

# **CONFERENCE PROGRAMME**

## **3rd International Conference on Solar Technologies & Hybrid Mini Grids to improve energy access**

**September 15 – 17, 2021**



**Last Update 06/09/2021**

**SIDE EVENT: September 15, 13:00 - 16:30 hrs**

## **Innovation Lab – Energy Access in A Crucible**



**Hosted by** Affordable Energy for Humanity (AE4H)

Prof. Jatin Nathwani and Ambika Opal, WISE, Canada – **ONLINE**

*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.*

**We will draw on the strengths from the following:**

*technical and data analytical expertise,  
economics and business models supporting micro-enterprises,  
insights that inform social value of energy; its generative impacts and service value maps that address  
cultural preferences, needs of the young and the old and gender inequities.*


Free access for Conference participants

Organisation as hybrid-event – online/face-to-face

**Please note that participants have to subscribe to this side-event!**

## **WEDNESDAY SEPTEMBER 15**

16:00	<b>REGISTRATION OPEN</b>
17:00 17:45	<b>Opening Address</b> <b>17:00 – Xavier Vallvé</b> , Trama TecnoAmbiental (Spain) <b>17:05 – Dr. Andreu Moià</b> , Universitat de les Illes Balears (Spain)  <b>Keynote speeches :</b> <b>17:15 – Bärbel Höhn</b> , Special Representative for Energy in Africa of the German Federal Ministry for Economic Cooperation and Development (BMZ) (Germany) – <b>to be confirmed</b> <b>17:30 – Jon Exel</b> , Team-Leader ESMAP, The World Bank (USA) - <b>Mini Grids for Half a Billion People, Two Years After Release of Main Report</b>

<b>SESSION 1: PROGRESS AND CHALLENGES IN ACHIEVING SDG 7</b> <b>Chairs:</b> Dr. Carsten Hellpap, GIZ, Germany Xavier Vallvé, Trama TecnoAmbiental, Spain	
17:45	<b>Solar – Thermal Systems as Solution to the Power Crisis in Southern Africa</b> Werner Weiss - AEE Institute for Sustainable Technologies (Austria) – <b>ONLINE</b>
18:00	<b>Experiences of Cooking on Solar Mini Grids</b> Melinda Barnard-Tallier - Gamos - Loughborough University - University of Surrey (United Kingdom)
18:15	<b>Status of the Global Off-Grid Solar Market</b> Drew Corbyn - GOGLA (The Netherlands) - <b>ONLINE</b>
18:30	<b>SDG7: Status of Achievements of Energy Access for All, and the Role of Mini Grids in Reaching Universal Electrification</b> Tatia Lemondzhava - The World Bank (US) - <b>ONLINE</b>
18:45	<b>Discussion</b>
<b>INDUSTRY FORUM – Company presentations</b> <b>Session organizer:</b> Ingo Vosseler, TTA, Spain	
19:00	<ul style="list-style-type: none"> <li>• Cegasa, Spain</li> <li>• Socomec, France</li> <li>• Studer, Switzerland</li> <li>• Phaesun, Germany - <b>ONLINE</b></li> </ul>
19:20	<b>Welcome Reception and networking</b> 
20:00	<b>End of the First Conference Day</b>

**THURSDAY SEPTEMBER 16**

9:00 – 9:15	<p align="center"><b>SESSION 2: ANNOUNCEMENT OF CONTINUOUS POSTER REVIEW</b></p> <p align="center"><b>Organizer:</b> Dr. Andreu Moià-Pol, Universitat de les Illes Balears UIB, Spain</p> <p align="center"><b>Posters will be continuously available virtually. On-site poster presentation during coffee-breaks and lunch.</b></p>
<b>A: SMALL PV and MINI-GRIDS</b>	
<b>Optimizer - Based PV Systems under Shading Conditions</b> Virginia Cebollada Alvarez - University of Gävle (Sweden)	
<b>The Advantages of MILP Procedures for Microgrid Sizing</b> Marina Petrelli - Politecnico di Milano (Italy)	
<b>Comparative Assessment of Off - Grid Solar Photovoltaic (PV) System: Technical &amp; Investment Analysis</b> Dr. Abdul Muhaimin Mahmud - Public Works Department of Malaysia (Malaysia) - <b>ONLINE</b>	
<b>Implementing Quality Criteria in Mini - Grids – Best Practices and Lessons Learned</b> Tim Malzfeld - SMA Sunbelt Energy GmbH (Germany)	
<b>Networked Rural Electrification</b> Daniel Zimmerle - Colorado State University (USA)	
<b>GIS Approach for Rural Electrification</b> Silvia Corigliano - Politecnico di Milano (Italy)	
<b>Blockchain vs DLT for Small Energy Community</b> Pere Sabater - University of Balearic Islands (Spain)	
<b>Using Blockchain to Incentivize Small Scale Power Trading and Mini - Grid Creation</b> Michele Velenderic - Green Power Brains (Germany) - <b>ONLINE</b>	
<b>B: SOLAR THERMAL AND COOKING SYSTEMS</b>	
<b>Monitoring Results of Solar Thermal Systems in the South African Region</b> Rudolf Moschik - AEE INTEC (Austria) – <b>ONLINE</b>	
<b>The Use of Composite Heating Storage Materials Based on <math>Zn(NO_3)_2 \cdot 6H_2O</math> for Space Heating and Domestic Hot Water Supply in the Arctic Region of the Russian Federation</b> Testov Dmitriy - Dubna State University (Russia) – <b>ONLINE</b>	
<b>Heating Storage Materials Based on <math>MgNO_3 \cdot 6H_2O</math></b> Artem Morzhikhim Martovich - Dubna State University (Russia) – <b>ONLINE</b>	
<b>Refrigeration Appliances for Mini Grids: Options to Keep Energy Consumption under Control</b> Dr. Victor Torres-Toledo - Phaesun GmbH (Germany) – <b>ONLINE</b>	
<b>Proposals to Cooperation in Overcoming Poverty and Lack of Prospects in Developing Countries by Open Source Appropriate Technology (OSAT) and Horticulture and Using Revenues from the Voluntary Compensation of Greenhouse Gas Emissions</b> Manolo Vilchez - alSol (Spain)	

## C: CAPACITY BUILDING


**Human Capital Development in Higher Education: a Long - Term, Integrated Approach for Achieving SDG7**  
Jiska de Groot - University of Cape Town (South Africa) - [ONLINE](#)

**Capacity Building in Developing Regions**  
Matthias Raab - SRH Hochschule, Berlin (Germany) - [ONLINE](#)

**Innovation Diplomacy as a Driver of the Energy Transition**  
Vitoria Elisa Silva - Federal University Of Uberlandia (Brazil) - [ONLINE](#)

## SESSION 3: LESSONS LEARNED: FAILURE AND SUCCESS FACTORS


**Chairs:** Dr. Carsten Hellpap, GIZ, Germany  
Hedi Feibel, Skat Foundation, Switzerland - [ONLINE](#)

9:15	<b>Lessons Learnt from Pico PV, SHS, PAYGO Market Development; The Case of Kenya</b> Merijn Havinga – SNV (The Netherlands) – <a href="#">ONLINE</a>
9:30	<b>African villages electrification</b> Marc Guirguirian – Socomec (France)
9:45	<b>Success of Self – Sustainable Off – Grid Rural Electrification Projects in India</b> Prasad Kulkarni – Gram Oorja Solutions Private Limited (India) – <a href="#">ONLINE</a>
10:00	<b>Assessment of electrification options for off - grid areas in Cambodia</b> Andrés González García – Senergiality, S.L (Spain)
10:15	<b>Discussion</b>
10:30-11:00	<b>Coffee Break and networking</b> 


#### SESSION 4: KNOWLEDGE TRANSFER, OPTIMISATION AND REGULATORY FRAMEWORK

**Chairs:** Werner Weiss, AEE - Institute for Sustainable Technologies, Austria – **ONLINE?**  
Dr. Andreu Moia-Pol, Universitat de les Illes Balears UIB, Spain

11:00	<b>Global ONLINE Knowledge Management on Energy Access via Energypedia</b> Ranisha Basnet – Energypedia - <b>ONLINE</b>
11:10	<b>Promoting Solar Cooling through Technical Training Courses</b> Julian Krüger - Solar Cooling Engineering UG (Germany) - <b>ONLINE</b>
11:20	<b>Battery Training for PV - Hybrid and Mini - Grid: A real Tool to Optimize the Projects</b> Claude Campion - 3C Projects (France)
11:30	<b>Discussion</b>
11:40	<b>Potential Energy Savings in Interconnected Domestic Solar Systems</b> Daniel Zimmerle - Colorado State University (USA)
11:50	<b>Optimal Integration of Photovoltaics in Micro - Grids that are Dominated by Diesel Power Plants</b> Nils Reiners - Institute for Solar Energy Systems (Germany) - <b>ONLINE</b>
12:00	<b>Interactive Multicriteria Optimizer for Designing Microgrid Wind - PV Electrification Systems Considering Managements Constraints</b> Marc Juanpera Gallel - Universitat Politècnica de Catalunya (Spain)
12:10	<b>Discussion</b>
12:20	<b>Quality Assurance Framework for Component Based Solar Home Systems in Uganda</b> Geoff Stapleton - Global Sustainable Energy Solutions Pty Ltd (Australia) - <b>ONLINE</b>
12:30	<b>A New Paradigm in Mini - Grid Electricity Tariff Setting</b> Toby D. Couture - E3 Analytics (Germany) - <b>ONLINE</b>
12:40	<b>Isla Huapi: Setting up a Sustainable Business Model for Stand - Alone PV</b> Elena Villanueva Méndez - Ministry of Energy Chile (Chile) - <b>ONLINE</b>
12:50	<b>Discussion</b>
13:00	<b>LUNCH and networking</b> 


<b>SESSION 5: DEVELOPMENT TRENDS IN THE OFF-GRID SECTOR</b> <b>Chair:</b> , Daniel Zimmerle - State University of Colorado, US Tatia Lemondzhava - The World Bank (US) - <b>ONLINE</b>	
14:30	To be confirmed
14:45	<b>Hydro Empowerment Network HPNET: What the solar mini grid sector can learn from more than 40 years of small-scale hydro experience</b> Dr. Hedi Feibel - SKAT Foundation (Switzerland) - <b>ONLINE</b>
15:00	<b>Haiti Renewable Energy Mini grid Program: PHARES</b> Georgios Xenakis – TTA (Spain)
15:15	<b>A History of Least Cost Mini Grid Design</b> Peter Lilienthal - HOMER Energy (USA) - <b>ONLINE</b>
15:30	<b>Discussion</b>
15:45 16:20	<b>Coffee Break and networking</b> 

<b>SESSION 6: INNOVATIONS, PRODUCTIVE USES AND PLANNING</b> <b>Chairs:</b> Andrés González García, Universal Energy Access Laboratory - MIT & Comillas University, Spain Jatin Nathwani, WISE, Canada - <b>ONLINE</b>	
16:20	<b>How to Design a Photovoltaic Powered Aeration System</b> Petros Guambe - Songo Higher Polytechnic Institute (Mozambique)
16:30	<b>REvived Water: Innovative Electrodialysis Solutions for Clean Drinking Water in Off - Grid Areas</b> Géraldine Quelle - REvived water, Phaesus GmbH (Germany) – <b>ONLINE</b>
16:40	<b>Designing Solar PV for Topping up Energy of an Oil Based Solar Thermal Collector for Cooking Application</b> Tomas Nhabetse - Eduardo Mondlane University (Mozambique) – <b>ONLINE</b>
16:50	<b>Peltier Cooling in SHS systems</b> Daniel Goldbach - Fosera Solarsystems (Germany)
17:00	<b>MIA - Made in Africa</b> Prof. Peter Adelman - id-eee Institute (Germany) - <b>ONLINE</b>
17:10	<b>Discussion</b>

17:20	<b>Innovative Solar Milk Cooling System for Rural Communities in Western - Kenya</b> Farah Mrabet - University of Hohenheim (Germany) - <b>ONLINE</b>
17:30	<b>Solar Cooling Systems for Agricultural Value Chains</b> Dr. Victor Torres Toledo - University of Hohenheim (Germany) - <b>ONLINE</b>
17:40	<b>Reliability Evaluation of Mini - Grids Considering Protection Issues</b> Maël Riou - Entech Smart Energies (France) - <b>ONLINE</b>
17:50	<b>Discussion</b>
18:00	<b>Development of a Monitoring and Evaluation Framework to Generate Data - Driven Load Profiles for Rural Households Powered by a Solar Hybrid Mini - Grid</b> Babak Ravanbach – DLR Institute of Networked Energy Systems (Germany) – <b>ONLINE</b>
18:10	<b>Exploring the Nexus of Mini - Grids and Digital Technologies</b> Dr. Bernhard Brand – Enerpirica (Germany)
18:20	<b>Interdisciplinary Analysis of Renewable Energy - Based Mini - Grids in Namibian Remote Areas – An Overview on the PROCEED Project</b> Sven Kühnel - Institute of new Energy Systems, THI (Germany) - <b>ONLINE</b>
18:30	<b>Discussion</b>
18:40	<b>End of the Conference Day</b> <i>Buses to the dinner restaurant are leaving in front of the University</i>
20:00	<b>Conference Dinner</b> 

## Friday, September 17

<b>SESSION 7: ENERGY FOR LOCAL DEVELOPMENT AND LIVELIHOOD</b> <b>Chairs:</b> Melinda Barnard-Tallier, MECS, UK Catoer Wibowo, EnDev, Germany – <b>ONLINE</b>	
09:00	<b>Adoption of Solar Water Pumps in Tanzania: The Farmers' Perspectives</b> Reinhard P. de Lucas Murillo de la Cueva - Instituto Superior Técnico, Universidade de Lisboa (Portugal) - <b>ONLINE</b>
09:15	<b>Pay - as - you - go Solar: UGANDA - A Potential Energy Reality in the West Nile Humanitarian Context?</b> Cecilia Ragazzi - Mercy Corps (United Kingdom) - <b>ONLINE</b>
09:30	<b>Study of Photovoltaic Energy for the Reduction of Moroccan Households Energy Poverty</b> Andreu Moià Pol - University of Balearic Islands (Spain)
09:45	<b>Renewable Energy in Humanitarian Settings: a Blueprint</b> Aakarshan Vaid, IRENA (Germany) - <b>ONLINE</b>

10:00	<b>Discussion</b>
<p align="center"><b>SESSION 8: PANEL DISCUSSIONS</b>  <b>Session organizer: tbd</b></p>	
10:15	<b>Topic 1:</b> Touch Safe Rural Electrification <b>Participants:</b> Dan Zimmerle, Daniel Goldbach, 3 <sup>rd</sup> person tbd
10:35	<b>Topic 2:</b> Pros and Cons in Subsidy schemes for energy access <b>Participants:</b> Carsten Hellpap, Georgios Xenakis, 3 <sup>rd</sup> person tbd
10:55	<b>Topic 3:</b> Trends in Solar Thermal Systems <b>Participants:</b> Werner Weiss, Victor Torres, Simon Batchelor, 3 <sup>rd</sup> person tbd
11:15-11:45	<b>Coffee Break and networking</b> 
<p align="center"><b>SESSION 9: INTEGRATED CONCEPTS AND ENERGY MANAGEMENT</b>  <b>Chairs:</b> Xavier Vallvé, TTA, Spain  Kilian Reiche, iiDev, Germany - <b>ONLINE</b></p>	
11:45	<b>Energy Management in Offgrid Systems</b> Pierre-Olivier Moix - Studer-Innotec (Switzerland)
12:00	<b>Integration of Electro - Mobility Solutions into Off - Grid PV Systems for Sustainable Development of Rural Areas in Sub - Sahara Africa</b> Aminu Bugaje - Institute of new Energy Systems, THI (Germany)
12:15	<b>Gender Mainstreaming in Solar Irrigation projects</b> Ranisha Basnet - Energypedia UG/Albert-Ludwigs-Universität Freiburg (Germany) - <b>ONLINE</b>
12:30	<b>Promoting Sustainable Communities via Appropriately Designed and Participatory Energy Access in Rural Areas of Developing Countries</b> Davi Ezequiel Francois - ITAS & KIT (Germany) - <b>ONLINE</b>
12:45	<b>Results Based Financing to Catalyze Commercial Finance for Off-grid Solar Market Development</b> Martijn Veen, SNV (The Netherlands) - <b>ONLINE</b>
13:00	<b>Discussion</b>
13:30	<b>CLOSING REMARKS</b> Dr. Carsten Hellpap - iiDev (Germany) Xavier Vallvé - Trama TecnoAmbiental (Spain)
<b>END OF THE CONFERENCE</b>	

## “SOLAR LUNCH”

September 17, 13:45 (lunchtime networking)

Manolo Vilchez and Julio Cantos (Celestino Ruivo - **Online tbd**) will lead a Solar Cooking Event. Participants are encouraged to get involved, enjoy the meal and have fun together!