

Side Event:

Energy Access Innovation Lab Session

Hosted by Affordable Energy for Humanity (AE4H), Nigel Moore

October 17, 2018, 09:00 - 12:30 hrs

Only for registered participants of the conference. When you register to the conference you can also register for this workshop.

2nd International Conference on Solar Technologies & Hybrid Mini Grids to improve energy access Palma de Mallorca, Spain October 17 – 19, 2018 www.energy-access-conferences.com		
Wednesday, October 17, 2018		
13:15	REGISTRATION OPEN	
14:00 14:20	Opening Address 14:00 - Xavier Vallvé , TramaTecnoAmbiental, Spain 14:05 – Dr. Andreu Moià , Universitat de les Illes Balears, Palma de Mallorca, Spain 14:15 - Dr. Llorenç Huguet , Rector de la Universitat de les Illes Balears, Palma de Mallorca, Spain	
OPENING SESSION:		
Chair:	Dr. Carsten Hellpap , GIZ, Germany Xavier Vallvé , TramaTecnoAmbiental, Spain	
14:20	Keynote speaker: To be confirmed	
14:45	Keynote speaker: To be confirmed	
Session 1: Programs and Market Development		
Chair:	Kilian Reiche , iiDevelopment GmbH, Germany	
15:10	Cost-benefit Analyses Favour Solar Systems over grid Electrification of Households in East Africa Mirco Gaul, SiNERGi GmbH, Germany	
15:25	Power to the Myanmar Village: are Mini- or Microgrids the (only) answer? Jörund Buen, Differ Group, Norway	

15.40	Towards Increased Electricity Access through Solar Mini-grids in African Countries: Barriers and Opportunities for better Regulations, Policies and Support Mechanisms Kirsten Ulsrud, University of Oslo, Norway	
15:55	Discussion	
16:05	Integrated Grid and Off-grid Energy Supply Models: Regulation, Planning, innovation and Governance for Universal Access to Energy Andres Gonzalez Garcia, Massachusetts Institute of Technology, Universal Energy Access Lab, US	
16.20	Review of Mini-grid Policy and Development in East Africa Mathilde Brix Pedersen, UNEP DTU Partnership, Technical University of Denmark, Denmark	
16:35	Discussion	
16:45 17:15	Coffee Break	
Session: Industry Forum and Poster Session		
Chair:	Tobias Zwirner, Phaesun, Germany	
17:15 17:35	INDUSTRY FORUM <ul style="list-style-type: none"> - Fundación Acciona, Spain - Solartys, Spain - Stäubli Electrical Connectors AG, Switzerland - Studer Innotec SA, Switzerland POSTER SESSION	
ENERGY ACCESS 17:35 17:50	Policy Options, Perceptions and Interests a big Obstacle to Massive Adoption of Renewable Energy. The Peruvian case. Valentin Bartra, Consejo Peruano de Energia Solar Fotovoltaica, Peru Off-Grid Hybrid Renewable Electricity System; Techno-economic Assessment, System Size Optimization and Design Aspects (for comparative case-studies in Uganda and Canada) Mohamed Mamdouh Elkadragy, KIT, Germany Impact Improvement of Public Subventions in Rural Electrification. NESAP case. Isahac Esteve, ANPER, Niger Can Solar Energy Address Nigeria's Households Energy Poverty? Sule Zubairu, Lancaster University, UK Global Online Knowledge Management on Energy Access via Energypedia Johanna Hartmann, Energypedia, Germany Renewable electric generation for communitary ecotourism in protected areas: the case of Peru Diego Manzana Monzó, University of Valencia, Spain	

...	<p>Renewable electric generation for communitary ecotourism in protected areas: the case of Peru Diego Manzana Monzó, University of Valencia, Spain</p> <p>Study of Photovoltaic Energy for Reduce the Energy Poverty in the Spanish Household Andreu Moià, Universitat de les Illes Balears, Palma de Mallorca, Spain</p> <p>Renewable Energy Resource Development and Procedural Application of Environmental and Social Impact Assessment Tool: Lessons from Kenya Philip Manyi Omenge, Egerton University, Kenya</p>	
<p>SOLAR HOME SYSTEMS AND SOLAR PLANTS</p> <p>17:50 18:05</p>	<p>How have Subsidies Impacted the Market for Commercial Solar Home Systems Providers in Rural Myanmar? Jörund Buen, Differ, Norway</p> <p>The Typical Myanmar Rural Off-grid Electricity Consumer is more Advanced than you think Jörund Buen, Differ Group, Norway</p> <p>Pre-feasibility Study of a Solar PV-Hybrid Plant in Bahia Negra, Paraguay Unai Arrieta, Trama TecnoAmbiental, Spain</p> <p>Prospective Analysis of Solar-powered Sesame Oil Production system in Burkina Faso Dr. Victor Torres Toledo, University of Hohenheim, Germany</p> <p>A Partnership Model for Innovative Solar Technology in Emerging Markets Manuel Seiffe, MPower Ventures AG, Switzerland</p> <p>Optimization of Rooftop Solar Installations for Industrial Buildings for Demand Side Management - A Case Study Manoj Kumar Soni, Birla Institute of Technology and Science, India</p> <p>Linking Energy Access to Sustainable Rural Village Livelihoods in Botswana Cheddi Kiravu, University of Botswana, Botswana</p>	
<p>TECHNOLOGY</p> <p>18:05 18:25</p>	<p>BOSS Milk cooling Kit – Increasing Milk Production and Economical Success in Rural Areas Tobias Zwirner, Phaesun, Germany</p> <p>Rural Development Using Electric Hybrid Cogeneration and Application of Thermal Energy in Food Processing Jose Maria Rincon Martinez, Universidad Nacional de Colombia, Colombia</p> <p>Optimized Fuzzy Energy Management for Autonomous PV-Hybrid Systems with Battery and Hydrogen Storage Path Lisa Gerlach, Technical University Dresden, Germany</p> <p>Blockchain Potential in Decentralized Energy Systems Dr. Carsten Hellpap, GIZ, Germany</p>	

...	<p>Daily Global Solar Radiation Prediction using Artificial Neural Networks: a New Approach Youness El Mgouchi, Moulay Ismail University, Marocco</p> <p>Bornay Wind +, a Step ahead on Small Wind Turbines Juande Bornay, Bornay, Spain</p> <p>Study of Energy and Block Chain in Spain Dr. Andreu Moià, Universitat de les Illes Balears, Palma de Mallorca, Spain</p> <p>Smart Grids in the European Union: Assessing Energy Security, Regulation & Social and Ethical Considerations Rafael Leal-Arcas, Queen Mary University of London, UK</p> <p>Impact of desert dust on West African solar energy yields Stefanie Meilinger, Internationales Zentrum für Nachhaltige Entwicklung, Germany</p>	
MINI-GRIDS 18:25 18:30	<p>Analysis of the Mini-grid Potential for the small Island Landscape of the Philippines Paul Bertheau, Reiner Lemoine Institut, Europa Universität Flensburg, Germany</p> <p>Development of Control Strategy for Distributed Off-grid Solar Photovoltaic Mini Grid Application Dipta Majumder, Inensus GmbH, Germany</p> <p>Solar Project under Construction in Honduras (and a Mini-grid project in Congo) Rosa Tarragó, RALOS new energy GmbH, Germany</p> <p>Prospects of Sustainable Development in land-locked Developing Countries via Renewable Energy Growth. The Sub-Saharan and Central Asia Region Case Study. Panagiotis Karvounis, National Technical University of Athens, Greece</p>	
18:30	Visit to the Trade and Poster Exhibition and	
19:15	Welcome reception	
20:00	End of the First Conference Day	

Thursday, October 18, 2018		
Session 2: Energy for Local Development and Sustainability		
Chair:	Dr. Andreu Moià, Universitat de les Illes Balears, Palma de Mallorca, Spain	
08:30	Are/Were Mini-grids Instrumental in Alleviating Energy Poverty in India? Dr. Harald Richter, GIZ, Germany	
08:45	Solar Water Pumping Market Transformation: An Assessment of Trends and Opportunities in Solar Water Pump Technology and Commercial Markets Yasemin Erboy Ruff, CLASP, USA	
09:00	How to Measure Employment Effects in Energy Access Programs? Michel Andreas, GIZ, Germany	
09:15	Discussion	
09:25	Energy & Water 4.0: Combined Off-Grid Water & Energy production in the Digital World and its Business Models Oliver Kopsch, MFT, Germany	
09:40	Project Gumbi: Integrating Energy, Enterprise & Safe Water in East Zambia Dr. Stephanie Terreni Brown, Clean Water Wave, UK	
10:55	How to Promote Productive Use of Solar Power in Rural Africa? Dr. Carsten Hellpap, GIZ, Germany	
10:10	Discussion	
10:30 11:15	Coffee Break and Visit to the Trade Exhibition	
Session 3 A Parallel Sessions: Solar Cooking (Exhibition Area) 10:30 – 13:00		IF CLOUDY, maybe on Wednesday or Friday
Convenor:	Prof. Celestino Ruivo, ISE – Universtiy of Algarve, ADAI, Portugal	
Heliac Solar Cooker - Efficient Solar Cooker at Lower Price Akiko Ishibashi, Heliac, Denmark		
Concentrated Solar Thermal Energy in Precision Cooking: a Developing Application in Indian Spice Roasting Heather L Xu		

On the Users Acceptance of Solar Cookers Prof. Celestino Ruivo, ISE - University of Algarve, ADAI, Portugal		
Design and testing of a solar box cooker with thermal storage unit based on phase change materials Giovanni Di Nicola, Università Politecnica delle Marche, Italy		
13:00	LUNCH and Visit to Trade and Poster Exhibition	
Session 3 B Parallel Sessions: Design and Technology Room 1		
Chair:	Georg Bopp, Fraunhofer ISE, Germany	
11:15	Solar Electricity & Hot Water for Dispersed Off-grid Households in Botswana: Demand-based Sizing and Initial Results from Tests on Prototypes Adrian Pugsley, Ulster University, Northern Ireland	
11:25	Electric and Thermal Power Supply in Off-grid and On-grid Systems are Merging Hubert Deubler, Planungsbüro Deubler, Germany	
11:35		
11:45	Mini-grids with distributed energy generation and frequency control. Return of experience after 6 years of operation of a pilot project in Switzerland. Matt Anderson, Studer Innotec, Switzerland	
11:55	Discussion	
12:15	Flexible Mini-Grids based on a Swarm Algorithm Alessandro Medici, Power Blox, Switzerland	
12:25	Potential of Transactional-based Control in the Optimization of Microgrid operation Prof. Dr. Antonio Notholt, Reutlingen University, Germany	
12:35	Portable and Reliable Off-Grid Hybrid Renewable Energy System Joan Tarragó, Roy Emmerich, Infnitve Fingers, Germany	
12:45	Discussion	
13:00	LUNCH and Visit to Trade and Poster Exhibition	
Session 3 C Parallel Sessions: Training and Knowledge Transfer Room 2		

Chair:	Dr. Rebekah Shirley , Power for All, Strathmore University, Kenia	
11:15	Human Resources and Energy Assets Performance Management System for Solar Organizations in Developing Countries Govinda Upadhyay, LEDsafari, Switzerland	
11:25	The AIR Project: Strengthening Higher Education in Renewable Energies in Southern Africa Prof. Dr.-Ing. Wilfried Zörner, University of Ingolstadt, Germany	
11:35	IEA PVPS Task9 Data Analyses of PV-mini-grids Michael Mueller, IEA PVPS, Switzerland	
11:45	Discussion	
11:55	Integrating Solar Education in Vocational Schools to Train and Empower Rural Woman in the Community: A Sustainable Approach towards Rural Electrification Ruma Akhter, Carl von Ossietzky University Oldenburg, Germany	
12:05	Mini-grids for Communities and Productive Use: Six-month Solar Training Program Exclusively for Ladies Barefoot college Tilonia, India	
12:15	Discussion	
12:25	Visit to Session 3 A or 3 B or Trade and Poster Exhibition	
13:00	LUNCH	
Session 4: Practitioners Round tables – different rooms 14:15 – 15:20		
Session organizer:	Nigel Moore , (WISE), Canada	
1.	Topic: Use of Blockchain in Renewable Energy delivery models Moderator: TBC Rapporteur: TBC	
2.	Topic: Which electric storage technology to choose? Moderator: Georg Bopp, Fraunhofer ISE, Germany Rapporteur: TBC	
3.	Topic: Subsidies, Public Investment and Market Development Moderator: TBC Rapporteur: TBC	
4.	Topic: Islands Electrification with Renewable Energy Moderator: TBC Rapporteur: TBC	
5.	Topic: How to make Mini-grids more sustainable? Moderator: TBC Rapporteur: TBC	

6.	Topic: Integrated Decentralised Electrification in Africa (IDEA) Moderator: Dean Cooper, SNV, The Netherlands Rapporteur: TBC	
7.	Attendants Suggest a Topic of their Interest during Registration Moderator: n.n. Rapporteur: n.n.	
Session 5: Business Models/ Delivery Models		
Chair:	Dean Cooper – Netherlands Development Organisation (SNV), The Netherlands	
15:25	Social Enterprises for Energy Access: a Review of Ashden Awards Daniel del Barrio Alvarez, The Policy Alternatives Research Institute, Japan	
15:40	Solar-battery Micro-grids vs. Solar Home Systems for Rural Electrification – Benefits+Drawbacks, Economics, and Opportunities Arnaud Henin, RENEMIG energy, Switzerland	
15:55	Discussion	
16:05	Off-Grid Practitioners' Views: Customer Service Challenges in Rural Off-Grid Solar PV Markets Hira Wajahat, Stimulus, Pakistan	
16:20	Energy Access after a Natural Disaster: Evidence from Higashi-Matsushima, Japan Hiroshi Komikado, University of Tokyo, Japan	
16:35	Discussion	
16:45 17:15	Coffee Break	
Session 6A: Parallel Session: Technical Innovations		
Chair:	Prof. Peter Adelman, University of Applied Sciences Ulm, Germany	
17:15	Cost-effective Concentrated Solar System for High-temperature & High-efficiency Thermal Energy Production Rafael Anson, AnsonLab, Spain	
17:25	Nexol Photovoltaic Water Heating Niklas Gemp, Nexol Photovoltaic Ag, Germany	
17:35	Concentrated Solar Heat at Costs Below Natural Gas Jakob Jensen, Heliac, Denmark	
17:45	Discussion	

17:55	Energy Storage based on Hydrated Quick Lime Marc Linder, German Aerospace Center (DLR), Stuttgart, Germany	
18:05	Evolution of Storage Prof. Peter Adelman, University of Applied Sciences Ulm, Germany	
18:15	Experimental Investigation of Heat Retention of a Novel Asymmetric Formed Reflector with Integrated Collector and Storage (AFRICaS) System Ronald Muhumuza, Ulster University, Northern Ireland, UK	
18:25	Discussion	
18:35	End of the Conference Day Buses to the dinner restaurant are leaving in front of the University	
20:00	Conference Dinner with Poster Award Ceremony	
Session 6B: Parallel Sessions: Solar for Productive and Institutional Uses (Room 2)		
Chair:	TBC	
17:15	Barrier Analysis for the Deployment of Renewable Energy Based Mini-grids in Myanmar Masako Numata, University of Tokyo, Japan	
17:25	Performance of Desalination Systems in the Coastal Region of Kenya Ignatius Waikwa Maranga, Strathmore University, Kenya	
17:35	Hybrid System for Community Waste Water Treatment Plant in Hammana, Lebanon Hassan Harajli, American University of Beirut, Lebanon	
17:45	Discussion	
17:55	3 Years on-Field Experience in Implementing a Small-Scale Solar Milk Cooling Solution in Kenya, Colombia and Tunisia Dr. Victor Torres-Toledo, University of Hohenheim, Germany	
18:05	Renewable Energy Based Electricity at UNICEF's Compound in Kabul Khader Kamal, UNICEF. UNOCA Compound, Afghanistan	
18:15	Hybrid Off-grid Renewable Power System for Sustainable Rural Electrification in Benin. Odou Oluwarotimi, Abdou Moumouni University of Niamey, Niger	
18:25	Discussion	
18:35	End of the Conference Day Buses to the dinner restaurant are leaving in front of the University	

20:00	Conference Dinner with Poster Award Ceremony	
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Friday, October 19, 2018		
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Session 7: Market Outlook and Planning		
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Chair:	Prof. Jatin Nathwani, WISE, Canada	
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09:00	Potential for Integration of Small Wind Turbines in Mini-grids in East Africa Ivan Nygaard, UNEP DTU Partnership, Technical University of Denmark, Denmark	
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09:15	From a Satellite Picture to an Optimized Mini-grid: the TAOS.ai Modeling Tool Ibrahim Abada, ENGIE – Tractebel, Belgium	
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09:30	Discussion	
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09:40	Mini-Grid Project Development – Reducing Transaction Costs using Remote Data and GIS Dr. Philipp Blechinger, Reiner Lemoine Institut, Germany	
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09:55	Renewable Energy-Based Mini-Grids for Electrification of Rural Settlements within Southern Africa – A Simulation-Based Analysis Fabian Junker, University of Ingolstadt, Germany	
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10.10	Discussion	
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10:20	Round Table’s Conclusions Nigel Moore, WISE, Canada	
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10:35 - 11:15	Coffee Break	
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Session 8: Field Experience		
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Chair:		
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11:15	Quality Assurance of Photovoltaic and Solar Thermal Systems: Lessons Learned in PTB’s International Cooperation Elena Ammel, Physikalisch-Technische Bundesanstalt, Germany	
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11:30	Renewable Energy-based Mini-grids for Electrification in Island Communities - the State of Pilot Projects in Ghana Seth Mahu, Ministry of Energy & Petroleum, Republic of Ghana, Ghana	
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11:45	Scaling Sustainable Energy for All: EarthSpark International and the Case of Micro-grid Infrastructure Julia Nueno Guitart EarthSpark International, USA	
12:00	Discussion	
12:10	Innovative Electricity Delivery Models to Electrify Remote and Dispersed Households with Third Generation Solar Home Systems Jose Gabriel Martin, ACCIONA Microenergia Foundation, Spain	
12:25	Solar Systems in the Canadian Arctic - Diesel Replacement in Micro-Grids Klaus Dohring, Green Sun Rising Inc., Canada	
12:40	PV-Diesel MiniGrids Solution in Rural Communities – the Case of Community led Virtual Net-Metering in Qabrikha South Lebanon Carla Nassab, UNDP, Lebanon	
12:55	Mini-grid Sustainability Factors – the Case of Indonesia Hedi Feibel, Skat Consulting Ltd., Switzerland	
13:10	Discussion	
13:25	Closing Remarks Dr. Carsten Hellpap , GIZ, Germany Xavier Vallvé , TramaTecnoAmbiental, Spain	
13:45	End of the Conference	

Pending: Side Event – GIZ Projects? And Side Event - Mini Grid Clinic? Tbc, 14.45 – 18.00 hrs		
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