SESSION 8: OPERATION ASPECTS	
	SALA D'ACTES	
	Chairs:	
	Carsten Hellpap, Energy Consultant (Germany)	
	João Nuno Garcia, Polytechnic Institute of Lisbon (Portugal)	
9:00 -	FMEA and Quality Inspection of Solar Thermal Installations in Soltrain+ Project in Zimbabwe	
9:15	Samson Mhlanga, National University of Science and Technology (Zimbabwe)	
9:15 –	Enhancing Electricity Consumption Prediction in Operational Mini-Grids Through Stochastic Simulation Modelling	
9:30	Carlos Guerrero Lucendo, VITO - Flemish Institute for Technological Research NV (Belgium)	
9:30 – 9:45	Mini-Grid O&M Managerial Models for Community Infrastructures In Refugee Settlements And Their Host Communities. Alianza Shire's Dolo Ado Project Approach Review	
9:45	Sonia Ramos Galdo, Centro de Innovación en Tecnología para el Desarrollo Humano - itd UPM (Spain)	
	PROTEO: The Last Mile Service Management System	
9:45 – 10:00	Manuel Alberto Pastor Gutiérrez, acciona.org, The Energy and Water Foundation (Spain)	
10:00 – 10:15	Discussion	
	1	
10:15 – 10:30	Round Tables´ Conclusions  \$\times SALA D'ACTES\$  Daniel Zimmerle, Colorado State University, USA	

10:30 – 10:35	SOLAR COOKING CHEFS KNIGHTING AND INDUCTION  \$\text{\$\sigma} \text{ SALA D'ACTES} \\ Xavier Vallvé, \text{TTA (Spain)}
------------------	--



10:35 –	COFFEE BREAK AND VISIT TO INDUSTRY AND POSTER EXHIBITION
11:00	EXHIBITION AREA – ES MERCAT

	SESSION 9A: PROJECTS SHOWCASE			
	SALA D'ACTES			
Chairs:				
Xavier Vallvé, TTA (Spain)				
	Jatin Nathwani, WISE - University of Waterloo (Canada)			
11:00 – 11:15	Engineering, Procurement, and Construction of 10 PV-Diesel Hybrid Mini-Grids in the Upper Suriname River			
11.13	Richard Paal, Energie Bedrijven Suriname (Suriname)			
11:15 – 11:30	Improvement of Livelihoods Through Adoption of the Water-Energy-Food Nexus – A Case of the SADC Region			
11.50	Kudakwashe Ndhlukula, SACREEE (Namibia)			
11:30 – 11:45	Key Findings of Testing Two Different Business Models for Solar-Powered Cold Rooms in Kenya and Ghana			
	Manuel Willhaus, Phaesun GmbH (Germany)			
11:45 – 12:00	Discussion			
12:00 – 12:15	Interconnected Minigrids: Powering Prosperity and Boosting Last Mile Energy Access			
	Alberto Rodriguez, RMI (USA)			
12:15 – 12:30	Solutions for an Efficient Integration of Hybrid PV-Storage Community Microgrids in Weak Electrical Networks: The Use Case Of Guidakhar (Senegal)			
	Yann Deferne, Canary Islands Technology Institute (Spain)			
12:30 – 12:45	Empowering Coastal Communities: Sustainable Water Access via Solar-Powered Seawater Desalination in the Colombian Caribbean			
	Julia Bosson, Corpoema, IDE-E (Colombia)			
12:45 – 13:00	Discussion			



	SESSION 9B: Solar Cooking event
	<i>☆</i> AB02
	Chefs:
	Manuel Vilchez, IPCENA (Spain)
	Celestino Ruivo, University of Algarve, (Portugal)
	Richard Sieff, MECS, (UK)
1:00 –	
3:00	
	Cooking with the experts
	Parabolic solar cookers
	Box oven solar cookers
	Electric Pressure Cookers with off-grid PV-generation

13:00 – 13:15	PLENARY CLOSING REMARKS
	END OF THE CONFERENCE

13:15 – 14:30	SOLAR LUNCH WITH FOOD COOKED DURING SESSION 9B  Sponsored by the ESMAP − The World Bank Group
------------------	---

#### SIDE EVENT 3

**Electricity Access for Underserved Customers: The Case for Undergrid Mini Grids** 

When: Friday September 6, 14:30 - 16:00

Hosted By: ESMAP - The World Bank Group

Where: AB01



The objective of this 1.5-hour workshop is to engage participants in focused discussions on the role of interconnected and undergrid mini grids in improving energy access for poorly served customers.

Traditionally, mini grids targeted off-grid areas, but now there's interest in undergrid mini grids for areas connected to the main grid but receiving poor service. These mini grids are being built and operated in locations with existing grid connections but suffer from frequent blackouts, affecting economic development.

This workshop will explore the potential for scaling undergrid mini grids in low- and middle-income countries, with examples from India and Nigeria. The World Bank's Nigeria DARES project and ESMAP's new publication on mini grid solutions will be highlighted. Participants will discuss emerging business models, best practices, and the challenges and opportunities in using undergrid mini grids to bridge the electricity access gap. This session will also provide a platform for mini grid developers, utilities, regulators, and other stakeholders to share their experiences and insights.