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[1]

The African School of Regulation (ASR) and the Global Association for the Off-grid Solar Energy Industry (GOGLA), with the collaboration of Sustainable Energy for All (SEforALL), the International Renewable Energy Agency (IRENA), the African Development Bank (AfDB), the Energy Sector Management Assistance Program (ESMAP, World Bank Group) and the Africa Forum of Utility Regulators AFUR), invite you to a high-level online conference on the regulatory environment, business model designs, and financial approaches that are necessary to attain a sustainable and scalable development of the off-grid standalone solar (OGS) industry.

The OGS sector is increasingly recognised as vital to achieving global energy access, given that OGS products can be deployed faster than main grids and can also service small and disperse loads more cost-effectively, as well as provide backup support to individual customers with unreliable supply from the main network. This is evidenced by the growing number of countries that have incorporated and continue to integrate OGS systems into their electrification plans.[2]

By 2030, OGS systems are projected to account for 41% of the necessary electricity access, based on geospatial least-cost modelling of universal energy access scenarios. In some regions such as Central Africa, OGS products are projected to be the least cost solution for 81% of new connections between 2020 to 2025 because grid infrastructure is underdeveloped and unlikely to scale up fast enough in the next few years. At present, the electricity access gap however remains significant, with over 730 million people still without access - close to 600 millions of them are in sub-Saharan Africa.[3]

Over $211 million in public funding has been disbursed or is being disbursed to the OGS sector through Results-Based-Financing since 2012. It also attracted $2.3 billion in capital through debt, equity and grants between 2012 and 2021[4]. Whereas these figures indicate some progress in funding for this critical sector, they are far below the massive investment required to increase electricity access, particularly if SDG7 is to be achieved.

It is estimated that the OGS sector requires almost $26 billion in financing.[5] The report further indicated that financing channels were not acting fast enough to address the funding gaps in the OGS market, largely because of a mismatch between the structure of these instruments and the underlying business models of the companies in the sector.

It is desirable that a significant proportion of the funding required by the OGS sector comes from private investors, who will also be involved in customer service. This will only be possible if business models for off-grid solar systems can be defined that are financially viable and can maintain this

---

[1] Updates on this program can be found at the African School of Regulation website: https://africanschoolregulation.org

[2] Lighting Global/ESMAP, GOGLA, Efficiency for Access, Open Capital Advisors (2022), Off-Grid Solar Market Trends Report 2022: Outlook https://www.gogla.org/reports/off-grid-solar-market-trends-report-2022/

[3] Lighting Global/ESMAP, GOGLA, Efficiency for Access, Open Capital Advisors (2022), Off-Grid Solar Market Trends Report 2022: State of the Sector https://www.esmap.org/Off-grid_Solar_Market_Trends_Report_2022

[4] Ibid

[5] ESMAP. 2020. Funding the Sun: New Paradigms for Financing Off-Grid Solar Companies. Washington, DC: World Bank. https://documents1.worldbank.org/curated/en/447971581689878643/pdf/Funding-the-Sun-New-Paradigms-for-Financing-Off-Grid-Solar-Companies.pdf

condition permanently, i.e., if the business models are sustainable. In addition, it is vital 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 off-grid solar companies to deploy all the off-grid solar systems identified in integrated electrification plans.

Off-grid solar companies encounter obstacles in their businesses that could be mitigated by a more adequate regulatory environment. Off-grid solar systems could replace most of the existing diesel back-up generators if the correct regulatory measures would be implemented.

Finally, off-grid solar companies cannot reach all the populations they should and provide a truly sustainable service without a sound regulation framework for OGS systems able to attract the necessary investment and that also considers the other modes of electrification.

In order for the OGS sector to achieve scale and be sustainable, an urgent and concerted efforts by various actors involved is imperative. These actors range from private companies, governments, development partners, financiers and others. "A positive enabling environment is critical for the off-grid industry to fully realise its potential to unlock electricity access and boost productivity, connectivity and resilience."[6] This conference aims to identify and characterise this positive enabling environment as precisely as possible.

The conference will focus on the specification of the fundamental regulatory conditions, business model designs, and financial approaches that are necessary for the off-grid solar industry to fully play its role in achieving universal electricity access.

Participants will debate to arrive at the definition of actionable regulatory and business models for off-grid solar systems that can attract investors, be deployed quickly, build all the OGS systems included in the least cost electrification master plan to achieve SDG7, 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 off-grid solar companies, private investors, policy makers, regulatory agencies, development financial institutions, think tanks, and academia – who will debate under a panel format virtually. The debates will be open free of charge to any interested registered participants, who may send questions and 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 organise follow up events – interviews, podcasts, debates on specific aspects – to further examine the topics that had been discussed.

[6] GOGLA website https://www.gogla.org/what-we-do/policy-regulations/policy-overview/

CONFERENCE PROGRAMME

DAY 1

The first day will be dedicated to presenting an overview of the reality and immediate perspectives of the global OGS sector but with a particular focus on Africa. Experiences of successes achieved and failures will be presented, with a view to establishing the underlying factors that resulted in each outcome and extracting the lessons that can be learned.

Day 1 session will begin with some brief introductory presentations on the topics and questions to be discussed during the Conference followed by moderated panel discussions.

3:00 to 3:20 pm: Conference opening

- Opening words by Ignacio Pérez-Arriaga (Interim Director, African School of Regulation, ASR).
- Setting the scene by Damilola Ogunbiyi (CEO and Special Representative of the UN Secretary-General for Sustainable Energy for All).

THE OFF-GRID SOLAR SECTOR: THE STATE OF PLAY AND LESSONS LEARNT SO FAR

3:20 to 3:50 pm: Existing approaches, best worldwide practices, and present challenges

- Situation of the standalone solar sector in Africa (Koen Peters, Executive Director of the global association for the off-grid solar energy industry, GOGLA).
- The need for sustainability and scalability of standalone solar systems (Ignacio Pérez-Arriaga, Interim Director, ASR).

3:50 to 4:00 pm: BREAK

4:00 to 5:55 pm: Presentation and discussion of experiences

The following panels will discuss the growth of the OGS sector from a global and – in particular – African perspective, the experiences with different business models (cash, rent-to-own, energy-as-a-service, consumer microfinancing, etc.), the various regulatory mechanisms in place for this sector and the financial approaches to the deployment of OGS systems. The second panel will focus on the dilemma that appears in a national electrification strategy when deciding the minimum demand that should be supplied in a given context of customer affordability, availability of subsidies, and potential for economic growth.

4:00 to 4:50 pm: PANEL 1 – **OGS Business models and payment methods.**

Moderator: Dana Rysankova (Global Lead for Energy Access, World Bank).
Panellists: Representatives from African-owned and other companies in the OGS sector, with different business models.

- Prosper R. Magali (Director of Innovation and Business Development, Ensol Tz Ltd.).
- Harold de Rijck (Founder, All Solar World).
- Franklin Arinda (Compliance & External Relations Manager, FRES).

4:50 to 5:00 pm: BREAK

5:00 to 5:55 pm: PANEL 2 – **Minimum required demand and subsidies as catalysts for the growth of the sector.**

Moderator: Rosalie Marsden (Senior Associate, Acumen).
Panellists:

- Josh Sebastian (Senior Expert, RBF and Fund Management, SNV Global Energy).
- Uche Honnah (Energy Principal Specialist, Universal Energy Facility, SEforALL).
- Julio Eisman (President, Spanish Universal Energy Access Table).

5:55 to 6:00 pm: CLOSING for the day.

DAY 2

SURMOUNTING THE CHALLENGES: TARGETING SDG 7

On the second day, the experts will discuss the best approaches to achieving sustainable and scalable business models, building on the key factors that would have been identified during the previous day's discussions.

3:00 to 3:05 pm: Introduction and schedule of the day

- Daniella Ngarambe (Research Associate, African School of Regulation).

3:05 to 4:00: Panel 3 – **Regulation as enabler of sustainability and scalability**

Without governmental intervention and suitable regulation it will be impossible to deploy all the OGS solutions that are necessary to electrify poor rural areas, as established in the national plans of many African countries. The panel will discuss the conditions under which the business models for OGS solutions can be scalable (i.e., able to reach to all customers that must be supplied with OGS in the plan) and sustainable (i.e., guarantee a service that will be permanent in time).

Moderator: James Manda (Technical Manager, African Forum for Utility Regulators, AFUR).
Panellists:

- Telma Matavel Nkutumula (Director of Legal Affairs, ARENE, Mozambique).
- Patrick Tonui (Head of Policy and Energy Strategy, GOGLA).
- Isaiah Nyakusendwa (Chairman, Renewable Energy Association of Zimbabwe).

4:00 to 4:10 pm: BREAK

4:10 to 5:00: Panel 4 – **Potential impacts of cross-sectoral (indirect) regulations in investment and growth of the SAS industry (including PUE).**

For some time there have been no regulations directly impacting the OGS sector besides quality standards. However, of late the industry has witnessed increasing government appetite to regulate consumer lending, e-waste, consumer protection, local manufacturing and fishing lights which in the process have advertently impacted the sector.

Moderator: Collin Gumbu (Policy and Advocacy Manager, GOGLA).
Panellists:

- Marianne Walpert (Co-CEO, Simusolar).
- Pepin Tchouate (Senior Regional Policy and Regulatory Offgrid Advisor, Power Africa, Tetra Tech).
- Mary Githinji (Senior Engagement Manager - Clean Energy Transition Africa, WRI Africa).

5:00 to 5:10 pm: BREAK

5:10 to 6:00: Panel 5 – **From theory to practice: How to make it work.**

Discussions for this panel will focus on the practical application of recommended regulatory interventions to achieve sustainability and scalability of the OGS sector.

Moderator: Raihan Elahi (Lead Energy Specialist, ESMAP/WB).

Panellists:

- Nickson Bukachi (EPRA, Kenya).
- Benjamin Curnier (Principal Green Mini-Grids Officer, Sustainable Energy Fund for Africa, SEFA, African Development Bank Group).
- Dennis Nderitu (Manager Energy Systems, Global Energy Alliance for People & Planet, GEAPP).

- Hadley Taylor (Programme Manager, Policy and Regulations, SEforALL).

DAY 3

LOOKING AHEAD AND INNOVATING TOGETHER

The third day will start by recapping the output from days 1 and 2 and will continue with two round table discussions. The first one will cover some emerging topics in the OGS sector and will focus on the need for an integrated approach to electrification that will include OGS jointly with minigrids and extension of the main grid. The second-round table will try to define an action plan guided by a long-term vision.

3:00 to 3:05 pm: Introduction and schedule of the day

- Elias Zigah (Research Associate, African School of Regulation).

3:05 to 3:25: Wrap up of days 1 and 2. Open issues and key lessons learned.

- Ignacio Pérez-Arriaga (Interim Director, African School of Regulation).

3:25 to 4:15: PANEL 6 – **Emerging topics in the OGS sector and how an integrated approach to electrification planning could help.**

This session will explore emerging issues surrounding the OGS sector in terms of sector regulations, financing structures/instruments and business models, and how an integrated approach to electrification planning that jointly considers the three electrification modes (grid extension, minigrids and standalone systems), and defines adequate business models within an integrated financial plan can achieve the scalability and sustainability objectives.

Moderator: Carol Ofafa (Research Associate, African School of Regulation).

Panellists:

- Grégoire Jacquot (Senior Specialist, Sustainable Energy for All, SEforALL).
- Yann Tanvez (Senior Investment Officer - Infrastructure, Africa. International Finance Corporation, IFC).
- Albert Nganga (Senior Licensing & Regulatory Officer, CrossBoundary Energy).

4:15 to 4:30 pm: BREAK

4:30 to 5:20 pm: PANEL 7 – **A call to action. What works, what can be improved and the need for a comprehensive and long-term vision.**

This final session will underscore and consolidate the key messages on necessary regulatory interventions, business model designs, and financial approaches for the OGS to achieve scale and sustainability, together with the important roles of all actors across public and private sectors.

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

Panellists:

- Rhoda Limbani Mshana (Chief Energy Sector Regulations Specialist, AfDB).
- Koen Peters (Executive Director, GOGLA).
- Gabriela Elizondo (Practice Manager, Energy Sector Management Assistance Program, ESMAP, World Bank Group).

5:20 to 5:30 pm: **Conference closure**

- Closing words by the CEO of Gogla, Interim ASR Director and representatives of collaborating entities.