



AFRICAN  
SCHOOL OF  
REGULATION



INTERNATIONAL ONLINE CONFERENCE

# Off-grid solar systems: Towards sustainable and scalable business models

September 26th, 27th and 28th; 3:00pm to 6:00pm, Central Africa Time and  
Central European Summer Time



AFRICAN  
SCHOOL OF  
REGULATION

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The African School of Regulation (ASR), in collaboration with the African Development Bank (AfDB), the Africa Forum of Utility Regulators (AFUR), Africa Minigrid Developers Association (AMDA), the Global Energy Alliance for the People and the Planet (GEAPP), and the International Renewable Energy Agency (IRENA), invites you to a high-level online conference on the necessary regulatory conditions, business model designs, and financial approaches that are necessary to attain a sustainable and scalable development of the minigrid industry.

A very large number of minigrids must be deployed in Africa to achieve the goal of universal electricity access in the continent by 2030, according to estimates by both the minigrid industry and well-known international organizations. Most of the large volume of capital that is needed must come from private investors, and this will only be possible if business models for minigrids can be defined that are financially viable and can maintain this condition permanently, i.e., if the business models are sustainable. In addition, it is necessary that these business models can be scaled up to the necessary dimension, both in terms of the required financing and the technical and managerial capability of the minigrid developers to install all the minigrids identified in the electrification plan.

Despite the favourable projections, minigrids have failed resoundingly in Africa and everywhere else over many years to have significant impact on electricity access. Minigrids cannot attain the relevance they should unless the sustainability of their business model is resolved and implemented through necessary regulatory measures. The conference will focus on the specification of the fundamental regulatory conditions, business model designs, and financial approaches that are necessary to attain sustainability – a necessary, but not sufficient condition for scalability – which will be also discussed.

Conference participants will debate to arrive at the definition of actionable regulatory and business models for minigrids that can attract investors, be deployed quickly, build all the minigrids included in a least cost electrification master plan to achieve SDG, and ensure permanence of reliable and affordable electricity supply. The applicability of lessons learned with minigrids to standalone solar systems will be also examined.

The Conference will bring a limited number of invited experienced participants – from minigrid developers, power pools, ministries, regulatory agencies, development financial institutions, think tanks, private companies, and academia – who will debate under a panel format virtually. The debates will be open free of charge to any interested registered participants, who will be able to send questions and to provide comments that will be conveniently used by the moderators of the panels and made available to all participants.

Preparatory reading material will be made available to all participants ahead of the dates of the Conference. Following the Conference, the ASR team will make public a brief with the summary of the key findings and takeaways, and will organize follow up events – interviews, podcasts, debates on specific aspects – to further examine the topics that had been discussed. This online expert-based debate-style Conference can prepare the ground for the larger presentational ESMAP-AMDA 7th Minigrid Action Learning Event (ALE) to be held in Nairobi from February 27 – March 3, 2023.



**TELMA MATAVEL NKUTUMULA**  
(Director of Legal Affairs, ARENE,  
Mozambique).

Telma Mariza Matavel Nkutumula, 41 years old, born in the Maputo city, province of the same name, graduated in law from the Faculty of Law in Eduardo Mondlane University, where she also attended the postgraduate course in Energy Law. Telma Nkutumula joined the Ministry of Energy in 2006, which later became the Ministry of Mineral Resources and Energy. From 2006 up to 2014 she worked in international cooperation department where she had responsibility and opportunity to deal with different multilateral and bilateral institutions of the energy sector, including International Renewable Energy Agency and assist the Minister in the presidency of the Forum of Energy Ministers of Africa and other organizations. She also participated in negotiation of different legal instruments within the scope of the development of the energy sector. From 2015 to 2019, in Ministry of Mineral Resources and Energy, Telma Nkutumula started to work in legal area dealing with contracts in this sector as well as with draft legislation in power, mining as well natural gas subsector. In 2020 she moved to Energy Regulatory Authority where presently is coordinating the Legal Affairs and Consumer Support Directorate. It's important to underline her current involvement in legal and regulatory framework for off grid as well as in Promotion of Renewable Energy Auction Programme – PROLER. Telma is married, has of 2 children's, catholic, speaks portuguese and english. She enjoys gardening, crafts and learning.



**PATRICK TONUUI**  
(Head of Policy and Energy Strategy,  
GOGLA).

Patrick is the Head of Policy and Regional Strategy for GOGLA, the voice of the off-grid solar industry. As Head of Policy and Regional Strategy is leading GOGLA's work to engage with governments, development partners and other stakeholders, growing and strengthening the market for clean, quality Off-Grid lighting and electrical systems by engendering an enabling environment across Off-Grid markets.

Patrick is an experienced public policy, economic and trade development professional with over 20 years' experience in the public and private sector conducting private sector development and support. Prior to joining GOGLA, Patrick worked for the International Finance Corporation to drive reform efforts to improve the business climate in Kenya and in the East African Community. He previously spent 7 years with the US State of Maryland's Department of Business and Economic Development driving the state's efforts to grow its Strategic and Innovation Sectors.

He holds an MBA and a Master of Science in International Business from Georgia State University and a Bachelor of Science in Horticulture from Egerton University in Kenya. Born and raised in Kenya, Patrick speaks English and Swahili.



**Isaiah Nyakusendwa**  
(Chairman, Renewable Energy  
Association of Zimbabwe).

Isaiah is a Founder and CEO of Celfre Energy (Private) Limited which is into the provision of affordable and quality renewable energy solutions for productive use for the Zimbabwean populace with interests in the SADC region. The Founding Chair since 2016 of the Renewable Energy Association of Zimbabwe (REAZ) – an umbrella body for renewable energy sector players. He also consults on rooftop, ground mounted and mini grids solar projects as well as mini hydro power projects.

He has sat on the following present and past national committees on the Renewable Energy Policy, Rural Electrification Master Plan, Nationally Determinant Contributions and Rapid Result Initiative on Solar Projects, Standards Committee on Rural Electrification, Energy Efficiency Policy, E-Mobility Framework, National Development Strategy on Infrastructure, Transport and Utilities. He has been active in the policy formulation, investment promotion, awareness raising, promotion of quality and affordable renewable energy up take.

He has been involved with The Global Off Grid Lighting Association (GOGLA), Private Financing Advisor Network (PFAN), Renewable Energy and Energy Efficiency Partnership (REEP), Africa Enterprise Challenge Fund (AECF) and The Energy and Environment Partnership Trust Fund (EEP Fund), ILO and Life Academy. Has over 30 years diverse experience having worked in the commercial, manufacturing, industry, services, agriculture and mining sectors.

An ardent conservationist as well having worked with international bodies such as IUCN, IUCN ESARO and UNESCO MAB programme in the past 25years.

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**James Manda** (Technical Manager, African Forum for Utility Regulators, AFUR).

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**PANEL 4: Potential impacts of cross-sectoral (indirect) regulations in investment and growth of the SAS industry (including PUE).**



**Marianne Walpert**  
(Co-CEO, Simusolar)

Marianne Walpert has been working in the photovoltaic industry since 1990, and working in Tanzania since 2007, providing solar lighting and productive-use equipment to thousands of rural Tanzanians.

In 2014 Ms. Walpert founded Simusolar, which is delivering financed equipment to the agriculture sector. Specifically, providing affordable solar-powered water pumping systems in rural East Africa directly to smallholder farmers and solar-powered fishing lights to fishers in Lake Victoria. The business has impacted over 20,000 people who benefited from increased incomes, greater productivity, and a higher quality of life.

Ms. Walpert has a Masters Degree in Physics from Northeastern University, Boston, MA and a Bachelors Degree in Math and Physics from the University of California.



**PEPIN TCHOUATE**  
(Senior Regional Policy and Regulatory  
Off-grid Advisor, Tetra Tech)

Dr. Tchouate-Heteu is the author of two books, several papers, and numerous technical reports on sustainable energy, the environment, and climate-change mitigation. Since May 2016, he works with Tetra Tech and has served as the Regional Energy Policy & Regulatory Lead Advisor on the USAID-funded Power Africa Transactions and Reforms Program and the Power Africa Off-grid Project. In this role, he has given input on more than 65 energy policies and regulations in more than 20 African countries. He has helped governments adopt 40 such policies, fostering an environment that enables the private sector to scale clean energy and rural energy access. Over the course of his career, Dr. Tchouate-Heteu worked with a range of institutions, such as the African Development Bank, the European Union, the French Development Agency, UNDP, USAID, and the World Bank.

Dr. Tchouate-Heteu earned his master's degree in electrical engineering from the Rheinisch-Westfälische Technische Hochschule Aachen (RWTH Aachen University) in Germany, and he earned his doctorate in applied sciences from the Catholic University of Louvain in Belgium. He is fluent in English, French, and German.



**PANEL 4: Potential impacts of cross-sectoral (indirect) regulations in investment and growth of the SAS industry (including PUE).**



**MARY GITHINJI**

(Senior Engagement Manager -  
Clean Energy Transition Africa, WRI  
Africa)

Mary Githinji is the Senior Engagement Manager - of Clean Energy Transition, Africa at the World Resources Institute - Africa. Her role is to support Africa's discourse on energy transitions towards the development of nuanced energy transition plans. She has over 12 years of experience in supporting public policy engagements across Africa. Prior to joining WRI, Mary worked as the Policy and Advocacy Manager at the AECF primarily responsible for advocating improvements to the enabling environment across eight countries for the Renewable Energy and Climate Technologies (REACT) SSA programme, namely: Burkina Faso, Ethiopia, Liberia, Kenya, Mali, Mozambique, Somalia and Zimbabwe.

Mary worked at Tetrattech International Development: supporting policy and advocacy engagements for the Stand Alone Solar sector at the Africa Clean Energy Technical Assistance Facility (ACE TAF) as a Country Manager for Kenya and Somalia; and at the Business Advocacy Fund in Kenya as the Deputy Fund Manager and Advocacy Manager where she supported over 40 Private Sector Organisations advocate improvements to the business enabling environment. Mary holds an MBA in Finance from the University of Nairobi in Kenya, and a bachelor's degree in international business and management from Northwood University in Michigan, U.S.A.



**COLLIN GUMBU**

(Policy and Advocacy Manager,  
GOGLA).

Collin Gumbu is based in Dar es Salaam, Tanzania and serves as GOGLA's Policy and Advocacy Manager. He has with him more than 15 years' experience working within the private sector and leading off grid related economic development programmes .

Prior to joining GOGLA, he served as Market Lead of IFC/World Bank led Lighting Tanzania Programme where he led market development activities of the Program that sought to contribute in market transformation of Tanzania Off Grid Solar sector. He also spent 3 years with Dar Teknohama Business Incubator (DTBi), the Tanzania flagship business incubator as Business Development Manager. Most recently Collin worked for Africa Clean Energy (ACE) Technical Assistance Facility (TAF) as Country Manager for Tanzania and Rwanda where he worked with the 2 governments to improve enabling environment policies for private sector delivery of stand-alone solar solutions to off grid communities.

He holds MBA in Marketing from the University of Dar es Salaam and is also a Certified Public Accountant. In his leisure time, he likes watching football and reading novels



**Nickson Bukachi**  
(EPRA, Kenya).

Eng. Nickson Bukachi is a leading voice in the renewable energy space. He has over nine (9) years' experience in energy related research, project development, policy and regulation. Eng. Bukachi serves as a Senior Renewable Energy Specialist at the Energy and Petroleum Regulatory Authority. Recently, he has spearheaded the development and implementation of various policy and regulatory instruments on energy efficiency and renewable energy inter alia: - mini-grid guidelines and regulations for Kenya; solar photovoltaic regulations; implementation of standards and labelling programme for electric appliances, net metering and solar water heating. This is in addition to leading and contributing to research projects on energy access, energy efficiency and renewable energy. Currently, he serves in various technical committees among them, the Taskforce on Implementation of the Energy Act of 2019, the Feed in Tariff Policy Committee, Judge in the Energy Management Awards, and the Kenya Off-grid Solar Access Project Implementation Team. He is Certified Energy Manager (CEM), Certified Renewable Energy Professional and Certified Measurement and Verification Professional (CMVP) both by Association of Energy Engineers, USA, Certified Energy Auditor, Certified Solar Photovoltaic Practitioner and Trainer, and Electrical Worker by the Energy and Petroleum Regulatory Authority, Associate Environmental Auditor in Kenya among others.



**BENJAMIN CURNIER**

(Principal Green Mini-Grids Officer,  
Sustainable Energy Fund for Africa,  
SEFA, African Development Bank  
Group).

Benjamin is an experienced sustainability and management director, with nearly 20 years' experience in a wide range of sustainability and resource efficiency areas (climate change, water, waste, energy efficiency and renewables), with project delivery experience ranging from policy development to large scale programmatic interventions. Having recently joined SEFA as the GMG lead, Benjamin is responsible for the development, and delivery of SEFA's GMG portfolio of investments. This includes leading the design and delivery of the Africa Mini-grid Accelerator Programme, which is SEFA's flagship TA programme to support countries develop their GMG markets. Further, Benjamin is leading on the design of funding solutions for GMG programmes in several countries, including Guinea, Mauritania, and Ethiopia. Benjamin has previously worked extensively on energy access projects, include providing services to SEFA's Green Mini-Grid Market Development Programme, where Benjamin led the delivery of market potential assessments for green mini-grids in nearly 10 sub-Saharan African countries. Benjamin was previously with Carbon Trust for 11 years, establishing the African office in South Africa. Benjamin commenced his career at PwC, where he worked as a strategy consultant providing commercial due diligence (buy and sell side), and strategic advisory services. Benjamin holds a master's of Aerospace Engineering with French from the University of Bath in the UK.



**DENNIS NDERITU**

(Manager Energy Systems, Global Energy Alliance for People & Planet, GEAPP).

Dennis is the Manager for Energy Systems at The Global Energy Alliance for People and Planet (GEAPP), where he champions the advancement of distributed renewables in developing nations. He dedicates his time to cultivating innovative technology and pioneering business models to enhance the sustainability and scalability of renewable energy systems, aiming to make a transformative impact on global energy landscapes. With a rich background as an Electrical Engineer, Dennis brings nearly a decade of multifaceted experience in the energy sector, primarily focusing on Africa's diverse and dynamic environments. Throughout his journey, he has worn multiple hats, contributing his expansive knowledge and innovative approach to various roles and leaving a trail of enhanced efficiency and optimized solutions. His vision is to empower communities and foster a planet where energy is sustainable, accessible, and equitable.



**HADLEY TAYLOR**

(Programme Manager, Policy and Regulations, SEforALL)

Hadley Taylor, Programme Manager, Policy and Regulatory Frameworks. Hadley has 12 years of experience in the energy access sector, working primarily with governments to improve enabling environments and designing national programmes to increase electricity access through off-grid and mini-grid solutions. She has experience designing multi-year technical assistance programmes in her current role as well as in her previous position with the GIZ. Hadley holds a Master's of Public Policy degree from the Hertie School of Governance and a dual bachelor's degree in Political Science and Global Development Studies from Queen's University.





**RAIHAN ELAHI**  
(Lead Energy Specialist,  
ESMAP/WB).

Mr. Raihan Elahi, Lead Energy Specialist, the World Bank is a thought leader in promoting electricity access using innovative technologies and disruptive business models. He is currently managing the Bank's Lighting Africa Program to promote private sector investment and facilitate policy changes to develop markets for standalone solar products. Under his leadership the Lighting Africa Program has evolved and is supporting electrification of productive uses, such as water pumping, irrigation, etc. to electrifying public institutions, such as healthcare facilities, education facilities, etc. and contributing to broader Bank objectives of human capital development.

Mr. Elahi played a significant role in the design and development of the Bangladesh solar market which electrified about 18 million people. A book written by Nancy Wimmer "The Marketmakers" features the experience. He was instrumental in developing the stand-alone solar market in Ethiopia by attracting private sector participation.

In addition to off grid energy access, Mr. Elahi also works in other conventional energy practice areas, including hydropower, geothermal energy, grid connected solar PV, transmission and distribution network development, power sector reforms, etc.

Mr. Elahi holds an MBA in Finance and an MSc. in Statistics.